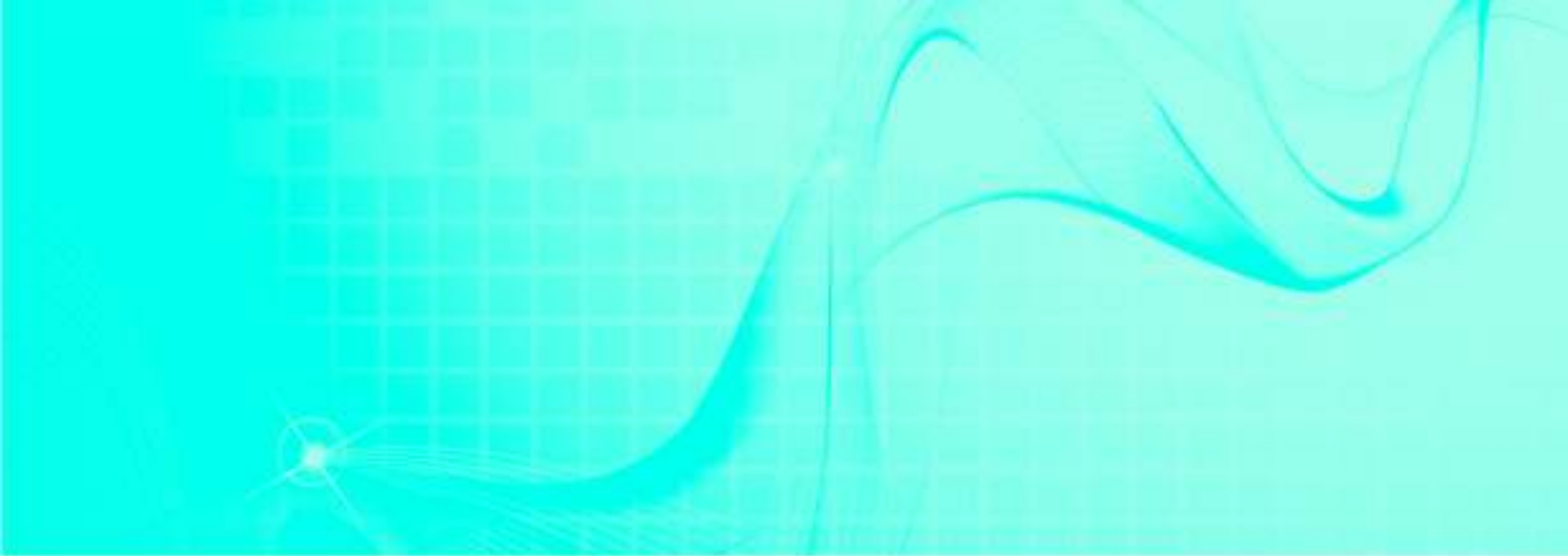




TEZPUR UNIVERSITY



ANNUAL REPORT 2015-16



Vision

To develop human excellence and inculcate leadership through hard work and creativity.

Mission

To render Tezpur University one of the most preferred destinations of students, faculty and scholars and employees. To be in the top 50 Universities of the world.

ANNUAL REPORT

2015-16



Specialized Knowledge Promotes Creativity

Tezpur University

Napam, Tezpur 784028, Assam



CONTENTS

| | | |
|---|--|-----|
| ❁ | From the Vice Chancellor | 1 |
| ❁ | Annual Report 2015-16: A Gist | 3 |
| ❁ | Highlights of Our Performance | 7 |
| ❁ | Our Notable Achievements During the Year | 8 |
| ❁ | Tezpur University: An Overview | 13 |
| ❁ | Financial Profile | 15 |
| ❁ | Academic Profile | 17 |
| ❁ | Research & Development Profile | 23 |
| ❁ | Student Profile | 24 |
| ❁ | STATUTORY BODIES | 29 |
| ❁ | ACADEMIC DEPARTMENTS AND CENTRES | 39 |
| ❁ | School of Engineering | |
| | Dean, School of Engineering | 41 |
| | Dept. of Civil Engineering | 43 |
| | Dept. of Computer Science and Engineering | 49 |
| | Dept. of Electronics and Communication Engineering | 59 |
| | Dept. of Energy | 68 |
| | Dept. of Food Engineering and Technology | 79 |
| | Dept. of Mechanical Engineering | 89 |
| ❁ | School of Humanities and Social Sciences | |
| | Dean, School of Humanities and Social Sciences | 97 |
| | Dept. of Cultural Studies | 99 |
| | Dept. of Education | 105 |
| | Dept. of English and Foreign Languages | 113 |
| | Dept. of Hindi | 123 |
| | Dept. of Mass Communication and Journalism | 127 |
| | Dept. of Social Work | 133 |
| | Dept. of Sociology | 139 |
| | Centre for Assamese Studies | 147 |
| | Centre for Endangered Languages | 151 |
| | Chandraprabha Saikiani Centre for Women Studies | 153 |
| | Teaching Learning Centre | 155 |
| ❁ | School of Management Sciences | |
| | Dean, School of Management Sciences | 159 |
| | Dept. of Business Administration | 161 |
| | Dept. of Commerce | 169 |
| | Centre for Disaster Management | 171 |
| | IPR Cell | 173 |
| ❁ | School of Sciences | |
| | Dean, School of Sciences | 179 |
| | Dept. of Chemical Sciences | 181 |
| | Dept. of Environmental Sciences | 197 |
| | Dept. of Mathematical Sciences | 207 |
| | Dept. of Molecular Biology & Biotechnology | 213 |
| | Dept. of Physics | 225 |
| | Centre for Petroleum Biotechnology | 235 |
| | DBT Nodal Centre | 237 |
| ❁ | Centre for Open and Distance Learning | 239 |
| ❁ | Community College | 241 |
| ❁ | CENTRAL FACILITIES | |
| · | The Central Library | 245 |
| · | Centre for Inclusive Development | 251 |
| · | CIIE | 255 |
| · | Computer Centre | 257 |
| · | Engineering Cell | 261 |
| · | Health Centre | 263 |
| · | Horticulture Section | 265 |
| · | IQAC | 267 |
| · | International Office | 268 |
| · | SAIC | 269 |
| ❁ | Programmes Organised by the University | 271 |
| ❁ | The Year in Figures | 276 |



From the Vice Chancellor



Tezpur University

(a Central University)
Tezpur 784 028, Assam, India

- **Visitor's Best University Award 2016**
- **NIRF India Rankings 2016: 05**
- **Accredited with 'A' Grade by NAAC**

Phone: 03712-267003(O),
267093(R)

Fax : 03712 -267006

E-mail : mkc@tezu.ernet.in
vc@tezu.ernet.in

Professor Mihir K. Chaudhuri, FASc, FNA
Vice-Chancellor

It is time to endorse the Annual Report of the University that presents a holistic account of significant happenings, reckonable achievements, public perception of the University and third-party recognition. A centrally funded institution like Tezpur University is expected to provide results-oriented service to the society as enshrined in the Act of the institution. I am sure any other central institution also does same.

The gone-by-year (2015-16) has been fruitful because of stakeholders — the students, the teachers and the staff — have all tried their best to support the purpose for which the University was established twenty-two (22) years ago. While there has been a rise in the female students strength (reaching around 50%), the all-round performance of the students has been quite satisfying not only because they have maintained good discipline on the campus, performed their academic duties, fetched jobs through on-campus and off-campus placement, but also they did remarkably well at zonal and national levels of co-curricular activities bringing laurels to themselves and the University. Over the past few years it has been observed that our students have been doing very well in cultural and literary competitions. Of course the University provides all possible support, as expected. I am happy to recall, nearly three hundred (300) students qualified this year in the NET, GATE and SLET examinations, many of whom have also chosen research as their next step of career progression. The alumni have been doing very well in academics, industries and in administrative service, both in the country and abroad, as we have learnt through our alumni networking. A good number of our students have earned fellowships abroad and gone ahead for research especially to USA and UK. The number of foreign students on the campus has gone up to two digits while a few of them returned to their countries with doctorate and master degrees from TU.

The faculty of an academic institution has very important roles to play, said or implied. The teachers are the role model, they are the leaders and guides, and trend setters. The teachers of our University have done the job quite well not only in terms of teaching but also in research. For a relatively small university like ours as many as hundred (100) quality PhDs have been produced during the year under report. Six hundred (600) peer reviewed research papers have been published in good to very good journals, a little over twenty (20) books have been published and more than hundred (100) book chapters have been written by my colleagues. Nearly one hundred and thirty (130) sponsored research projects with the funding of nearly fifty (50) crore of rupees have been going on. Several patents have also been filed for. More than fifteen (15) national and international collaborations including a couple of UKIERI projects have been actively pursued in the University. Some of our teachers have been awarded research accolades, namely, "J.C. Bose Gold Medal Award" in Plant Physiology, "APS-IUSTF Professorship Award" in Physics, "UGC DAAD Senior Scientist Fellowship", for instance. Kudos to my colleagues! However, we have still a long way to go.



The University has been awarded seven GIAN courses of which five (5) workshops have already been conducted and the rest are now due. The Innovation and Incubation Centres have been active with the participation of both students and teachers. Several innovations have been made and displayed. The INSPIRE Teachers' Club has been already in place with the members meeting from time to time discussing the issues related to the purpose for which it was established. Our University has participated in 'nirf' ranking, the result of which will be announced in the month of April 2016. It is hoped that the University will be able to fetch a good rank. The third cycle of accreditation by NAAC is now due for our University for which we have been working to meet the requirement of the council. The University maintains a very active IQAC Cell under the directorship of a professor. All these have been elaborated in the Annual Report.

Finally, the University is pleased to put on record of having received the Visitor's Best University Award 2016. It is a matter of encouragement and inspiration for all of us and certainly a great recognition for a relatively young university, as ours. I thank all stakeholders for their contributions, and congratulate my students, teachers and staff for the award.

Date : 03 November 2016

Place : Tezpur

A handwritten signature in blue ink, appearing to read 'Mihir K. Chaudhuri'.

Mihir K. Chaudhuri



TEZPUR UNIVERSITY

Annual Report 2015-16

A Gist

2015-16

UNIVERSITY PROFILE

| | |
|------------------------|--|
| Name of the University | : Tezpur University |
| State | : Assam |
| Address | : Napam, Tezpur 784028, Sonitpur District, Assam |
| Year of Establishment | : 1994 |
| Type of University | : Unitary Type Residential Central University |

HIGHLIGHTS OF THE YEAR 2015-16

| | |
|---------------------|---|
| Vice Chancellor | : Professor Mihir Kanti Chaudhuri, FASc, FNA |
| Pro Vice Chancellor | : Professor Amarjyoti Choudhury, PhD (Oxon) (till Dec 31, 2015) : Professor Manabendra Bhuyan, PhD (Gauhati) (from Feb 08, 2016) |
| Registrar | : Dr Biren Das, PhD (Gauhati) |

Total number of

| | |
|--|-----------------------------|
| " Academic Departments | : 20 |
| " Academic Centers | : 5 |
| " Academic Programmes | : 70 |
| " Students | |
| Female | : 1487 |
| Male | : 1487 |
| International students | : 06 |
| " Teachers | : 219 |
| Female | : 49 |
| Male | : 170 |
| " Teachers (General) | : 121 |
| " Teachers (SC/ST/OBC) | : 98[SC-29; ST-17, OBC-52] |
| " Non-teaching Employees | : 264 |
| Female | : 28 |
| Male | : 236 |
| " Non-teaching Employees (General) | : 104 |
| " Non-teaching Employees (SC/ST/OBC) | : 160[SC-42; ST-23; OBC-95] |
| " Departments under UGC-SAPDRS I | : 04 |
| " Departments under UGC-SAPDRS II | : 06 |
| " Departments under DST-FIST | : 05 |
| " Departments under Centre of Excellence | : 01 |
| " Departments under Centre of Potential for Excellence in Particular Areas | : 01 |
| " Papers published by Faculty | : 598 |
| " Conference proceedings | : 117 |
| " Books produced by Faculty | : 21 |
| " Book chapters produced by Faculty | : 102 |
| " Sponsored ongoing projects | : 128 |
| " Total financial outlay of ongoing projects | : Rs. 2322.96 lakh |
| " Sponsored projects beginning 2015-16 | : 38 |
| " International collaborative research projects | : 08 |
| " Grants received for the projects beginning 2015-16 | : Rs. 1405.31 lakh |
| " Seminars/Workshops organised by various departments/centres | : 67 |
| " Seminars/Workshops attended by Faculty abroad and in India | : 275 |



| | |
|--|----------------|
| " Talks given by Faculty abroad and in India | : 172 |
| " International visits by Students and Faculty | : 10 |
| " International Visitors to the University | : 26 |
| " International Fellowship | : 07 |
| " Awards received by Faculty | : 24 |
| " Students who qualified NET, SLET, GATE | : 114, 41, 138 |

FINANCIAL PROFILE

Annual budget for the financial year 2015-16

| | |
|------------|--------------------|
| " Plan | : Rs. 2767.40 lakh |
| " Non Plan | : Rs. 6705.97 lakh |

Funds utilised for Infrastructural Development during 2015-16

Total outlay on this count

| | |
|-----------------------------|--------------------|
| " Building | : Rs. 2003.40 lakh |
| " Library books | : Rs. 44.84 lakh |
| " Campus development | : Rs. 27.35 lakh |
| " Equipment | : Rs. 175.54 lakh |
| " Furniture & Fixture | : Rs. 121.82 lakh |
| " Computers and Peripherals | : Rs. 24.24 lakh |

INFRASTRUCTURAL DEVELOPMENT

- " Construction of RCC 3- storied Hostel Building Under construction
- " Swimming Pool
- " Barrier free environment- construction of Ramps and Toilets for differently able persons.

FURTHER HIGHLIGHTS OF THE YEAR

A number of noteworthy events took place during the year. These include the following:

The University was awarded Visitors Award for Best University 2016.

Professor Mihir K Chaudhuri, Vice Chancellor was conferred Honoris Causa Doctor of Science by Vidyasagar University at their 18th Convocation, held on 03 March, 2016.

Department of Business Administration was honoured with Category "A" and was ranked among the Top 5 Business Schools in East India.

Professor Mihir K Chaudhuri, Vice Chancellor was felicitated by AsomSahitya Sabha in its 9th Special Annual Hafflong Session, February 4, 2016.

Professor K K Baruah, Department of Environmental Science, was awarded the prestigious 'JC Bose Gold Medal Award' for the year 2015 by the Indian Society for Plant Physiology.

Prof C K Sharma was empaneled as Indian Council of Cultural Relations (ICCR) Chair Professor abroad in January 2016.

Prof N Karak was awarded Bronze medal, Chemical Research Society of India (CRSI), 2016, 4th Dr. S. S. Deshpande National Award, Holkar Government Science College, Indore, 2015 and the 9th Polymer Foundation Award, PSMFP 2015.

Prof S K Dolui received National Technology Innovation Award-2015, in innovative product development category, awarded by the Dept. of Chemicals and Petrochemicals, Ministry of Chemicals and Fertilizers, Govt. of India, New Delhi.

Dr Pritam Deb, Associate Professor, Department of Physics, was awarded the prestigious APS-IUSTF Professorship Award in Physics by the Indo-US Science and Technology Forum (USSTF).

Shri Jintu Sarma, UDC, Department of Environmental Science, was honoured with the 'Most Efficient Employee in the Low Vision Category' for the year 2015 by the Ministry of Social Justice & Empowerment, Government of India.



Tezpur University was awarded 'Dr Ambedkar Chair' by DrAmbedkar Foundations under the Ministry of Social Justice and Empowerment, Government of India.

Tezpur University was awarded 'Mahatma Gandhi Chair in Ethics' by the Indian Council of Philosophical Research the Indian Council of Philosophical Research.

Tezpur University was awarded 'Industry Chair' by the Vinati Organics Ltd., Mumbai, for conducting research in Chemical Sciences and Industry-Academia interface.

Tezpur University organised the Research, Innovation and Higher Education Cooperation Opportunities between India and the European Union on April 29, 2015.

Professor Milan K Sanyal delivered the Horizon Lecture on 'Ordering in Confined Geometry: Investigation of Fundamental Ideas with Nanomaterials' on May 7, 2015.

Tezpur University initiated a 'One Student: One Tree Programme' for students on all the academic programmes on May 9-10, 2015.

The Department of CSE is nominated by UGC as a Participant of BRICS Network University.

Tezpur University organised a national seminar on 'Technical Terminology in Humanities and Social Sciences: Preparation, Usage and Problems' during August 29-30, 2015.

Tezpur University won the Best Team Award in the 6th Annual Basanta Kumar Baruah State Level Debate Competition held on September 4, 2015 at Luit Valley Academy, Jorhat.

Tezpur University organised various programmes during Hindi Fortnightly during September 14-25, 2015.

Tezpur University organised 'Techxetra 2015' on 'Empowering Peace and Security: A Techstep Forward' from October 30 to November 1, 2015.

Tezpur University organised a series of lectures on frontier knowledge, imagination and initiatives based on the works of Nobel Laureates of the year 2015 during November 17-19, 2015.

Tezpur University celebrated the 65th year of Indian Constitution by organising a Panel Discussion and an Essay Writing Competition on November 24, 2015.

Tezpur University celebrated the 125th birth anniversary of Dr B R Ambedkar by organising an Essay Writing Competition on 'Ambedkar and His Legacy of Social Justice in the Indian Constitution' on November 24, 2015.

Tezpur University organised the Eleventh National Conference on Solid State Ionics (NCSSI-11) during December 21-23, 2015.

Tezpur University hosted the 31st Inter University East Zone Youth Festival 3-7 January 2016.

Tezpur University joined the rest of the nation and other countries of the world in celebrating the 153rd Birth Anniversary of Swami Vivekananda on January 12, 2016.

Tezpur University celebrates its 23rd Foundation Day on 21st January, 2016 Professor P. Balaram, Former Director, Indian Institute of Science, Bangalore, Professor Sanjoy Hazarika, Director, Centre for North East Studies, JMI, New Delhi and Ms. Mamang Dai, Journalist, Poet and Author, Arunachal Pradesh were the honoured guests of the day to deliver the foundation day orations.

On occasion of Matrivasha divas ChandraprabhaSaikiani Centre for Women's Studies screened, 'A small multilingual video presentation on "Status of Women in various societies' on February 21, 2016.

Tezpur University celebrated Inscignis on Inspiring Indian Innovation from February 28 to March 1, 2016.

AnkurGogoi and BhintumoniDeori, core members of the Folk Orchestra Team of the University received the Best Regional and Folk Team Award in the 8th South Asian Universities International Youth Festival, 2015.



Eisa Ahmed Ghaznavi was awarded Gold Medal in Western Vocal Solo in the 30th Inter University East Zone Youth Festival, Ranchi University, 2015.

Duyi Samyor, a Ph D student in the Department of Food Engineering & Technology, is selected for Newton Bhabha PhD placement programme for the year 2015-2016.

Indraneel Kalita won the 1st Prize in on Spot Photography Competition, National Level Unifest held at Mysore University, 2016

Priyanka Borah won a Bronze Medal in Folk-Tribal Dance in the 30th University East Zone Youth Festival held at Ranchi University, Jharkhand, 2016.

Tezpur University paid floral tributes to NatyaSurjaPhani Sharma on July 31, 2015.

Tezpur University paid floral tributes to RupkonwarJyoti Prasad Agarwala on the occasion of his birth anniversary, June 17, 2015.

Tezpur University organised several events including Essay Competition and Special Yoga Camp for the campus dwellers to celebrate the International Yoga Day, 21 June, 2015.

Tezpur University offered floral tributes LokapriyaLokapriyaGopinathBordoloi on the occasion of his 65th Death Anniversary, 5 August, 2015.

Ms. UddipanaGoswami (3rd Sem. MCJ) and Mr. RupjyotiKalita (3rd Sem. MCJ) won the Best Team and the Best Debater Awards at the 19th Parag Kr. Das Memorial Inter College/University Debate Competition held the Assam State Museum, Guwahati, 3 September, 2015.

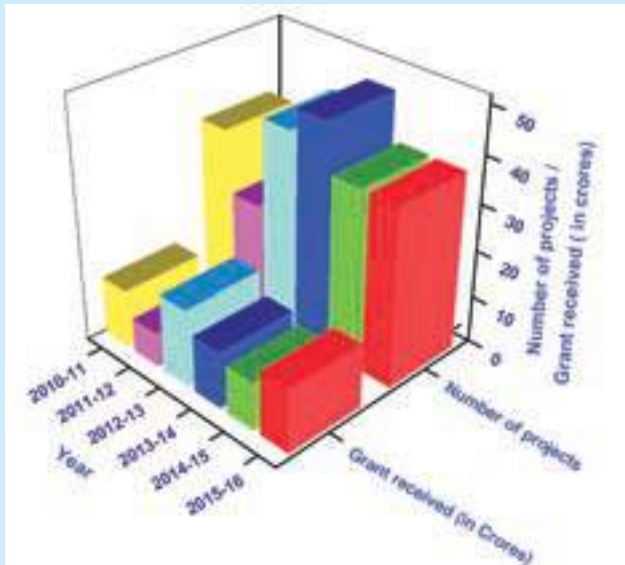
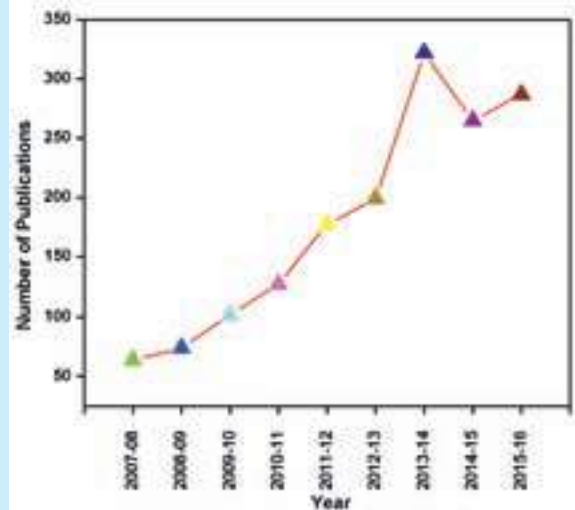
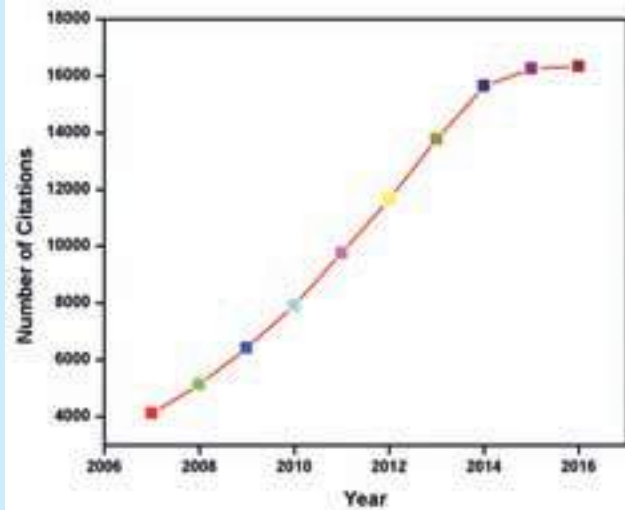
The feminist historian Prof Uma Chakravarti gave a series of lecture on "The Question of Women", organized by ChandrapravaSaikiani Centre for Women's Studies, 27-28 October, 2015.

Tezpur University, along with nation, observed a two-minute silence in memory and honour of the martyrs of Freedom Struggle on January 30, 2016.

Indian Statistical Institute, Bangalore, in collaboration with the School of Management Sciences of the University, announced Certification Program for SIX SIGMA GREEN BELT for the Northeastern States, March 18 -21 March, 2016.



Highlights of Our Performance



Until 2016

| | |
|---|-------|
| Number of Publications | 1942 |
| Sum of the times cited | 16339 |
| Sum of Times Cited without self - citations | 13031 |
| Citing Articles | 12126 |
| Citing Articles without self - citations | 10969 |
| Average Citations per Item | 8.41 |
| h-index | 46 |



Our Notable Achievements During the Year

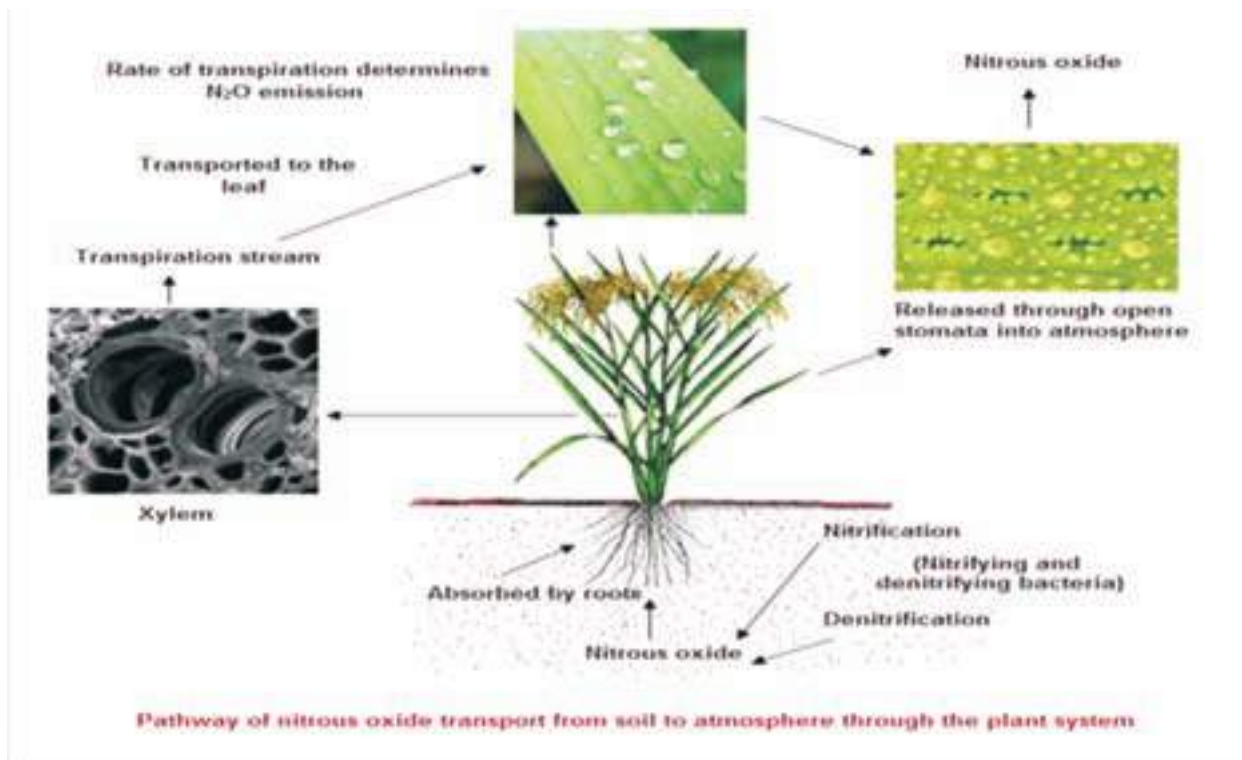
Scripting history not only for itself, but also for Assam and the North-East India, Tezpur University bagged the Visitor's "Best University" Award 2016. In an impressive function organized in the Rashtrapati Bhawan on March 14, 2016, the award was presented to the Vice Chancellor of the University Prof. Mihir K. Chaudhuri by the Hon'ble President Shri Pranab Mukherjee, who is also the Visitor of the University, in presence of the Union Human Resource Development (HRD) Minister Smt. Smriti Zubin Irani, University Grants Commission Chairman Prof Ved Prakash, Jury Members, Vice Chancellors, Directors of IIMs, IITs, NITs and a host of dignitaries.



Prof. K K Baruah

Professor Baruah, Department of Environmental Science, was awarded the prestigious 'JC Bose Gold Medal Award' for the year 2015 by the Indian Society for Plant Physiology in recognition of his outstanding contribution to research in plant physiology.

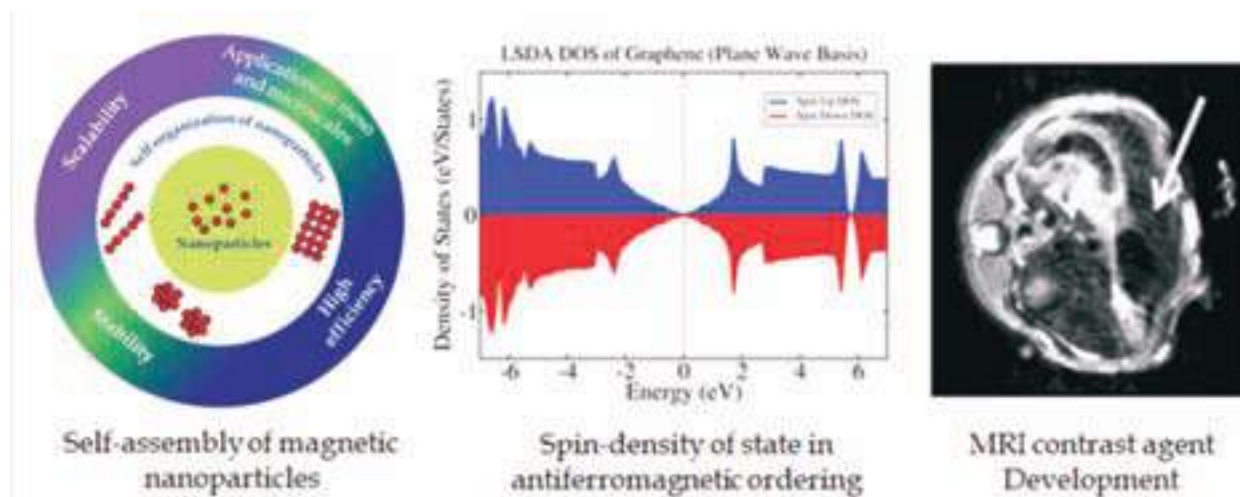
Plants serve as conduits for the transport of both CH₄ and N₂O produced in soil to the atmosphere. Plants thriving well under aquatic conditions (e.g. rice) mostly emit CH₄ whereas upland crops (e.g. wheat) predominantly emit N₂O. However, uncertainties are found to exist regarding the mechanisms of transport of these gases through the plant system. Recent research indicates that gas transport in the dissolved form via the transpiration stream through the xylem vessels is an important pathway of GHG emission (Baruah et al. 2012; Borah and Baruah 2015 a,b). Further, Borah and Baruah (2016) reported emission reduction of GHGs through application of Kinetin and Auxin a new concept of hormonal regulation of GHG transport through plant body. Soil management by application of slow released nitrogen fertilizer can reduce the emission of N₂O by 23-24% a viable mitigation technology developed by Baruah and his group (Bordoloi et al. 2016 a,b,c; Baruah et al. 2016). Relationship of photosynthate translocation to the grain and the root is an important regulation process in GHG transport in rice and wheat (Gogoi et al. 2005; Das and Baruah 2008 a,b,c). New addition to the knowledge of plant physiology and climate change have been made by Baruah and his group (Saikia et al. 2015; Bharali et al. 2016). Identification of suitable rice varieties for cultivation in a climate change situation by his group is another land mark in research on environmental physiology (Gogoi et al. 2003; Gogoi et al. 2008; Gogoi and Baruah 2012; Borah and Baruah 2015; Bharali et al. 2016).



Due to the high rate of depletion of petroleum resources and the environmental concerns, the utilization of renewable resources is currently in the spotlight of the chemical industries. Vegetable oils are considered to be the most important class of renewable raw materials due to their world wide availability, inherent biodegradability, low cost, and superb environmental credentials. A variety of chemical modifications can be performed on vegetable oils, yielding functionalized vegetable oils (FVOs) that can be used to produce diverse value added products with versatile applications, particularly as major ingredient in paints and coatings.

The present innovation entitled Green synthesis of epoxidized soybean oil and citric acid based bio-nanocomposites with excellent performance characteristics revealed a class of green bionanocomposites which was prepared by an in situ solvent free and catalyst free method. The bionanocomposites possess excellent performance characteristics in terms of gloss, hardness, drying time, chemical resistance, etc. and hence they can find suitable applications in surface coating industry. The technique avoids the use of any conventional petroleum based materials.

Dr. Pritam Deb, Associate Professor, Department of Physics, Tezpur University received prestigious APS-IUSSTF Professorship award in Physics from the American Physical Society (APS) for the year 2016. He is invited by Department of Materials Science and NanoEngineering, Rice University, USA for delivering lecture series on his significant achievements in nanomagnetism. Besides that, he will also be delivering few course lectures to the senior students of the university. The citation of the award has also mentioned that this Visiting Professorship award will initiate new collaborative research programs in future between this best material science institute of USA and the awardee.



FEMINAL BOOKS PUBLISHED BY MEMBERS OF THE FACULTY

Sarma, M M and Sahoo, S (Eds). Purnakanta Buragohain: Nine years beyond the Patkai. Guwahati: Bhabani, 2015.

This is an unusual travel narrative of an extra-ordinary man from a village in colonial Assam. The author, Purnakanta Buragohain was an enterprising businessman, a historian and an adventurous traveler. This book contains an account of the author's adventurous travel across Myanmar, Thailand and China between 1933 and 1942. The narrative tries to build a pan-Asian identity by highlighting the common ancestry, shared customs and past friendly relations between the Assameses and the peoples of South Asia. This book, a translation of Buragohain's Assamese account, hopes to add to the field of South Asian travel writing.

Mahanta, P J (Ed). Vaisnavite Music of Assam: Its Institutionalization and Performative Context. Guwahati: Purbanchal Prakash. March, 2016.

The Vaisnavite music of Assam emerged as a major tradition in the wake of the Bhakti movement during 15th-16th centuries, incorporating the large corpus of compositions by the apostles of the movement. The Vaisnavite Music of Assam, addresses some of the issues involved in the process and also brings into focus the divisions and sub-divisions within the



larger matrix of Vaishnavite Music, including their performative nuances.

Borbora, M and Borah, G K (Eds). Aspects of Modern Assamese. Guwahati: Bhabani Books, March 2016.

A collection of 12 research papers on the social-historical background of various grammatical, semantic, and pragmatic aspects of Modern Assamese, an Indo-Aryan Language of India. The research are written within various modern theoretical frameworks, both formal and cognitive.

Nath, D P (Ed). Women's Narratives from North East India: Lives in the Margins. Guwahati: Purbanchal Prakash March, 2016.

Women's Narratives from North East India: Lives in the Margins is a collection of essays on women's narratives from the region. Along with discussions of major literary texts by women, the book includes important insights into films, documentaries and folk literatures from North East India.

Nath, D. P. and Dutta, P. (Eds). Perspectives in Cultural Studies. Guwahati: Purbanchal Prakash March, 2016.

Perspective in Cultural Studies is a collection of essays on a range of issues in the field of Cultural Studies including review of institutionalized practices of cultural studies, appraisal of emergent theoretical possibilities and critical readings of cultural texts like rituals, performance, cinema and televisual media.

Das, D and Bhuyan, A (Eds). Development Strategies for North East India. New Delhi: Mittal Publications, 2016.

The volume consists of 25 research papers contributed by researchers, practioners, and academicians in the broad field of microfinance and livelihood. It showcases, the strategic thought process involving major themes of rural development comprising managerial policy perspectives for sustainable development, the path for financial inclusion, marketing linkages and their importance, upgradation of skills and technical expertise, and managing livelihood assets and capitals.

Saikia, M, Eqbal, M and Pratap, D. (Eds). Library Management: New Trends and Challenges. Delhi: Academic Publications.

The book provides the latest information related to library management systems, procedures and new trends partnering to various activities of the libraries and information centres which affect the reader's service. It covers different management techniques and procedure along with traditional and contemporary approaches of library management to the library professionals. It also highlights issues, challenges, new trends applicable in managing library and information centres, such as TQM, Human Resource Management, Skills and Techniques, Stress management, Professional Competencies, Knowledge Management and strategies for managing collection development in ICT era for modernization of libraries.

Goswami, C, Bhuyan, A, and Das, N (Eds). 2015. Tourism and Handicrafts: A Sustainable Approach. New Delhi: Excel India Publishers.

"Tourism and Handicraft: A Sustainable Approach" is an edited volume of contributions by various scholars from all over India. As suggested by the title of the book itself, the contributions deal with linking handicrafts to the tourism sector for local economic development and making tourism sustainable. Handicraft of a region has a role to play in the tourism attraction of the region and vice versa. Though it is well-taken that tourism and handicraft are interlinked and that tourism can lead to development of local communities and economic development of a region, yet, certain forces hinder this synergy. The different chapters of the book try to find out strategies to overcome these hindering forces.

Jintu Sarma, UDC, Dept of Environmental Science, was awarded by the Ministry of Social Justice and Empowerment (MoSJE), Govt of India the National Award of the Empowerment of Persons with Disabilities, 2015 [Category: Best Employee (Male, Low Vision)]. The award comprised of a citation, a gold medal and Rs 50,000.00. The awarding ceremony took place at **VigyanBhawan, New Delhi on 3 December, 2015.**



Tezpur University: An Overview

Tezpur University was established by an Act of Parliament in 1994. The University started work from Tezpur Law College campus with three departments. Today, the university has completed 22 years of existence with a profound and significant service to the state of Assam in particular and to the nation in general in the field of higher education. The meetings of the Statutory Bodies of the University were held regularly as per requirement. The activities of the University can be discussed on the following counts.

Academic achievements

During 2015-2016 the University was awarded the Visitor's Best University Award 2016 by the Hon'ble President of India on 14.03.2016 for its excellence in academics. Like the previous years, the University continued to make significant academic achievements. As many as six new academic programmes were started during this year. These are: MA in Linguistics and Endangered Languages; MA in Education; PG Diploma in Women's Studies; BVoc in Food Processing; B.Voc in Renewable Energy and Diploma in Paralegal Practice. The University got one new department approved by the UGC.

A good number of graduating students qualified national/international level exams, namely, GATE, CSIR-UGC NET & JRF, CAT, TOEFL, GRE, etc. and were able to earn respectable placements. A few students and alumni also qualified in some competitive examinations for administrative services. Students and faculty members of the University received prestigious fellowships such as Fulbright-Nehru Fellowships, Alexander von Humboldt Fellowships, Charles Wallatt India Trust SOAS Visiting Fellowship, and UGC-DAAD. University also could attract foreign scholars to the University as Adjunct Professor. The research contributions of the University continued to receive international recognition with a higher h index. A good number of researchers received awards/recognition for their significant contributions.

Internationalization of Higher Education

The University is taking steps towards becoming a global University for which we have started participation in Times Higher Education (THE) World University Ranking. The University is also trying to get international teachers and students. During this financial period, the University got one International professor from University of Arkansas – Little Rock, USA as Adjunct Professor in the Energy Department. One Research Scholar from the same University also registered for Ph.D. course works on credit transfer agreement. USIEF has also recommended one Fulbright Specialist from the University of Ohio, USA under Institutional Collaboration scheme.

Research & Consultancy

Various funding agencies like UGC, DST, DBT, DOI, AICTE, DAE, DRDO, DRL, ICMR, MoES, MoFPI, MNRE, ICSSR, DeitY, MSME have continued to fund research projects of the University and the total financial outlay exceeds Rs. 50 crores. The faculty of the University published research papers in peer reviewed journals, conference, proceedings, book chapters and books. Many Departments are engaged in consultancy services with industries and government departments/agencies. Collaborative research activities with reputed institutions like CDFD, Hyderabad; IICB, Kolkata; IUCAA, Pune; CDRI, Lucknow; the University College of London (under UKIERI); the University of Nottingham; MAKIAS, Kolkata; NPL, New Delhi are continuing like the previous year.

Extension Activities

The Centre for Inclusive Development (CID) has been coordinating the extension and outreach activities in the three villages adopted by the University as well as in other areas in the neighbourhood. Some of these activities carried out during the year under report are :



1. Built a public toilet complex at Napaam;
2. Drinking water extended to a nearby school and a market complex;
3. Built the boundary fencing and Entrance Gate of a nearby school;
4. Built a crematorium at Napaam and essential facilities created for a graveyard at Amolapam;
5. Running a project on generating power from locally available bio mass resources;
6. Voluntary tutorial classes and counselling to the school students of neighbourhood;
7. Conducting sensitization and awareness camps on various crucial issues.

Training & Placement

The Training and Placement Cell acts as the conduit of information between the University and the recruiting organizations apart from guiding and assisting the students in shaping their careers. During the year under report, 140 students with diverse profiles were placed in 45 reputed companies across the country. The University also strengthened its relationship with a number of prominent industrial houses in its effort to bridge the gap between the industry and academia that included 28 past recruiters and 17 new companies. Some of the prominent brands that recruited students from the University included Power Grid Corporation, Oil India, Amazon, Sap Labs, Dubar India, Nestle, Tech Mahindra, Wipro, Intel, Huawei Technologies, Vodafone, Pantaloons, DHL, HDFC Assets Management Company, Dalmia Cement, Airtel, Asian Paints, Axis Bank, Colgate Palmolive, ICICI Bank, Mahindra Finance, Zaloni Technologies, TNS World, XL Dynamics, Sap Labs, AMUL, Aasray Food, XL Dynamics, etc. The new recruiters accounted for 41 percent of the total recruitments, which indicates the high rise of institute's visibility in the industrial corridors. Also, the substantial rise in the pick ratio reflects the strong association and faith of the corporate on the capabilities and business acumen of our students.

Efforts made towards skill development

The University initiated the Pradhan Mantri Kaushal Vikas Yojana (PMKVY) and several training programmes were held for students and the local people. The Centre for Innovation, Incubation and Entrepreneurship of the University organized training programmes like the Skill Development on Fabrication of Aluminium Building Materials for the unemployed local youths. The University also started during the concerned year B Voc in Renewable Energy and Food Processing under the Department of Energy and Food Engineering and Technology and Diploma in Paralegal Practice under the Community College Scheme of the UGC. Other short term job oriented courses like Air Ticketing, Healthcare Informatics Management were also continued in the concerned year. The University has also got a Teaching Learning Centre (TLC) from MHRD, Govt. of India under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching Scheme.

Other achievements

The University received industrial patronage from various industries like ONGC, NRL, T & I. Apart from seminars and workshops, the University events organized by the students like TechXetra, Sampark received industrial support. One Industry Chair Professor in the Dept of Chemical Sciences has been instituted in collaboration with Vinati Organics Ltd., Mumbai. Moreover, e-governance mechanism in University administration is well instituted and various governance platforms are currently operational. The University continues to give due emphasis on women empowerment and gender sensitization. Gender balance has been faithfully maintained in the official committees and decision making processes. Gender Champions has been engaged and carrying out their activities.







THE FINANCIAL PROFILE

The Accounts of the University are maintained in four parts: **Part I deals with Non-Plan Maintenance Funds, Part II deals with Plan Funds, Part III deals with Earmarked Special Funds and Part IV deals with Debts and Deposits Accounts.** The Accounts of the financial year 2015-16 have been prepared in the New Accounting Format for Educational Institutions as prescribed by MHRD, Govt. of India.

The opening balance at the beginning of the year **2015-16** was **Rs. 3182.38 lakh**. During the year, the University received **Rs 13266.81 lakh** as grants under various schemes, namely Non-Plan, Plan and for Projects. The University has also generated **Rs 1402.61** as Internal Revenue. Thus, the total funds available during the year was **Rs.17851.80 lakh**. Out of the available funds, the University incurred an expenditure of **Rs 12368.20 lakh** during the financial year, leaving an unspent balance of **Rs 5280.41 lakh**.

A) The following Statement presents the Receipt and Expenditure at a glance.

Statement of Receipt & Expenditure for the financial year 2015-16

(Rs. in lakh)

| RECEIPTS | | | EXPENDITURE | | |
|-------------------------------|---------|-----------------|-------------------------------------|---------|-----------------|
| Particulars | Amount | Total Amount | Particulars | Amount | Total Amount |
| A) Opening Balances | | | E) Expenditure | | |
| 1. Non-Plan | | | 1) Part I (Non-Plan) | 7057.36 | |
| Bank balances | 403.70 | | 2) Part- II (Plan) | 2820.15 | |
| Advances | 41.6 | | 3) Part -III (Earmarked | 2490.69 | 12368.20 |
| Investment | 0 | | & Special Fund | | |
| 2. Plan | | | F) Grant Receivable from UGC | | 611.37 |
| Bank balances | 298.83 | | G) Closing Balance | | |
| Advances | 53.31 | | 1. Non-Plan | | |
| Investment | 225.00 | | Bank balances | 1014.83 | |
| 3. Earmarked Spl. Fund | | | Advances | 31.33 | |
| Bank balances | 2010.32 | | Investments | 0 | |
| Investments | 138.17 | | 2. Plan | | |
| Advances | 11.45 | 3182.38 | Bank balances | 577.34 | |
| B) Grant Receipts | | | Advances | 13.22 | |
| 1) Part -I (Non -Plan) | 5790.65 | | Investments | 632.29 | |
| 2) Part- II (Plan) | 4591.96 | | 3. Earmarked Spl.Fund | | |
| 3) Part- III (Earmarked | 2884.20 | 13266.81 | Bank balances | 1722.18 | |
| & Special Fund) | | | Investments | 1223.17 | |
| C) Internal Receipt | | 1402.61 | Advances | 66.05 | 5280.41 |
| D) Current Liabilities | | 408.18 | | | |
| Grand Total | | 18259.98 | Grand Total | | 18259.98 |

**B) XII Plan Grant**

During the year **2015-16**, the **UGC** sanctioned and released **Rs 3524.37 lakh** as **XII Plan General Development Grant**. The Plan Grants were utilized for creation of new infrastructure during the year as mentioned below:

(Rs. in lakh)

| Sl. No. | Infrastructure Created and Other Expenses | Amount | Amount |
|----------|---|--------|----------------|
| A | Building against XII Plan | | |
| | 1) Const of R.C.C. -3 storied Type –B Residential Building | 415.59 | |
| | 2) Const of R.C.C-3 storied Type-C Residential Building | 173.00 | |
| | 3) Const of R.C.C.-3 storied Type-D Residential Building | 221.10 | |
| | 4) Const of RCC Building for School of Humanities & Social Sciences | 726.89 | |
| | 5) Extension of VCs Conference Room | 18.71 | |
| | 6) Const. of School Building for KV | 315.81 | |
| | 9) Const of R.C.C.-2 storied Library Building (Extension) | 132.30 | 2003.40 |
| | Building against (MoSJE Grant, Govt. of India) | | |
| | 1.Cons t.of RCC-3 storied 102 cap. Boys Hostels | | 181.54 |
| | Total Expenditure under Building Head | | 2184.94 |
| B | Library Books | | |
| | 1) XII Plan Dev. Grant | 0.72 | |
| | 2) School of Education | 16.66 | 17.38 |
| C | Laboratory Equipment | | |
| | 1) School of Education | 5.27 | |
| | 2) XII Plan Dev Grant | 116.86 | 122.13 |
| D | Furniture (School of Education) | | 34.31 |
| E | Computer & Peripherals | | |
| | 1.Schhol of Education | 1.03 | |
| | 2.XII Plan Dev. Grant | 24.25 | 25.28 |
| F | Salary & Other Expenditure | | 436.11 |
| | Total | | 2820.15 |

C) Earmarked Special Fund:-

The Faculty members earned a total of **Rs.2490.69 lakh** against **205 Projects & Programmes** (including DBT sponsored grant for development/upgradation of infrastructure in Medical colleges in NE states) during the year **2015-16** .This amount was released to the concerned Principal Project Investigators as and when requisitioned.

D) Internal Generation of Revenue:

Internal revenue generated by the University during the year **2015-16** was **Rs. 1402.61 lakh**.



Academic Profile

The University offered 70 programmes from the Certificate to the PhD level in the academic year 2015-16. The University introduced a few new programmes which include two B Voc programmes in Renewal Energy and Food Processing; one PG Diploma programme in Paralegal Practice under the Community College; one PG Diploma programme in Women's Studies.

The total programmes of study offered during the year are given below:

Ph.D. Programmes

1. Ph. D. in Physics
2. Ph. D. in Chemical Sciences
3. Ph. D. in Mathematical Sciences
4. Ph. D. in Molecular Biology & Biotechnology
5. Ph. D. in Environmental Sciences
6. Ph. D. in English & Foreign Languages
7. Ph. D. in Cultural Studies
8. Ph. D. in Mass Communication & Journalism
9. Ph. D. in Sociology
10. Ph. D. in Hindi
11. Ph. D. in Education
12. Ph. D. in Assamese Studies
13. Ph. D. in Business Administration
14. Ph. D. in Computer Science & Engineering
15. Ph. D. in Electronics & Communication Engineering
16. Ph. D. in Food Engineering & Technology
17. Ph. D. in Mechanical Engineering
18. Ph. D. in Civil Engineering
19. Ph. D. in Energy

M. Tech. Programmes

1. M. Tech. in Polymer Science & Technology
2. M. Tech. in Information Technology
3. M. Tech. in Electronics Design & Technology
4. M. Tech. Bioelectronics
5. M. Tech. in Food Engineering & Technology (Lateral entry)
6. M. Tech. in Mechanical Engineering
7. M. Tech. in Energy Technology

M. Sc. Programmes

1. M. Sc. in Physics
2. M. Sc. in Nanoscience & Technology
3. M. Sc. in Chemistry
4. M. Sc. in Mathematics
5. M. Sc. in Molecular Biology & Biotechnology
6. M. Sc. in Environmental Sciences

M.A. Programmes

1. M.A. in English
2. M.A. in Linguistics & Endangered Languages
3. M.A. in Linguistics & Language Technology
4. M.A. in Cultural Studies



5. M.A. in Mass Communication & Journalism
6. M.A. in Sociology
7. M.A. in Hindi
8. M.A. in Social Work
9. M.A. in Education

Integrated M. Sc./M.A./M.Com.

1. Integrated M. Sc. in Physics
2. Integrated M. Sc. in Chemistry
3. Integrated M. Sc. in Mathematics
4. Integrated M. Sc. in Bioscience & Bioinformatics
5. Integrated M.A. in English
6. Integrated M. Com.

Other P.G. Programmes

1. Master of Business Administration
2. Master of Computer Application

Integrated B. Sc. B. Ed./B.A. B. Ed.

1. Integrated B. Sc. B. Ed. in Physics
2. Integrated B. Sc. B. Ed. in Chemistry
3. Integrated B. Sc. B. Ed. in Mathematics
4. Integrated B.A. B. Ed. in English

B. Tech. Programmes

1. B. Tech. in Computer Science & Engineering
2. B. Tech. in Electronics & Communication Engineering
3. B. Tech. in Electrical Engineering
4. B. Tech. in Mechanical Engineering
5. B. Tech. in Civil Engineering
6. B. Tech. in Food Engineering & Technology

B. Voc. Programmes

1. B. Voc. in Renewable Energy
2. B. Voc. in Food Processing

Diploma Programmes

1. P.G. Diploma in Translation (Hindi)
2. P.G. Diploma in Tourism Management
3. P.G. Diploma in Women's studies
4. Diploma in Paralegal Practice
5. Advanced Diploma in Health Care Informatics and Management
6. P.G. Diploma in Mobile and Multimedia Communication

Certificate Programmes

1. One-year Certificate in Chinese
2. Certificate in Technical Writing
3. Certificate in Air Ticketing & Computerized Reservation System



The University conducted national level entrance tests (TUEE: Tezpur University Entrance Examinations) for admission to these programmes during 29th, 30th and 31st May, 2015 at the following 23 centres across the country: Agartala, Bangalore, Barpeta Road, Bhubaneswar, Chennai, Delhi, Dibrugarh, Diphu, Guwahati, Hyderabad, Imphal, Itanagar, Jorhat, Kokrajhar, Kolkata, Lucknow, Mumbai, North Lakhimpur, Patna, Shillong, Silchar, Siliguri, and Tezpur.

- A total of 20572 on line applications were received for various programmes of study including PG/UG and PhD programmes.
- Out of 266 seats for the B.Tech. programmes, 159 seats (60%) were reserved for the candidates of the NE states and their counselling was done by the University. The remaining 107 seats were open for all, and admission was administered through Central Counselling.
- During the year 2015-16, 1313 candidates were admitted to various programmes of study of which 753 were male and 560 were female. Out of the 1313 candidates, 341 belong to the category of OBC; 161 to SC; 102 to ST. As per the reservation policy of the Central Government, the University reserved seats for OBC (NCL), SC, ST and PWD categories with 27% , 15%, 7.5 % and 3%, respectively.
- Candidates who were appearing in their respective qualifying examinations were also allowed to appear in the entrance examinations conducted by the University. In the event of their selection they were provisionally admitted, subject to submission of their testimonials of passing the qualifying examinations with satisfying the eligibility criteria. They were given here sufficient time with 15th November, 2015 as the deadline
- The total strength of the students on the campus during the year was 3505 (Male – 58% and Female – 42%). The numbers of students belonging to OBC (NCL), SC, ST, and PWD on the campus were 967(27.58%); 419 (11.95%); 261(7.45%); and 31(0.88%), respectively. Almost all of them were accommodated in the University hostels. Only a small number of students preferred to stay outside the campus as Day-scholars.
- As per the academic calendar, the Semester End Examinations for the Spring and Autumn Semesters were conducted during 21st – 28th May and 14th – 19th December, 2015, respectively. Results of the examinations were declared on 15th June, 2015 and on 6th January, 2016, respectively.
- The numbers of students who qualified for award of degrees and diplomas are given below:

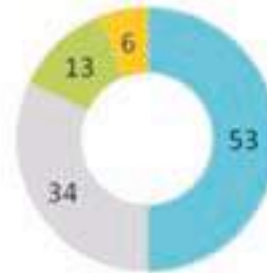


Total No. of Awardees

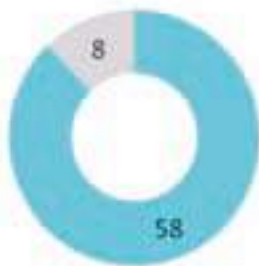
- Ph.D
- B.Tech./B.Sc./BA
- M.Tech/Intg.M.Tech
- M.A./M.Sc./MCA/MBA/Intg.MSc/COOL(M.A)
- P.G. Diploma/Advanced Diploma/COOL P.G Diploma



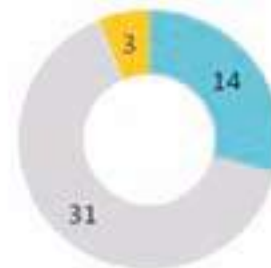
Computer Science & Engineering



Electronics & Communication Engineering



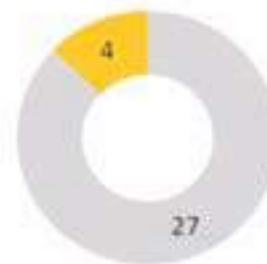
Mechanical Engineering



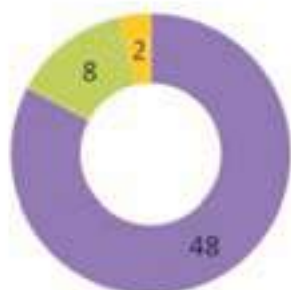
Food Engineering And Technology



Civil Engineering



Energy



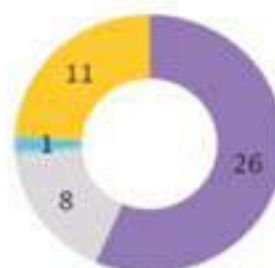
Business Administration



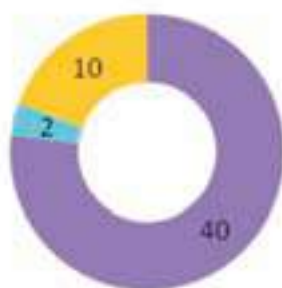
Environmental Science



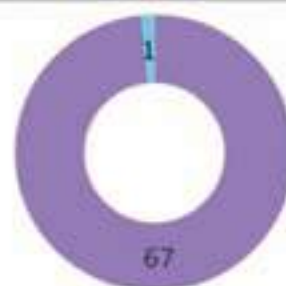
Physics



Chemical Sciences



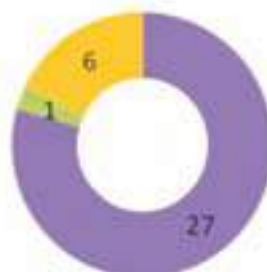
Molecular Biology & Biotechnology



Mathematical Sciences



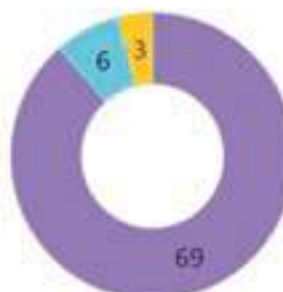
Sociology



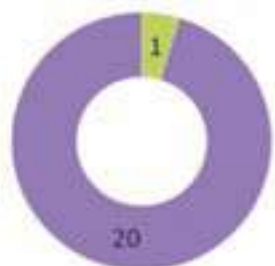
Cultural Studies



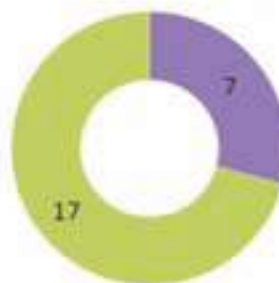
MCJ



English & Foreign Languages



Hindi



Centre For Open And Distance Learning (CODL)



Research and Development Profile

- The office of the Dean, R&D facilitates the implementation and smooth functioning of extramural research projects funded by the various Government and non-Government funding agencies like UGC, DST, DBT, DOI, AICTE, DAE, DRDO, DRL, ICMR, Ministry of Earth Science, Ministry of Food Processing Industries, MNRE, ONGC and others. The office of the Dean, R&D is responsible for the advertisement and appointment of project staff; allows conduct of field trips/visits as required by the project staff and PIs and Co-PIs; granting permission to attend workshops/seminars/symposiums/ conferences by the PI/Co-PI/project staff as well as allow them to visit to different research laboratories. In addition, Departmental research projects such as UGC-SAP, UGC-BSR startup grants, DBT Biotech Hub, and DBT Strengthening of Biotechnology Teaching, Training and Research in Universities and Colleges in Northeast India. Dean R&D regularly conducts the meetings of Tezpur University Ethical Committee, Tezpur University Animal Ethical Committee and Institutional Biosafety Committee. This office also coordinates the implementation of projects approved by ONGC-CPBT, which is an instance of Academy-Industry collaboration.
- During the year 2015-2016 this office has forwarded several research proposals for consideration of approval to the funding agencies. At present total 160 research projects are ongoing of which 140 are major research projects and 20 are minor research projects with a financial outlay of Rs. 5397.11 lakhs. During 2015-2016 total 30 new projects were sanctioned. Ongoing projects also include eight international collaborative projects of which four projects are under UKIERI scheme, two Indo-Russian projects, one with CEFIPRA (Indo-French) and one project is Indo-UK collaboration. The maximum grant received in a single project is Rs. 332.77 lakhs. Twelve departments are funded by UGC-SAP of which 7 departments are supported by DRS-I and 5 departments are supported by DRS-II. The research works conducted in these projects/schemes have led to publication of research papers in peer-reviewed, high impact factor national and international journals. Further, these projects have augmented the research skills of the project staff and have created trained manpower to cater the need of the society.
- The office also facilitates consultancy projects undertaken by the faculty members of the University. Total amount of Rs. 10, 40, 268 was earned during 2015-2016 as consultancy fee by individual faculty as well as by the departments from various Schools.
- The office is also entrusted with the collection/ deposition and maintenance of records of analytical service charge for the sophisticated instruments housed at Sophisticated Analytical Instruments Facility (SAIF) and various departments. During the year of report, Rs. 10, 33,199 was collected as analytical service charge from internal users (within the University) as well as users from various other Universities, research institutes and industries.
- This office also looks after and maintains the records of the fellowships granted to the Ph.D. students by external funding agencies. During the year under report, the following number of students received the fellowships/scholarships mentioned:

| <i>Name of Fellowship/ Scholarship</i> | <i>Number of Students</i> | <i>Name of Fellowship/ Scholarship</i> | <i>Number of Students</i> |
|--|---------------------------|--|---------------------------|
| <i>RGNF fellowship:</i> | <i>19</i> | <i>MNRF SRF:</i> | <i>1</i> |
| <i>UGC-NET JRF/SRF:</i> | <i>20</i> | <i>DBT JRF:</i> | <i>3</i> |
| <i>DST INSPIRE fellowship:</i> | <i>20</i> | <i>CSIR JRF/SRF:</i> | <i>24</i> |
| <i>ICSSR JRF:</i> | <i>2</i> | <i>UGCMANF</i> | <i>3</i> |



Student Profile

The office of the Dean Students' Welfare provides ample scope, opportunities and facilities for the all-round development of personality and leadership qualities among the students. The University boasts of a vibrant student community actively involved in sports, cultural, literary and other extra-curricular activities. Major events during April 2015-March 2016.

TEZPUR UNIVERSITY STUDENTS' COUNCIL-2015 (TUSC) ELECTION

The 18th Students' Council was formed through election held during 25-02-15 to 16-03-15.

The elected body took charge on 16-03-2015. Mr Arindam Khound, Vice President of TUSC, took over as president of Tezpur University Student's Council for 6 months (15.03.2016 to 30.09.2016). This was required to facilitate the transition from Vice Presidential form of election to Presidential form of election. Most of the existing office bearers of TUSC 2015 were reappointed by students as extended TUSC 2016 except ex-student members. Moreover the election timing was also changed from March to September.

Names of TUSC members:

- | | |
|--------------------------------------|-----------------------|
| 1. Vice President | : Arindam Khound, |
| 2. General Secretary | : Shivam Mahate, |
| 3. Asstt. General Secretary | : Jitesh Kumar, |
| 4. Indoor Games Sports Secretary | : Mukul Anand, |
| 5. Outdoor Games Sports Secretary | : Saurabh Anand, |
| 6. Cultural Coordinator | : Seema Devi Yein, |
| 7. Magazine Secretary | : Prithvi Raj Saikia, |
| 8. Hobby Club Secretary | : Pallab Kr. Das, |
| 9. Executive Member, MA in Sociology | : Tania Sen, |
| 10. Executive Member, MA in MCJ | : Abhishek Das, |
| 11. Executive Member, BTech, ME | : Kedar Chetry |

Students Discipline

The office of the Dean Students' Welfare looks after students' discipline. The Anti-Ragging committees and Anti Ragging squads kept a constant vigil to keep the University Ragging Free. The University boasts of zero incidence of disruption of academic activities because of any students' unrest. This has been possible only because of the active involvement of the administration and faculty members including active grievance redressal mechanism which is available both online and offline.

Students' Activities

The student community of the University is actively involved in sports, cultural, literary and other co-curricular activities. Sports and cultural events are a regular feature in the campus wherein a large number of students take part. A brief note on the cultural and sports activities is as follows:

The cultural section of the University is proactive in providing facilities to the students. Music Practice room at Students' Activity Centre, Kalaguru Bishnu Prasad Rabha Auditorium, Community Hall, Chandra Prabha Saikiani Bhawan are some of the facilities for practice and performing. There are different instruments like, Guitars, Drum Set, Synthesizer, Dhol, BorDhol, KobiDhol, Madol, Doba, Pepa, Bahi, Gogona, Kham, Khol etc. available for the use of the interested students.



The University has established good infrastructure and support system for Sports and Games. Some of the major facilities are

- Football ground with night light facility
- One 400 meter track cum cricket field with night light facility
- Two Basketball courts with night light facility
- Two Volleyball courts with night light facility
- One Tennis court with night light facility
- One Indoor Stadium (Badminton court with YY Yonex Synthetic mat)
- A gymnasium with world class weider product, USA and Afton product

Selected list of Cultural and Literary Events

- All Assam Inter Institutional Bihu Competition on 25 April, 2015 (participant institutions are JB College, Jorhat, AEC, Guwahati, Assam Down Town University, Guwahati and Tezpur University, Tezpur)
- Rabha Divas Celebration on 19 June 2015 (Invited guests - Mrs. Malaya Goswami & Dr Parineeta Goswami)
- Tribute to Kaviguru Rabindranath Tagore on 7 August 2015 (Invited guest - Prof Nandita Goswami Bhattacharyya)
- Independence Day Celebration on 15 August 2015
- Cultural Programme in Honour of Governor of Arunachal Pradesh on 23 September 2015 (Shri J P Rajkhowa, Hon'ble Governor of Arunachal Pradesh)
- SPICMACAY Kathak recital on 1 October, 2015 (Invited artist - Mrs Sreeparna Chakraborty)
- Peace Concert on 2 October, 2015
- SPICMACAY Sitar recital on 8 October, 2015 (Invited artist Mr Supratik Sengupta)
- Cultural evening in honour of the Governor of Assam on 29 October 2015 (Shri J.B Pattanaik, Hon'ble Governor of Assam)
- Tribute to Dr Bhupen Hazarika on 5 November, 2015 (Invited guest - Sri Pranjal Saikia)
- Staged a Play, Vastraharan by the students of TU on 13 November, 2015
- Shilpi Divas Celebration on 17 January 2016
- Foundation Day Cultural Programme on 21 January 2016
- Republic Day Celebration on 26 January 2016
- Flute recital in association with SPICMACAY on 8 March, 2016 (Invited guest Pt. Hari Prasad Chaurasia)
- Staging of a Play Adhe Adhureon 28 March 2016 (Invited artist - Dr Zahanara Begum and her Team)

ANNUAL MEET 2016

The Annual Meet 2016 of Tezpur University was organized by the Students Council during February 18-20, 2016. Under the sports and cultural category there were both group and individual competitions. The group competitions are either Inter-Departmental or Inter-Hostel. Some of the major competitions are Dances, Drama, Song, Literary, Debate, Photography, Fine Arts, Wall Magazine, Cultural procession etc. In the sports category, competitions started in the month of August, 2015 with Football, Volleyball, Basketball, Badminton and Table tennis competitions. The concluding session was held during 18 to 20 February, 2016. Indian sportswoman in weightlifting from North Eastern Region and World champion Madam Namcirakpam Kunjarani Devi graced the occasion of Tezpur University Annual Meet as chief guest. This year in the grand cultural night organized on the last day of the Annual Week, reputed artist from Assam Zubeen Garg enthralled the audience with his melodies.

**Overall Best performers of Sports and Cultural category of 19th Annual Meet 2015-16**

| EVENT | Name |
|--|------------------------------------|
| Best Lifter (M) | DhrubaJyotiGogoi |
| Strong Man, 2016 | DhrubaJyotiGogoi |
| Strong Woman, 2016 | Monikangna Dutta |
| Champion of the Champion 2016, (M) | ArindomKhound |
| Arm Wrestling (Champion of the Champion) Women | SanjuriRajkumari |
| Best Player Football (Men) | BishanRawat |
| Best Player Volleyball (Women) | Manisha Doley |
| Best Player Volleyball (Men) | TridipMili |
| Best Player Basketball (Men) | Nayanjyoti Dutta |
| Best Player Basketball (Women) | Kirti A. Singh |
| Man of the series Cricket (Men) | Jumol Hazarika |
| Best Commander (Men) | NurNazibur Rahman |
| Best Commander (Women) | Deva Rashmi Choudhury |
| Marathon (Men) | Anirban Sharma |
| Marathon (Women) | Nirjmoni Bora |
| Best Athlete (Men) | Anirban Sharma |
| Best Athlete (Women) | Binita Hazarika |
| Mr. Tezpur University | Tahraj Rahman |
| Best Archer (Man) | ArunRathi |
| Best Singer | Anurag Baruah |
| Best Director | AnkitaSaikia and Muktikam Hazarika |
| Best Actor | AkhilKashyap |
| Best Actress | SwagataBharali |
| Best Supporting Actor | Birinchi Kumar Nath |
| Best Supporting Actress | GeetanjaliChetry |
| Best Actor in Comedy Role | Abhishek Paul |
| Best Bihuwa | PranjalPratim Das |
| Best Bihuwati | BhabanaChutia |
| Best Dhulia | BiplabChetia |

ZONAL AND NATIONAL ACCOLADES

The students participated in the following zonal and national events:

Inter University East Zone Youth Festival, 2016 (IUEZYF)

Inter University East Zone Youth Festival (IUEZYF), 2016 was organized by Association of Indian Universities and sponsored by Ministry of Youth Affairs and Sports, Govt. of India in association with Tezpur University during 3-7 January 2016.

Renowned litterateur PadmashriBirendranath Dutta graced the inaugural ceremony as a Chief Guest. Prof Furqan Qamar, Secretary General, AIU, Sampson David, Joint Secretary, AIU, Shri RP Sharma, MP, Sonitpur Constituency were the Guest of Honour. A total of 21 Indian Universities participated with 695 participants.

A team of 40 students of Tezpur University participated in cultural and literary competitions and successfully begged the Champion Trophy.

Details of the achievements of Tezpur University team in IUEZYF, 2016 are as follows:

- 1st Prize in 1) Folk Orchestra, 2) Debate, 3) On spot photography, 4) Rangoli, 5) Installation, and 6) Folk Dance.
- 2nd Prize in 1) Indian Group Song, 2) Light Vocal, 3) Western Group Song, 4) Western Vocal Solo, 5) Quiz, 6) Poster Making, 7) One act play, and 8) Mime.
- 3rd Prize in 1) Classical Dance, 2) Elocution, 3) Collage, 4) On spot painting, and 5) Skit

Tezpur University team is adjudged as the Best Team in 1) Literary, 2) Fine Arts, and 3) Dance category.

Tezpur University was awarded the Best University Trophy.



**Inter University National Youth Festival 2016**

Inter University National Youth Festival 2016 was organized by Association of Indian Universities, sponsored by Ministry of Youth Affairs and Sports, Govt. of India in association with University of Mysore, in Mysuru during 15-19 February 2016. Thirty three participants from Tezpur University participated in various cultural and literary events with following accolades.

- 1st Prize in On Spot Photography
- 2nd Prize in 1) Folk Orchestra, 2) Group song Indian, and 3) Light Vocal
- 3rd Prize in 1) Installation, 2) One Act Play, and 3) Debate
- 4th Position in Quiz

Students participation in different Sports activities inside and outside the campus

In the year 2015, the students participated in Badminton Tournament organized by KIIT U, Orissa (East Zone, AIU) from 17th to 22nd of September, Cricket Tournament organized by Mithila University (East Zone, AIU) from 17th to 22nd of December and in Archery Competition organized by Punjabi University (All India AIU) from 22nd -26th of January.

The student won the second prize in All Assam Body-building competition organized in Haflong during 9 -10 October, 2015.

ACHIEVEMENTS IN REGIONAL COMPETITIONS**Debate**

The students of Tezpur University received accolades in various Debate Competitions organized in different parts of the region. Some of the remarkable achievements are:

- TU Team bagged the Best Debater, Best Team prize in 9th Parag Das Memorial All Assam Inter College and University Debate Competition organized by Sadi Pratidin Guthion 23 August 2015
- TU Team bagged 3rd Best Debater and Best Team prize in Basanta Kumar Baruah Memorial All Assam Prize Money Debating Competition organized by Luit Valey Academy on 4 September 2015
- TU Team bagged the 2nd Best Team in 34th K.C Kakati Memorial Inter College/University Debate Competition organized by JB college, Jorhat on 19th September 2015
- TU Team bagged the 2nd Best Team in All Assam Debate Competition organized by Socio Cultural Science Society on 20th Sept 2015
- TU Team bagged the Best Team prize in All Assam Debating Prize Money Competition organized by Durnakanta Memorial Trust and Golaghat Purbanchalik College, Hathiyekhowa (Golaghat) on 24 September, 2015
- TU Team bagged the 2nd Best Team in 53rd Bholaborooah memorial North East level inter college and University Debate competition organized by B. Borooah College on 29 September, 2015
- TU Team bagged the Best Team prize in 24th Jatiya Swahid Memorial All Assam Inter College Debating Competition organized by Bahona College, Jorhat on 3 October, 2015.
- TU Team bagged the 2nd Best Debater prize in Tanu Konwar Memorial Debate Competition organized by Gargaon College, Gargaon, Sivasagar on 10 October 2015
- TU Team bagged the 2nd Best Team in 4th Inter College/University Prize money debate competition organized by Pragjyotika Group of Institutions, Titabar, Jorhat on 7 November, 2015.
- TU Team bagged the prestigious Best Debater for the motion: Best Debater against the motion award in Inter University Annual Debate Competition organized by Observer Research Foundation, Kolkata on 7 November, 2015

Bihu

Tezpur University Bihu Team was adjudged as Best Bihu Team in All Assam Bihu Competitions as listed below,

- All Assam Bihu Husori Competition organized by Tezpur University as a part of Spring Fest, Basantar Lahare Lahare during April, 2015
- All Assam level Bihu competition "Bordoisila" organized by Assam Engineering College, Guwahati as a part of their cultural festival Pyrokinesis on 17 March, 2016.

All Assam level Bihu competition "Jetuka" organized by Jorhat Engineering College, Jorhat as a part of their cultural festival Pheonix 2016 on 20 March, 2016.

THE STATUTORY BODIES



- ★ The Board of Management
- ★ The Planning Board
- ★ The Academic Council
- ★ The Finance Committee
- ★ The Building Committee

**THE BOARD OF MANAGEMENT**

(01/04/2015 – 31/03/2016)

| | |
|--|-------------------------------|
| Vice-Chancellor | Chairman |
| Pro Vice-Chancellor | Member |
| Dr Devi Singh Director, Indian Institute of Management Lucknow – 226 013 | Member (till 24.05.2015) |
| Prof Iftekhar Ahmed Dean, Film and Television Institute of India Pune – 411 004 | Member (till 24.05.2015) |
| Prof Partha S Ghosh B-10/7334, VASANT KNJU New Delhi – 110 070 | Member (till 24.05.2015) |
| Prof Birendra Nath Dutta 104 GopinathBordoloi Road Guwahati – 781003 | Member (till 24.05.2015) |
| Dr Lakshmi Goswami Goswami Nursing Home Tezpur – 784001 | Member |
| Prof SS Sarkar Dean, School of Management Sciences | Member |
| Prof SK Dolui Dept. of Chemical Sciences | Member |
| Dr P Anbarasan Dept. of Mass Communication & Journalism | Member |
| Mr S Mahapatra Dept. of Energy | Member (till 05.01.2016) |
| Shri SI Singh Dept. of Computer Science and Engineering | Member (w.e.f. 06.01.2016) |
| Finance Officer | Permanent Invitee |
| Controller of Examinations | Permanent Invitee |
| Student Representative | |
| Anjan Barman , Research Scholar, Dept. of MBBT | Special Invitee |
| Anup Sarma , MA, Dept. of EFL | Special Invitee |
| Kalyani Koushik , BTech, Dept. of Mechanical Engineering | Special Invitee |
| Registrar | Secretary |



THE PLANNING BOARD

(01/04/2015 – 31/03/2016)

Vice Chancellor

Pro Vice-Chancellor

Prof PJ Mahanta

Dean, School of Humanities & Social Sciences

Prof A Kumar

Dean, School of Sciences

Prof SS Sarkar

Dean, School of Management Sciences

Prof DK Bhattacharyya

Dean, School of Engineering

Prof DC Baruah

Dean, Student's Welfare

Prof Charu Lata Mahanta

Dean, Research & Development

Dr UK Das

Associate Dean, Planning & Development

Six teachers nominated by the Academic Council

Prof PK Das

Dept. of English & Foreign Languages

Prof MM Sarma

Dept. of English & Foreign Languages

Prof SM Hazarika

Dept. of Computer science & engineering

Prof RC Deka

Department of Chemical Sciences

Prof Nilakshi Das

Dept. of Physics

Dr RR Hoque

Dept. of Physics

Dr B P Sarmah

Dept. of Mathematical Sciences

Dr S Deka

Dept. of Civil Engineering

Ex-Officio Chairman

Member

Ex-Officio Member

Ex-Officio Member

Ex-Officio Member

Ex-Officio Member

Ex-Officio Member

Ex-Officio Member

Ex-Officio Member

Member
(till 21.03.2016)

Member
(w.e.f. 22.03.2016)

Member
(till 21.03.2016)

Member
(w.e.f. 22.03.2016)

Member
(till 21.03.2016)

Member
(w.e.f. 22.03.2016)

Member

Member
(till 21.03.2016)



| | |
|---|-------------------------------|
| Dr D Datta Department of Mechanical Engineering | Member (w.e.f. 22.03.2016) |
| Dr Juri Gogoi Konwar Dept. of Cultural Studies | Member (till 21.03.2016) |
| Dr Hemjyoti Medhi Department of English and Foreign Languages | Member (w.e.f. 22.03.2016) |
| One representative of MHRD Joint Secretary (Central Universities) Ministry of Human Resource Development Department of Higher Education ShastriBhawan, New Delhi-110115 | Member |
| One representative of UGC Prof V Sahni CIPOD, School of International Studies Jawaharlal Nehru University, New Delhi | Member |
| One representative of NEC Director (HRD & E) NEC, Nongrim Hill Shillong – 793003 | Member |
| One representative of State Govt. of Assam The Commissioner & Secretary Department of Higher Education, Govt. of Assam Dispur, Guwahati – 781006 | Member |
| Two nominees by the Board of Management Prof R Chakraborty Vice-Chancellor VidyaSagar University, West Bengal – 721102 | Member (till 03.02.2016) |
| Shri RK Dutta Former Chairman cum Managing Director Oil India Limited, Kolkata – 700071 | Member (till 03.02.2016) |
| Shri VK Verma Executive Director,HR&A Oil India Limited (OIL) Duliajan– 786602, Assam | Member (w.e.f. 22.03.2016) |
| Controller of Examinations | Permanent Invitee |
| Finance Officer | Permanent Invitee |
| Librarian | Permanent Invitee |
| Registrar | Ex-officio Secretary |



THE ACADEMIC COUNCIL

(01/04/2015 – 31/03/2016)

| | |
|--|---|
| Vice Chancellor | Ex-officio Chairman |
| Pro Vice Chancellor | Ex-officio Member |
| DEANS OF THE UNIVERSITY | |
| Prof SS Sarkar Dean, School of Management Sciences | Ex-officio Member |
| Prof PJ Mahanta Dean, School of Humanities & Social Sciences | Ex-officio Member |
| Prof DK Bhattacharyya Dean, School of Engineering | Ex-officio Member |
| Prof A Kumar Dean, School of Sciences | Ex-officio Member |
| Prof DC Baruah Dean, Student's Welfare | Ex-officio Member |
| Prof Charu Lata Mahanta Dean, Research & Development | Ex-officio Member |
| TWO PROFESSORS NOMINATED BY THE VICE CHANCELLOR | |
| Prof KK Baruah Dept. of Environmental Science | Member (till 29.06.2015) |
| Prof M Bora Dept. of Mathematical Sciences | Member (till 29.06.2015) |
| Prof MM Sarma Dept. of English and Foreign Languages | Member (w.e.f. 30.06.2015) |
| Prof Nashreen S Islam Dept. of Chemical Sciences | Member (w.e.f. 30.06.2015) |
| ALL HEADS OF DEPARTMENT/ CENTRE | |
| Prof PK Das HoD, Dept. of English and Foreign Languages | Ex-officio Member (till 7.10.2015) |
| Prof Madhumita Barbora HoD, Dept. of English and Foreign Languages | Ex-officio Member (w.e.f. 8.10.2015) |
| Dr DP Nath HoD, Dept. of Cultural Studies | Ex-officio Member |
| Prof D Das HoD, Dept. of Buisness Administration | Ex-officio Member |



| | |
|--|--|
| Prof D Hazarika HoD, Dept. of Dept. of Mathematical Sciences | Ex-officio Member (till 31.07.2015) |
| Dr BP Sarma HoD, Dept. of Mathematical Sciences | Ex-officio Member (w.e.f. 01.08.2015) |
| Dr A Bora HoD, Dept. of Mass Communication & Journalism | Ex-officio Member |
| Dr K Kikhi HoD, Dept. of Sociology | Ex-officio Member |
| Prof SM Hazarika HoD, Dept. of Computer Science & Engineering | Ex-officio Member |
| Prof S Bhattacharyya HoD, Dept. of Electronics & Communication Engineering | Ex-officio Member |
| Dr SK Ray HoD, Dept. of Molecular Biology & Biotechnology | Ex-officio Member |
| Dr GA Ahmed HoD, Dept. of Physics | Ex-officio Member |
| Dr AK Das HoD, Dept. of Environmental Science | Ex-officio Member |
| Dr MK Hazarika HoD, Dept. of Food Engineering & Technology | Ex-officio Member |
| Prof D Deka Dept. of Energy | Ex-officio Member |
| Prof RC Deka HoD, Dept. of Chemical Sciences | Ex-officio Member |
| Dr D Dutta HoD, Dept. of Civil Engineering | Ex-officio Member (till 05.02.2015) |
| Dr U K Das HoD, Dept. of Civil Engineering | Ex-officio Member (w.e.f. 06.02.2015) |
| Dr SK Tripathi HoD, Dept. of Hindi | Ex-officio Member |
| Prof SK Dutta HoD, Dept. of Social Works | Ex-officio Member |
| Dr Anjali Sharma HoD, Dept. of Education | Ex-officio Member |
| Prof SS Sarkar HoD(i/c), Dept. of Commerce | Ex-officio Member |



| | |
|--|---------------------------------------|
| Prof N Sarma Head, Computer Centre | Ex-officio Member |
| Dr D Nath Head, Centre for Disaster Management | Ex-officio Member |
| Dr Madhurima Goswami Head, Women Studies Centre | Ex-officio Member |
| Prof RK Dev Goswami Head, Centre for Assamese Studies | Ex-officio Member |
| TWO ASSOCIATE PROFESSORS NOMINATED BY THE VICE CHANCELLOR | |
| Dr P Anbarasan Dept. of Mass Communication & Journalism | Member (till 12.10.2015) |
| Dr S Saharia Dept. of Computer Science and Engineering | Member (w.e.f. 13.10.2015) |
| Dr C Goswami Dept. of Business Administration Dr Ruli Bora Dept. of Chemical Sciences | Member (till 22.06.2015) Member |
| TWO ASSISTANT PROFESSORS NOMINATED BY THE VICE CHANCELLOR | |
| Mr SI Singh Dept. of Computer Science & Engineering | Member (till 29.06.2015) |
| Dr Heera Barpujari Dept. of Business Administration | Member (till 29.06.2015) |
| Dr Hemjyoti Medhi Dept. of English and Foreign Languages | Member (w.e.f. 30.06.2015) |
| Dr Joya Chakraborty Dept. of Mass Communication and Journalism | Member (w.e.f. 30.06.2015) |
| THREE NOMINEES OF THE BOARD OF MANAGEMENT | |
| Prof G Biswas Director, IIT Guwahati | Member |
| Prof BN Goswami Director, Indian Institute of Tropical Meteorology Pune – 411008 | Member (till 9.08.2015) |
| Prof Maitrayee Chaudhuri Jawaharlal Nehru University New Delhi – 110067 | Member (till 9.08.2015) |
| Prof IBS Passi Professor (Emeritus), INSA Senior Scientist and Honorary Professor, IISER Mohali Punjab University, Chandigarh – 160014 | Member (w.e.f 10.08.2015) |



| | |
|---|-----------------------------------|
| Prof B Boruah Professor of Philosophy Delhi, New Delhi – 110016 | Member (w.e.f. 10.08.2015) IIT |
| ONE REPRESENTATIVE OF UGC | |
| Dr (Ms) Santosh Satya Professor, Centre for Rural Development and Technology IIT Delhi, New Delhi – 110016 | Member (w.e.f. 16.03.2016) |
| ONE REPRESENTATIVE OF THE MHRD | |
| Mr VVR Shastri Former Chairman and Managing Director Bharat Electronic Ltd., Bangalore | Member |
| ONE REPRESENTATIVE OF NEC | |
| Director (HRD&E) North Eastern Council, Shillong – 793003 | Member |
| ONE REPRESENTATIVE OF STATE GOVT OF ASSAM | |
| Commissioner & Secretary / Principal Secretary In-Charge Dept. of Higher Education, Govt of Assam, Guwahati – 781006 | Ex-officio Member |
| Dr L Boral Controller of Examinations | Ex-officio Member |
| Librarian | Ex-officio Member |
| Registrar | Ex-officio Secretary |



THE FINANCE COMMITTEE

(01/04/2015 – 31/03/2016)

| | |
|---|------------------|
| Vice Chancellor | Chairman |
| Pro Vice-Chancellor Joint Secretary and Financial Advisor, MHRD or his/her nominee from Finance Bureau of MHRD not below the rank of Deputy Secretary | Member Member |
| Joint Secretary (CU&L) of MHRD, or His/her nominee not below the rank of Joint Secretary to the Govt. of India | Member |
| Joint Secretary (CU) , UGC or any other Joint Secretary level Officer nominated by the Chairman, UGC | Member |
| Ms Rupshikha Saikia Borah Director, Finance, Oil India Ltd. Noida, Uttar Pradesh | Member |
| Mr AG West Kharkongor Director (Finance) NEEPCO Ltd, Shillong – 793003 | Member |
| Prof SS Sarkar Dean, School of Management Sciences Tezpur University | Member |
| Finance Officer | Secretary |

**THE BUILDING COMMITTEE****(01/04/2015 – 31/03/2016)**

| | |
|---|-----------|
| Vice-Chancellor | Chairman |
| Pro Vice-Chancellor | Member |
| Mr B K Das Chief Engineer, Public Works Department (Roads) Govt. of Assam, Guwahati – 781003 | Member |
| Prof A Dutta Dept. of Civil Engineering IIT Guwahati, Guwahati – 781039 | Member |
| Superintending Engineer, PWD (Building) Tezpur Building Circle Tezpur – 784001 | Member |
| Mr D Saikia Dy. Architect, PWD Govt. of Assam, Guwahati – 781003 | Member |
| Dr Lakshmi Goswami Goswami Nursing Home Tezpur – 784001 | Member |
| Executive Engineer | Member |
| Finance Officer | Member |
| Registrar | Secretary |



ACADEMIC DEPARTMENTS AND CENTRES

- School of Engineering
- School of Humanities and Social Sciences
- School of Management Sciences
- School of Sciences
- Centre for Open and Distance Learning
- Community College

• School of Engineering

Dept. of Civil Engineering

Dept. of Computer Science and Engineering

Dept. of Electronics and Communication Engineering

Dept. of Energy

Dept. of Food Engineering and Technology

Dept. of Mechanical Engineering





SCHOOL OF ENGINEERING

The School of Engineering (SoE) of Tezpur University that was established in the year 2006 with the introduction of BTech programmes in three disciplines, viz., Computer Science and Engineering, Electronics and Communication Engineering and Mechanical Engineering has completed another eventful year. The School has developed over the years and has six departments and is now offering BTech programmes in six disciplines with the addition of the disciplines of Civil Engineering, Food Engineering and Technology, and Electrical Engineering. Some of the PG programmes, which are now part of this school started as early as 1994. The departments of Computer Science and Engineering, Electronics and Communication Engineering, Mechanical Engineering, Food Engineering and Technology, and Energy are offering MTech programmes. All six departments offer Ph.D. programmes. This school strives to produce skilled professionals at UG, PG as well as doctoral levels and also promotes research with emphasis on innovative technologies. Research is an integral component of the academic programmes.

The School is constantly striving to improve its output in terms of both knowledge and employability of its graduates. The School has effectively utilized the financial support from AICTE through its Institutional Development Plan (IDP) for capacity building of both faculty and students, infrastructure development, and enhancement of laboratory facilities for enhanced teaching and learning outcomes to keep pace with the changing global scenario of technical education.

A few of the significant events that were organized in the School are highlighted below.

- **NBA accreditation obtained**
NBA has accredited the BTech courses of CSE, ECE, ME and FET after the visit of an expert team during 6-8 Nov., 2015.
- **AICTE supported NEQIP grant**
The Institutional Development Plan (IDP) for the School of Engineering (SoE) submitted to the AICTE under the NEQIP programme was approved with the sanction of Rs. 681.47 Lakh for the period of 2014-2017.
- **AICTE approved programmes**
The MTech programmes in Bioelectronics; Electronics Design and Technology, Energy Technology, Information Technology, Food Engineering and Technology, Mechanical Engineering and the BTech programmes in Electronics and Communication Engineering, Computer Science and Engineering, Civil Engineering, Mechanical Engineering are approved by AICTE.
QIP centre approved by AICTE has started in SoE from 2016.
- **Meeting with AICTE nominated NEQIP Mentor**
A meeting with the AICTE nominated NEQIP Mentor, Professor B Bandopadhyay from IIT Mumbai was organized on 29 Dec. 2015 to 1 Jan, 2016 to discuss effective implementation of AICTE NEQIP project.
- **Formation of Governing Body (GB) for School of Engineering**
The Governing Body includes eminent scholars and industrialists such as Professor S Dasgupta, Vice Chancellor, Assam University, Silchar, Professor S Majhi, IIT G, Professor Probin K Bora, IITG, Professor Sajal K Deb, IITG and Mr. Abhijit Barooah, MD, Premier Cryogenics Ltd, Guwahati, Assam. The first meeting of the GB was held on 20 August, 2015.
- **Establishment of state of the art high performance computing infrastructure for scientific computing**
PARAM –TEZ, a High Performance Computing Centre was inaugurated in the Department of Computer Science



and Engineering of Tezpur University. This Centre is being set up at Tezpur University in collaboration with C-DAC Pune and is sponsored by DeitY. This sophisticated facility is expected to meet the high performance computing needs of researchers from all over North East India. The facility consists of 12 TF HPC system having 50TB of storage capacity along with three numbers of C-DAC's indigenously built PARAM Shavak having computing power of around 3TF each.

- **Financial Support for Faculty Development Programme**
As part of Faculty and Staff Development Scheme of AICTE NEQIP, 63 faculty members availed the facility to attend conferences and workshop within India with travel, accommodation and registration support.
- **AICTE GATE linked Scholarship**
AICTE GATE linked Scholarship was disbursed to a total 113 M Tech 1st year and 2nd year students at a revised rate from August, 2015 to June 2016.
- **Introduction of BVoc Programme**
Two BVoc programmes of 3 years duration in (i) Food Processing and (ii) Renewable Energy and Management were started from the academic session 2015-2016.

Dean, School of Engineering

Professor Charu Lata Mahanta

E-mail: charu@tezu.ernet.in

THE STAFF OF THE OFFICE OF THE DEAN

J C Das, Diploma (SCTE, Assam)

Sr. Technical Assistant

E-mail: djibon@tezu.ernet.in

URoy, MA (Tezpur)

UDC

E-mail: uttamroy@tezu.ernet.in

MTS

B Bora

D Mahanta



DEPARTMENT OF CIVIL ENGINEERING

THE DEPARTMENT

The Department of Civil Engineering was established in 2009 under the School of Engineering with a BTech programme. A PhD programme was initiated in winter, 2010. The Department aims at providing quality education and guidance to students and researchers. So far the Department has produced four batches of civil engineers out of which about 50% are now employed (on and off campus); the other 30% are pursuing higher studies. The Department, funded by AICTE-NEQIP, has established well equipped laboratories and plans to start an MTech programme in 2017. In addition to academic and research activities, the Department has also been extending its expertise to various sectors through consultancy.

Academic Programmes and Student Intake

| Academic programmes | Student Intake |
|----------------------------|--|
| BTech in Civil Engineering | 60 |
| PhD | Intake variable 03 in the Academic year 2015-16 |

Major facilities and equipment available

| Laboratory | Equipments available |
|-------------------------------------|----------------------------------|
| Structural Laboratory | UTM |
| | CTM |
| Geotechnical Engineering Laboratory | Advanced Triaxial |
| | Direct shear |
| Transportation Laboratory | CBR |
| | Marshall Apparatus |
| Environmental Laboratory | BOD Incubator |
| | COD Reactor |
| Surveying Laboratory | Total Station |
| Structural and NDT Laboratory | Ultrasonic Pulse Velocity Tester |
| | Rebound Hammer |



**MAJOR RESEARCH FINDINGS/RESEARCH AND DEVELOPMENT ACTIVITIES**

| Principal Investigator | Salient Research Findings |
|------------------------|--|
| B K Narzary | Performance Evaluation of E-Waste modified soil and bituminous mixture <ul style="list-style-type: none"> The E-waste chips enhances the unsoaked CBR value of soil whenlaying it between layers of soil. The E-waste chips enhances the 4 day soaked CBR value of soil whenlaying it between layers of soil. Soaked CBR value of soil-ewaste composite depends on size of thee-waste chips. Large sized chips reduces permeability |
| K U Ahamad | Water Quality Index for Ground Water of Amolapam Village <ul style="list-style-type: none"> Small variation in the depth of ground water table across the study area; Strong relationship between pH and Turbidity, electrical conductivity,temperature, fluoride, hardness, iron and total dissolved solids and apoor association between pH and dissolved oxygen, alkalinity, total solidsand total suspended solids were observed; Groundwater quality parameters in most of sites were found satisfactoryfor domestic use. |
| U K Das | Reduction of building plinth wall thickness by application of coir/ Jute as Geotextile and waste material as anchor bar <ul style="list-style-type: none"> Inclusion of randomly distributed coir fiber in soil enhances engineering properties of the soil Tyre Ropes has shown good anchorage with the soil under study |

Research projects, ongoing and new

| Project Title | Funding Agency | Amount (in INR) | Duration | Principal Investigator |
|---|----------------|-----------------|-----------|------------------------|
| Performance Evaluation of E-Waste modified soil and bituminous mixture | UGC | 0.69 lakh | 2015-2017 | B K Narzary |
| Water Quality Index for Ground Water of Amolapam Village | UGC | 0.80 lakh | 2015-2017 | K U Ahamad |
| A study on the reduction of building plinth wall thickness by application of coir/ Jute as Geotextile and waste material as anchor bar. | UGC | 0.90 lakh | 2015-2017 | U K Das |

PUBLICATIONS**In International and National Journals**

Ahamad, K. U., Narzary, B. K., Mudoi, P., Rani, R., Bharati, V., and Singh, H. Application of Regression Analysis for Surface Water Quality Modelling, Journal of Mechanical and Civil Engineering (IOSR-JMCE), 1, 2015.

Chakraborty, A. and Roy, S. Study on the properties of Expansive Clayey Soil using Coconut Husk Ash (CHA) as Stabilizer. ADBU Journal of Engineering Technology, 4(1), 2016.

Chakraborty, A., Borah, A. and Sarmah, D. Stabilization of Expansive Soil using Sugarcane Straw Ash (SSA). ADBU Journal of Engineering Technology, 4(1), 2016.

Deka S., Dash, S. K. and Sreedeeep, S. Strength of Lime treated Fly Ash using Bentonite. Geotechnical Engineering Journal of the SEAGS & AGSSEA, 46(3), 2015.

Hussain I, Ahamad K. U. and Nath P. Water Turbidity Sensing using a Smart Phone, RSC Advances, 6, 2016.

Hussain, I., Das, M., Ahamad, K. U. and Nath, P. Water salinity detection using a smartphone. Sensors and Actuators B: Chemical, 239,

Saikia, A. Active Vibration Isolation by Open and In-filled Trenches: A Comparative Study. ADBU Journal of Engineering Technology, 4(1), 2016.

Saikia, A. Consolidation settlement of NC clays with mean stress ratio approach. Discovery, 40(184), 2015.

Saikia, A., Narzary, B. K., and Bharali, J. D. Average vertical stress over a stratum beneath uniformly loaded square/circular footings. Journal of Mechanical and Civil Engineering (IOSR-JMCE), 1, 2015.



Sonowal, D. B., Bharali, J. D., Agarwal, M. K., Sharma, N. and Hazarika, P. Analysis and Design of 220 KV Transmission Line Tower (A conventional method of Analysis and Indian Code based Design). Journal of Mechanical and Civil Engineering (IOSR-JMCE), 1, 2015.

Conference proceedings

Ahamad, K.U., Sharma, M. R., Narzary, B. K., and Bharali, J. D. Co-Precipitation of As(III) And F^- With Fe(II) Precipitation in Aqueous Phase. Proceedings of the National Seminar cum Workshop on Advances in Civil & Infrastructure Engineering (ACIE), Organized by Tezpur University, 2015.

Ahamad, K. U., Sharma, M. R., Singh, R., Rani, R., Singh, H., Bharati, V., Baruah, I., and Choudhury, H. Ground Water Quality Parameter Evaluation for Rural Tezpur Using Regression and Correlation Analysis. Proceedings of the National Seminar cum Workshop on Advances in Civil & Infrastructure Engineering (ACIE), Organized by Tezpur University, 2015.

Barua, E., Kirtania, S. and Das, A. Determination of elastic moduli of single layered graphene sheets using finite element method. Proceedings of the National Seminar cum Workshop on Advances in Civil & Infrastructure Engineering (ACIE), Organized by Tezpur University, 2015.

Chakraborty, A. Effect of using Waste Glass Powder in Concrete- A Review. Proceedings of the National Seminar cum Workshop on Advances in Civil & Infrastructure Engineering (ACIE), Organized by Tezpur University, 2015.

Chakraborty, A. and Goswami, A. Review on the stabilization of expansive soil using Fly Ash. Proceedings of the National Conference on New Frontiers in Civil Engineering: Challenges and Opportunities in North-East India, organized by Department of Civil Engineering, Royal Group of Institutions, 2015.

Das, A., Ramaswamy, Bharali, J. D., and Sonowal, D. B. Estimation of creep and shrinkage strains in concrete. Proceedings of the National Seminar cum Workshop on Advances in Civil & Infrastructure Engineering (ACIE), Organized by Tezpur University, 2015.

Das, A., Buragohain, R., Barua, E. and Nath, M. K. Preparation of contour map for NIT Silchar using Google Earth. Proceedings of the National Seminar cum Workshop on Advances in Civil & Infrastructure Engineering (ACIE), Organized by Tezpur University, 2015.

Das, U. K. A study of Urban Landslide Management Scenario I Guwahati, Assam. Proceedings of the Indian Geotechnical Conference (IGC-2015) organized by Indian Geotechnical Society and College of Engineering, Pune, 2015.

Das, U. K., Das, S., Baruah, A., Choudhury, M., Talukdar, U., Kar, A., Mujumdar, A. and Saikia, H. A study on Waste Tyre Rope as Soil Reinforcement Material. Proceedings of the National Seminar cum Workshop on Advances in Civil & Infrastructure Engineering (ACIE), Organized by Tezpur University, 2015.

Deka, S., Saharia, A. M., Ahmed, A., Baruah, S., Bania, M. and Singh, J. Improvement of an Organic Soil using Admixtures. Proceedings of the National Seminar cum Workshop on Advances in Civil & Infrastructure Engineering (ACIE), Organized by Tezpur University, 2015.

Nath, M. K., Dutta, P. P., Chowdhury, A. and Das, A. Finite element analysis of laser bending process for D36 shipbuilding steel. Proceedings of the National Seminar cum Workshop on Advances in Civil & Infrastructure Engineering (ACIE), Organized by Tezpur University, 2015.

Saikia, A., Kumar, A., Jagadeesh, G., Vishwakarma, A., Naik, R. S., Singh, S. P. and Kumar, R. Improvement of clayey soil using cement admixture. Proceedings of the National Seminar cum Workshop on Advances in Civil & Infrastructure Engineering (ACIE), Organized by Tezpur University, 2015.

Saikia, A. Effects of backfill material properties on vibration isolation effectiveness of in-filled trenches. Proceedings of the National Seminar cum Workshop on Advances in Civil & Infrastructure Engineering (ACIE), Organized by Tezpur University, 2015.

Sonowal, D. B., Khan, A., Gogoi, A. and Paswan, V. Health Assessment of an Existing Concrete Structure with the help of Existing pulse Velocity and Schmidt Rebound Hammer Tests. Proceedings of the National Seminar cum Workshop on Advances in Civil & Infrastructure Engineering (ACIE), Organized by Tezpur University, 2015.

Sonowal, D. B., Agarwalla, M. K., Sharma, N. and Hazarika, P. 2-Dimensional Analysis of 220 KV transmission line tower (As per Indian Standard Code of Practice). Proceedings of the National Seminar cum Workshop on Advances in Civil & Infrastructure Engineering (ACIE), Organized by Tezpur University, 2015.

**Books and Book Chapters**

Ahamad, K. U., Medhi N., Kumar V. and Nikhil N. 2015. Water Quality Evaluation in a Rural Stretch of Tezpur, Assam (India) using Water Quality Index and Correlation Matrix. In Kurisu, F., Ramanathan, A. L., Kazmi, A., and Kumar M. (eds). Trends in Environmental Science and Technology, Capital-Springer Publication.

Chakraborty A. 2015. Concrete Technology. K.M. Publishing, Panbazar, Guwahati.

SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**International and National**

A Saikia attended an AICTE-NEQIP sponsored short term course, Recent Advances in Civil Engineering, Jorhat Engineering College, 8-12 December, 2015.

A Das attended a Two-week ISTE STTP on Introduction to Structural Engineering conducted by IIT Kgp, at Tezpur University, 30 November, 2015-9 January, 2016.

A Das attended an AICTE-NEQIP sponsored short term course on Recent Advances in Civil Engineering conducted by Jorhat Engineering College, Assam, 8-12 December, 2015.

A Das attended a National course on Practical Aspects of Finite Element Analysis conducted under TEQIP by IITG, Guwahati, 25-29 January, 2016.

A Das attended an AICTE-NEQIP sponsored two day National seminar cum workshop on Advances in Civil and Infrastructure Engineering conducted by Tezpur University, 8-9 May, 2015.

A Das attended an AICTE-NEQIP sponsored short term course on Advances in Mechanical Engineering and Industrial Applications conducted by Tezpur University, 20-24 July, 2015.

A Chakraborty attended a Two-week ISTE STTP on Introduction to Structural Engineering conducted by IIT Kharagpur at Tezpur University, 30 November, 2015-9 January, 2016.

B K Narzary attended a Two-week ISTE STTP Environmental Studies conducted by IIT Bombay, at Tezpur University, 2-12 June, 2015.

D B Sonowal coordinated a Two-week ISTE STTP on Introduction to Structural Engineering conducted by IIT Kharagpur at Tezpur University, 30 November 2015-9 January, 2016.

J D Bharali attended a Two-week ISTE STTP on Introduction to Structural Engineering conducted by IIT Kharagpur at Tezpur University, 30 November 2015-9 January, 2016.

K U Ahamad attended a Two-week ISTE STTP on Introduction to Structural Engineering conducted by IIT Kharagpur at Tezpur University, 30 November 2015-9 January, 2016.

R Buragohain attended a Two-week ISTE STTP on Introduction to Structural Engineering conducted by IIT Kharagpur at Tezpur University, 30 November 2015-9 January, 2016.

R Buragohain attended an AICTE-NEQIP sponsored short term course on Recent Advances in Civil Engineering conducted by JEC, Assam, JEC, Assam, 8-12 December, 2015.

S Deka attended a Two-week ISTE STTP on Introduction to Structural Engineering conducted by IIT Kharagpur at Tezpur University, 30 November 2015-9 January, 2016.

U K Das attended a Two-week ISTE STTP on Introduction to Structural Engineering conducted by IIT Kharagpur at Tezpur University, 30 November, 2015-9 January, 2016.

TALKS BY THE FACULTY ABROAD AND IN INDIA

D B Sonowal delivered a talk, Safe Buildings, at Conference Hall, Office of the Deputy Commissioner, Sonitpur, Tezpur, 24 February, 2016.

SEMINAR/WORKSHOP/SYMPOSIA/INVITED LECTURES ORGANISED BY THE DEPARTMENT

Star Pravin Mason Certificate Programme, in collaboration with Star Cement (Regional), 19 September, 2015.

AICTE-NEQIP Sponsored two day National Conference cum Workshop on Advances in Civil and Infrastructure Engineering (ACIE), 8-9 May, 2015.



Indo-US Water Innovation Conference, Jointly Organized by North Dakota State University (USA) and Tezpur University (India) concurrently at CME Auditorium at NDSU: Civil Engineering Conference Room, Tezpur University, 24 April, 2015.

DISTINGUISHED VISITORS TO THE DEPARTMENT

Mr A Das, Deputy General Manager, Gammon India Ltd., Kamrup, Assam
 Prof A Dutta, Department of Civil Engineering, IIT Guwahati.
 Prof D K Baidya, Department of Civil Engineering, IIT Kharagpur.
 Prof D Choudhury, Department of Civil Engineering, IIT Bombay.
 Mr I H Hazarika, Executive Director, NEEPCO, Brookland Compound, Meghalaya.
 Prof J Pathak, Department of Civil Engineering, Assam Engineering College, Guwahati.
 Prof N Sharma, Department of Water Resources Development and Management, IIT Roorkee.

AWARDS & HONOURS RECEIVED BY THE FACULTY/ RESEARCH SCHOLARS/STUDENTS

Ankur Gogoi and Bhintumoni Deori, Core Members of the Folk Orchestra Team of the University that received the best Regional and Folk Team Award in the 8th South Asian Universities International Youth Festival, 2015.
 Eisa Ahmed Ghaznavi awarded Gold Medal in Western Vocal Solo in the 30th Inter University East Zone Youth Festival, Ranchi University, 2015.

NUMBER OF STUDENTS WHO PASSED NET-JRF/GATE[2015-2016]

GATE – 8
 GRE - 2

NOTABLE PLACEMENT [2015-2016]

Tech Mahindra – 2
 M/s KK Traders – 1
 KEC International Limited – 2
 WSP/ Parsons Brinckerhoff – 1

THE FACULTY OF THE DEPARTMENT

Associate Professor

UKDas, PhD (Gauhati)

Head of the Department & Associate Dean, Planning and Development

Specialization/Area of Interest: Geotechnical Engineering

E-mail: ukrdas@tezu.ernet.in

Assistant Professors

A Saikia, PhD (Tezpur)

Specialization/Area of Interest: Geotechnical Engineering

E-mail: asaikia@tezu.ernet.in

K U Ahamad, PhD (IIT Guwahati)

Specialization/Area of Interest: Environmental Engineering

E-mail: kahamad@tezu.ernet.in

D B Sonowal, MTech (IIT Roorkee)

Specialization/Area of Interest: Structural Engineering

E-mail: bailung@tezu.ernet.in

B K Narzary, MTech (IIT Guwahati)

Specialization/Area of Interest: Transportation Engineering

E-mail: binanda@tezu.ernet.in



S Deka, PhD (IIT Guwahati)
Specialization/Area of Interest: Geotechnical Engineering
E-mail: deka.s@tezu.ernet.in

J D Bharali, MTech (IIT Guwahati)
Specialization/Area of Interest: Transportation Engineering
E-mail: jdb@tezu.ernet.in

A Das, MTech (IISc Bangalore)
Specialization/Area of Interest: Structural Engineering
E-mail: adas@tezu.ernet.in

R Buragohain, MTech (IIT Guwahati)
Specialization/Area of Interest: Water Resource Engineering
E-mail: rbg@tezu.ernet.in

A Chakraborty, ME (AEC, Guwahati)
Specialization/Area of Interest: Geotechnical Engineering
E-mail: aru243@tezu.ernet.in

THE STAFF OF THE DEPARTMENT

Technical Staff

C Doley, MTech (IIT Gauhati),
Technical Officer
E-mail: chirajd@tezu.ernet.in

I Thawmung, Diploma
Technical Assistant
Email: iseng@tezu.ernet.in

P Kalita, Diploma
Technical Assistant
E-mail: pj@tezu.ernet.in

J Baruah, Diploma
Technical Assistant
E-mail: jahnu@tezu.ernet.in

Office Staff

PN Chauhan
LDC
E-mail: chauhan@tezu.ernet.in

C Mohammad
MTS
E-mail: chandmd@tezu.ernet.in





DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

THE DEPARTMENT

The vision of the Department is to be a dedicated center of learning and research in computer science and engineering. It is committed to create competent professionals capable of taking leading roles in industry, academia and application areas of the field. A High Performance Computing Centre was established in the Department in June 2015 in order to provide high end computing facilities to the scientific researchers from the North-East region. The Department is nominated by UGC as a Participant of BRICS Network University. The BTech programme of the Department in Computer Science & Engineering is accredited by National Board of Accreditation.

The thrust areas of research for the Department have been the following:

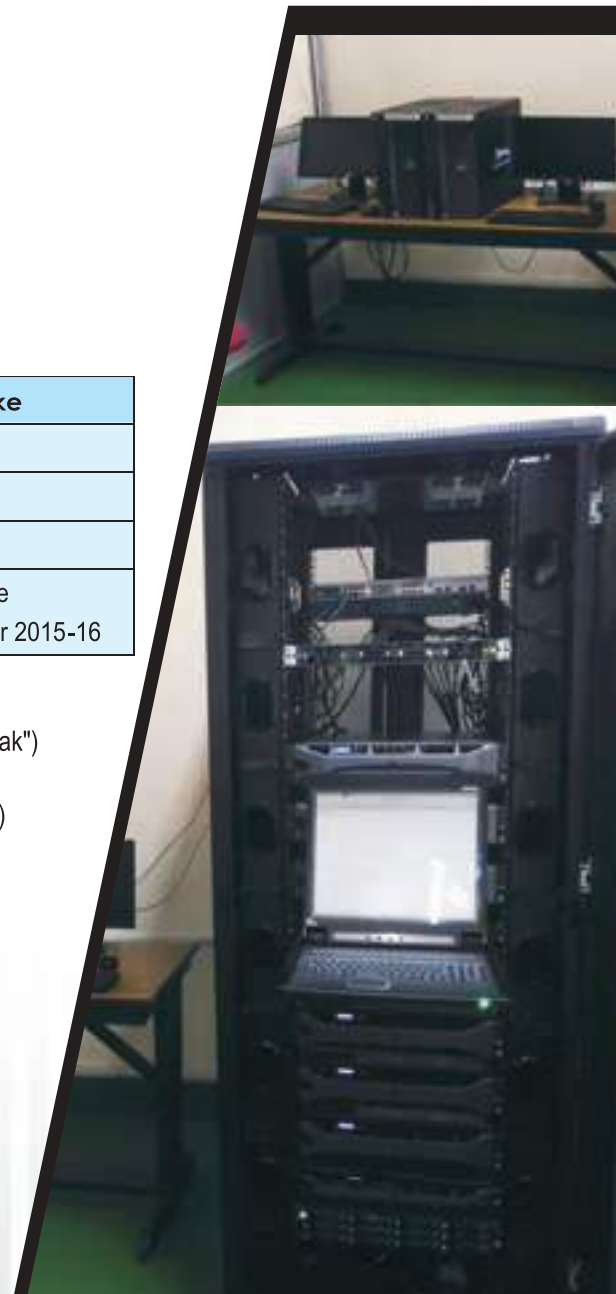
- Data Mining
- Bioinformatics
- Biomimetic and Cognitive Robotics
- Computer and Network Security
- Image Processing and Pattern Recognition
- Knowledge Representation and Reasoning
- Natural Language Processing
- Networks
- Optimization Techniques
- Workflow Analysis

Academic Programmes and Student intake

| Academic programmes | Student Intake |
|---|--|
| MTech in Information Technology | 30 |
| Master in Computer Application | 45 |
| BTech in Computer Science & Engineering | 60 |
| PhD in Computer Science & Engineering | Intake variable 03 in the Academic year 2015-16 |

Major facilities and equipment available

- High Performance Computing Center (Super Computer "ParamShavak")
- Cluster Computing Facility With Storage
- Embedded System Trainer Lab (8085 & Arm) Processor Based (2 Nos)
- Logic Analyzer
- Mixed Mode Oscilloscope
- Bench Mark Lan Trainer/I-Security
- Matrox Image System
- Ibm X3550 M3 Server
- Hp Elite 8300mt (15) Pcs
- Hp Workstation 8600/6600
- Cisco 2821 Router
- Cisco 4948 L3 Switch
- Cisco 3560 L3 Switch
- Sun Ultra 27 Ws
- Hp DI 380 Server





MAJOR RESEARCH FINDINGS/RESEARCH AND DEVELOPMENT ACTIVITIES

| Principal Investigator | Salient Research Findings |
|--|--|
| D K Bhattacharyya S M Hazarika U Sharma N Sarma | <p>MHRD Center of Excellence</p> <ol style="list-style-type: none"> 1. In Bioinformatics <ul style="list-style-type: none"> • An exhaustive survey on Big data analytics in bioinformatics is completed. • Developed a tool to extract protein-protein interaction (PPI) complexes from PPI network using unsupervised graph-based approach. • Developed a tool for core and peripheral connectivity -based cluster analysis over PPI network. • Developed a tool referred to as 'Strew Index' to evaluate the correspondence between a feature and a class label for any labeled dataset. a. Carried out an empirical study on existing protein complex detection methods. 2. In Network Security <ul style="list-style-type: none"> • Developed a robust FPGA based victim -end DDoS defense solution for all types of DDoS attacks. • Developed a statistical victim-end DDoS attack detection method to detect low- rate and high-rate attack. • Developed an efficient feature selection method using information theoretic approach. 3. In Natural Language Processing <p><i>Study of dialectal features of a spoken form of a language-</i></p> <ul style="list-style-type: none"> • Speech Processing -Identification of dialectal features in Nalbaria and All India Radio variety of Spoken Assamese. The study included the computation and analysis of the VOT values for the stops of the two dialectal variants. • Creation of heterogeneous corpus of Assamese language - spoken, printed (image), handwritten (image) and encoded text. • An HMM based Text To Speech System has been built using the HTS toolkit for synthesizing Assamese text. • We are trying to explore to what extent Voice Conversion techniques can be used for incorporating the accent associated with a dialect to the speech generated by the standard TTS. <p>Computational analysis of syntax of Manipuri Texts</p> <ul style="list-style-type: none"> • Collected an un-annotated text corpus of Manipuri of about 18 million words. • Developed transliteration software for conversion of Manipuri texts into Unicode (UTF-8) format. • Studied the syntax structure of Manipuri text and identified issues related to ambiguity, word order, etc. Also, studied different syntax models and parsing techniques that may be tried for Manipuri. <p>Processing of natural language data in different forms</p> <ul style="list-style-type: none"> • We are identifying the tools and techniques required for processing natural language data available in different formats, viz., speech, scanned images of handwritten and printed texts, and digitized texts encoded in different coding schemes. Towards this end we are building a heterogeneous Assamese corpus. 4. In Robotics <ul style="list-style-type: none"> • Performed the classification of human emotions using EEG data via two classification tasks resulting in four-state classification of emotions. • Proposed a collaborative control architecture for a robotic wheelchair with the aim of providing 'assistance as required'. The architecture is based on cBDI - an extension to the Belief-Desire-Intention model to support human-machine collaboration. • For a collaborative assistive device, human intent recognition (IR) is one of the first and foremost requirements. Formalizing the complex process of human IR in a compact yet expressive mathematical model holds promise. We put forward a Hierarchical Finite State Machine (H-FSM) for human IR within a generalized framework for collaborative assistive devices. • We propose an efficient representation schema for extended objects together with a simple recursive algorithm to extract spatial information. We evaluate our approach and demonstrate that, for Human Activity Recognition, the spatial information thus extracted leads to better models for video understanding. |

| | |
|---------------------|--|
| | <p>5. In Cognitive Radio Networks</p> <ul style="list-style-type: none"> • Developed a power allocation strategy for underlay Cognitive Radio Network. • Developed a Constrain based Cooperative Spectrum Sensing scheme for Cognitive Radio Networks. • Developed a Threshold Adaptive Cooperative Spectrum Sensing (TACSS) scheme for Ad-hoc Cognitive Radio. • Developed a capacity constraint distributed data dissemination protocol for Ad-hoc CRN. • Developed a Cross-Layer based Location-Aware Forwarding using Distributed TDMA MAC protocol for Ad-hoc Cognitive Radio Network. • Developed an Opportunity prediction at MAC layer sensing for Ad-hoc Cognitive Radio Network. • Developed a Dynamic virtual backbone based routing scheme in Cognitive Radio Network. • Setup of test-bed for TV-band field trace capturing, spectrum sensing (ISM band) using basic Energy detection. <p>6. In Multi-spectral and Hyper-spectral Satellite Data analysis-</p> <ul style="list-style-type: none"> • Completed an exhaustive survey on hyper-spectral satellite data analysis using ensemble approaches. • A method has been developed for hyper-spectral satellite data analysis using ensemble learning approach. • An efficient hyper-spectral satellite data classification method has been developed using SVM approach. • An efficient multi-spectral satellite data classification method has been developed using soft computing approach. |
| <p>N Sarma</p> | <p>Implementation of Distributed HoneyNet System at NE to collect Distribute and Analyze live cyber-attack data.</p> <ul style="list-style-type: none"> • The objective of this project is to collect Malware samples by implementing distributed HoneyNet system at different places in NE and to carry out further analysis of data. • MAC Protocol Design for Cognitive Radio Networks |
| <p>S M Hazarika</p> | <p>BCI as an Intelligent Sensor: BCI Integrated Collaborative Control of a Cognitively Enhanced Smart Wheel Chair</p> <ul style="list-style-type: none"> • A collaborative BDI architecture for control of Intelligent wheelchair • Estimation of mental fatigue on motor imagery have been accomplished |
| <p>S Patra</p> | <ul style="list-style-type: none"> • Advance Techniques for land-cover change detection in multi-temporal remote sensing images |



**Research projects, ongoing and new**

| Project Title | Funding Agency | Amount (in INR) | Duration | Principal Investigator |
|---|------------------|-----------------|------------------|--|
| Center of Excellence on Machine Learning and Big Data Analysis | MHRD | 400.00 lakh | 2014-2017 | D K Bhattacharyya S M Hazarika, U Sharma, N Sarma |
| Information Security Education and Awareness. MoU signed between TU and President of India to execute "Information Security Education and Awareness" project. | DeitY | 65.00 lakh | 2015-2020 | D K Bhattacharyya |
| Big Data Analytics- Bioinformatics, Network Security and Robotics | UGC SAP (DRS-II) | 77.00 lakh | 2014-2019 | D K Bhattacharyya |
| A High Performance Computing Center (Byinstalling Super Computer "ParamShevak")to provide high end computing facility to the scientific researchers of North-East region. | DeitY | 120.00 lakh | 2015- Onwards | D K Bhattacharyya &A Ranjan,C-DAC, Pune |
| Implementation of Distributed HoneynetSystem at North East to Collect, Distribute andAnalyze live Cyber-attack data. | C-DAC Mohali | 181.00 lakh | 2015-2018 | N Sarma |
| BCI Integrated Collaborative Control of a Cognitively Enhanced Smart Wheelchair. | UKIERI-DST | 27255 GBP | 2015-2016 | S M Hazarika |
| Advanced Techniques for LAND -COVER change detection in multi temporal remote sensing images. | UGC | 6.00 lakh | 2014-2016 | S Patra |

PUBLICATIONS**In International and National Journals**

Ahmed, H. A., Bhattacharyya, D. K. and Kalita, J. K. Core and peripheral connectivity based cluster analysis over PPI network, *Computational Biology and Chemistry*, 59, 2015.

Ahmed, H. A., Bhattacharyya, D. K. and Kalita, J. K. Strew index: An effective feature–class correlation measure, *Journal of Network Modeling Analysis in Health Informatics and Bioinformatics*, 4, 2015.

Baruah, U. and Hazarika S. M. A Dataset of Online Handwritten Assamese Characters, *Journal of Information Processing Systems*, 11(3), 2015.

Bhuyan M. H., Bhattacharyya, D. K. and Kalita J. K. A multi-step outlier-based anomaly detection approach to network-wide traffic, *Information Sciences Journal*, 348, 2016.

Bhuyan, B. and Sarma, N. Performance Comparison of a QoS Aware Routing Protocol for Wireless Sensor Networks, *Journal of Emerging Technology Trends in Electronics, Communication and Networking*, 8(1), 2016.

Borah, A. and Borah, B. A Spatial Domain Reversible Visible Watermarking, Technique for Textured Images, *International Journal of Computer, Applications*, 129(14), 2015.

Borah, S. K. and Sharma, U. Phrase and idioms identification in Assamese, *Procedia Computer Science*, 84, 2016.

Boro, D. and Bhattacharyya, D. K. Particle swarm optimisation-based KNN for improving KNN and ensemble classification performance, *International Journal of Innovative Computing and Applications*, 6, 2015.

Boro, D. and Bhattacharyya, D. K. DyProSD: a dynamic protocol specific defense for high-rate DDoS flooding attacks, *MicroSystem Technologies*, 22(6), 2016.

Buragohain, C., Kalita, M. J., Singh, S. and Bhattacharyya, D. K. Anomaly based DDoS Attack Detection, *International Journal of Computer Applications*, 123(17), 2015.

Chatterjee, B. C. and Sarma, N. Oki, Eiji, Routing and Spectrum Allocation in Elastic Optical Networks: A Tutorial, *IEEE Communications Surveys and Tutorials*, 17, 2015.



- Chettri, S. K. and Borah B. On analysis of time-series data with preserved privacy, *Innovations in Systems and Software Engineering*, 11(3), 2015.
- Chutia, D., Bhattacharyya D. K., Sarma, K. K., Kalita, R. and Sudhakar, S. Hyper spectral Remote Sensing Classifications: A Perspective Survey, *Journal Transactions in GIS*, 20(4), 7, 2015.
- Deka, R. K., Kalita, K. P., Bhattacharya, D.K. and Kalita, J. K. Network defense: Approaches, methods and techniques, *Journal of Network and Computer Applications*, 57, 2015.
- Devi, M., Saharia, S., and Bhattacharyya D.K. Dance Gesture Recognition: A Survey, *International Journal of Computer Applications*, 122, 2015.
- Goswami, R., Bhattacharyya, D. K., Dutta, M. and Kalita, J. K. Approaches and issues in view selection for materialising in data warehouse, *International Journal of Business information Systems*, 21(1), 2016.
- Hoque, N., Bhattacharyya, D. K. and Kalita, J. K. FFSc: A novel measure for low-rate and high-rate DDoS attack detection using multivariate data analysis, *Journal: Security and Communication Networks*, 9(13), 2016.
- Hussain, I., Ahmed, Z. I., Saikia, D. K. and Sarma, N. A QoS-aware dynamic bandwidth allocation scheme for multi-hop WiFi-based long distance networks, *EURASIP Journal on Wireless Communications and Networking*, 1, 2015.
- Mahanta, P., Bhattacharyya, D. K. and Ghosh, A. MIPCE: An MI-based protein complex extraction technique, *Journal of Biosciences*, 40, 2015.
- Patra, S., Modi, P. and Bruzzone, L. Hyperspectral Band Selection Based on Rough Set. *IEEE Transactions on Geoscience and Remote Sensing*, 53(10), 2015.
- Prajapati V.K., Satapathy S.S., Kumar M.V. S., Buragohain, A.K. and Ray, S. K. Evidences indicating the involvement of selection mechanisms for the occurrence of C34 anticodon in bacteria, *J Cell SciMoleculBiol*, 2(1), 2015.
- Sarmah, A. K., Hazarika, S. M. and Sinha, S. K. Formal concept analysis: current trends and directions, *Artificial Intelligence Review*, 44(1), 2015.
- Satapathy, S.S., Ray, S.K., Sahoo, A.K., Begum, T. and Ghosh T. C. Codon Usage Bias is not Significantly Different between the High and the Low Expression Genes in Human. *Int J Mol Genet Gene Ther*, 1(1), 2015.
- Sharma, P, Ahmed, H. A., Roy, S. and Bhattacharyya, D. K. Detecting protein complexes using connectivity among nodes in a PPI Network, *Network Modeling Analysis in Health Informatics and Bioinformatics*, 4(35), 2015,
- Sharma, P., Ahmed, H. A., Roy, S. and Bhattacharyya D. K. Unsupervised methods for finding protein complexes from PPI networks, *Journal of Network Modeling Analysis in Health Informatics and Bioinformatics*, 4(8), June 2015.
- Conference proceedings
- Begum, A., Sharma, U. and Nath, S. Speech synthesis for Mymensingia Dialect of Bangla and Conversion to Standard Bangla. *National Conference on Computing, Communication and Information Proceeding (NCCCIP-2015)*, NERIST, May 2-3, 2015.
- Bhuyan, B. and Sarma, N. A QoS aware Routing Protocol in Wireless Sensor Networks with Mobile Base Stations. In *Proceedings of the International Conference on Internet of things and Cloud Computing*. ACM, March 2016.
- Bhuyan, M. H., Kalwar, A., Goswami, A., Bhattacharyya, D.K. and Kalita, J.K., Low-rate and High-rate Distributed DoS Attack Detection Using Partial Rank Correlation. In *Proceedings of the Fifth International Conference on Communication Systems and Network Technologies (CSNT)*, IEEE, 4-6 April 2015.
- Borah, A., Sharma, U. and Borah, B. Generating Domain-Specific Lexicons for Sentiment Polarity Detection of Business News Headlines. *National Conference on Computing, Communication and Information Proceeding (NCCCIP-2015)*, NERIST, May 2-3, 2015.
- Boro, D., Basumatary, H., Goswami, T. and Bhattacharyya, D. K. UDP Flooding Attack Detection Using Information Metric Measure. In *Proceedings of the International Conference on ICT for Sustainable Development*, Springer Singapore, 11 February, 2016.
- Devi, M., Sarma, N. and Deka, S. K. Dynamic virtual backbone based routing in cognitive radio networks. In *Proceedings of the 2015 IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS)*. 15 December 2015.
- Hoque N. S., Barbhuiya, F. A. and Sarma, N. Pair Voting: A secure online voting scheme using Pairing-Based Cryptography and Fuzzy Extractor. In *Proceedings of the 2015 IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS)*, IEEE, December 2015.



Hoque, N., Bhattacharyya, D. K. and Kalita, J. K. A novel measure for low-rate and high-rate DDoS attack detection using multivariate data analysis. In Proceedings of the 8th International Conference on Communication Systems and Networks (COMSNETS), IEEE, January 2016.

Kakoty, N.M., Sarma, J., Sinha, A., Konwar, D., Kumar, S.B., Mishra, S.K. and Hazarika S.M. Jaipur foot gait control through a predictive controller. In Proceedings of the 2015 Conference on Advances In Robotics; ACM, July 2015.

Patra, S. and Bruzzone, L. A rough set based band selection technique for the analysis of hyperspectral images. In Proceedings of the International Geoscience and Remote Sensing Symposium (IGARSS)-2015, July 2015.

Rahman, N. and Borah, B. A Survey on Existing Extractive Techniques for Query-Based Text Summarization. In Proceedings of the ISACC, September, 2015.

Roy, A. and Sarma, N. Performance analysis of energy-efficient MAC protocols for underwater sensor networks. In Proceedings of the 2nd International Conference on Computing for Sustainable Global Development (INDIACom), IEEE, November 2015.

Roy, A. and Sarma, N. Selection of communication carrier for underwater wireless sensor networks. In Proceedings of the International Symposium on Advanced Computing and Communication (ISACC), IEEE, September 2015.

Roy, S. and Bhattacharyya, D. K. Segmentation of cortical gray and white matters from MRI using density based clustering approach. In Proceedings of the International Symposium on Advanced Computing and Communication (ISACC-2015), IEEE, September 2015.

Talukdar, U., Barua, R. and Hazarika, S.M. A description logic based QSTR framework for, recognizing motion patterns from spatio-temporal data, (ReTIS). In Proceedings of the IEEE 2nd International Conference Recent Trends in Information Systems, July 2015.

Books and Book Chapters

Bhattacharyya, D. K., Kalita, J. K. and Bhuyan, M. H. 2016. Network Traffic Anomaly Detection and Prevention-- Concepts, Techniques and Tools, Springer.

Roy, S., Bhattacharyya, D. K. and Kalita, J. K. 2015. Analysis of Gene Expression Patterns Using Biclustering, In Methods in Molecular Biology, New York: Clifton, NJ. Springer.

Swain, B. and Satapathy, S. S. 2016. Nature inspired moving sink energy efficient data gathering protocol for wireless sensor network, Artificial Intelligence and Evolutionary Computations in Engineering Systems, Springer AISC, 2016.

SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED

International and National

A Karmakar attended the Indo-German workshop on Algorithms organized by the ACM Unit, Indian Statistical Institute, Kolkata in collaboration with DFG (German Research Foundation), 9-13 March, 2015.

B Borah attended the First Workshop on Computing: Theory and Applications, organized by CCSD, ISI, Kolkata at ISI North-East Center, Tezpur, 14-18 March, 2016.

B Nath attended a Two-week ISTE Workshop on Algorithms conducted by IIT Kharagpur under National Mission on Education through ICT (MHRD), May, 2015.

D Boro attended a Two-week ISTE Workshop on Algorithms conducted by IIT Kharagpur under National Mission on Education through ICT (MHRD), May, 2015.

Sanghamitra Nath attended a Two-week ISTE Workshop on Algorithms conducted by IIT Kharagpur under National Mission on Education through ICT (MHRD), May, 2015.

Sanghamitra Nath attended an International Conference on Computing and Communication Systems'2015 (I3CS'15), NEHU, Shillong, 9-10 April, 2015.

Shoubhanjana Kalita attended a Two-week ISTE Workshop on Algorithms conducted by IIT Kharagpur under National Mission on Education through ICT (MHRD), May, 2015.

S I Singh attended and presented a paper, A framework for reputation model based on time and trust aware heteroscedastic Gaussian Process, at the IEEE sponsored International Symposium on Advanced Computing and Communication (ISACC-2015), Assam University, Silchar, 14-15 September, 2015.

S K Deka attended the IEEE International Conference on Advanced Networks & Telecommunications Systems (IEEE ANTS 2015), Kolkata, 15-18 December, 2015.



S K Deka, attended a Two-week ISTE Workshop on Algorithms conducted by IIT Kharagpur under National Mission on Education through ICT (MHRD), May, 2015.

SM Hazarika attended the Leadership Foundation, UK and MHRD sponsored one-week training, Leadership in Higher Education, February, 2016.

S Patra attended the IEEE International Geoscience and Remote Sensing Symposium, Milan, Italy, July, 2015

SS Satapathy attended the 1st International Conference on Computer and Electronics Engineering, Hyderabad, 9-10 January, 2016.

Z Bhuyan attended a Two-week ISTE Workshop on Algorithms conducted by IIT Kharagpur under National Mission on Education through ICT (MHRD), 2015.

TALKS BY THE FACULTY ABROAD AND IN INDIA

B Borah delivered a talk, Data Mining and Image Processing, St. Anthony's College, Shillong, 5 March, 2016.

D K Bhattacharyya Invited as Speaker in the Digital India Workshop, NEILIT, Tezpur, 1-3 July, 2015.

D K Bhattacharyya Invited as Speaker in the Workshop organized by NITM and St Anthony College, 27-28 August, 2015.

D K Bhattacharyya Invited as Speaker at Rajiv Gandhi University, Itanagar, 10 April, 2015.

D K Bhattacharyya patronized and delivered speech in NEQIP FDP organized by Dept of Mechanical Engg., Tezpur University, 20-24 July, 2015.

M Dutta delivered a talk, Hard Problem in Computer Application, at University of Hyderabad, November, 2015.

M Dutta delivered a talk, The P=NP Problem, at University of Hyderabad, March 2016.

S M Hazarika delivered a talk in national workshop on Emerging Trends and Technologies in Computer Science at Guwahati University, 7 January, 2016.

S S Satapathy acted as a resource person in the DBT Sponsored training programme, Training cum Workshop on Biological Data analysis through Computational Approach, CSIR-NEIST, Jorhat, 8-10 December, 2015.

U Sharma delivered a talk in national workshop on Emerging Trends and Technologies in Computer Science at Guwahati, 7 January, 2016.

U Sharma Invited as Speaker in the International Symposium on Advanced Computing & Communication (IEEE ISACC-2015) at Assam University, Silchar, 14-15 September, 2015.

SEMINAR/WORKSHOP/SYMPOSIA/INVITED LECTURES ORGANISED BY THE DEPARTMENT

Two days workshop on IoT Capacity Building Conducted by C-DAC Pune

Two week ISTE Workshop on Algorithms conducted by IIT Kharagpur under National Mission on Education through ICT (MHRD), 2015.

DISTINGUISHED VISITORS TO THE DEPARTMENT

Prof. B P Sinha, ISI Kolkata

Prof. Jugal Kalita, University of Colorado Springs, USA

AWARDS & HONOURS RECEIVED BY THE FACULTY/RESEARCH SCHOLARS/STUDENTS

D K Bhattacharyya attended the 1-week in-residence programme at the Rashtrapati Bhawan as an Inspired Teacher, during June 2015.

S M Hazarika attended Leadership Foundation, UK and MHRD sponsored one-week training, Leadership in Higher Education, February, 2016.

S Patra received International Travel Grant from DST, New Delhi for attending IGARSS'15 Symposium at Milan, Italy.

**OTHER IMPORTANT ACTIVITIES OF THE DEPARTMENT/ACHIEVEMENTS OF THE FACULTY**

A High Performance Computing Centre (HPCC) is being established at Department of CSE, Tezpur University, in June 2015 to provide high end computing facility to the scientific researchers of North-East region. Shri Ashish Ranjan of CDAC, Pune and Prof. D. K. Bhattacharyya of Tezpur University will act as the Chief Investigators of the project.

Department of CSE, Tezpur University is selected as a Participating Institute under Ministry of IT's Information Security Education and Awareness (ISEA) Project for the period 2015-20.

The Department is nominated by UGC as a Participant of BRICS Network University.

BTech in Computer Science & Engineering is accredited (provisionally for 2 years) by National Board of Accreditation.

NUMBER OF STUDENTS WHO PASSED NET-JRF/GATE[2015-2016]

NET: 02

GATE: 22

GRE: 02

THE FACULTY OF THE DEPARTMENT**Professors**

D K Saikia, PhD (IIT Khagpur)

(On lien as Director, NIT, Meghalaya)

Specialization/Areas of interest: Mobile Computing, Computer Networks

E-mail: dks@tezu.ernet.in

M Dutta, PhD (IIT, Kanpur)

Specialization/Areas of interest: Data mining, Optimization

E-mail: malay@tezu.ernet.in

D K Bhattacharyya, PhD (Tezpur)

Dean, School of Engineering &

Dean, Academic Affairs (from 21 January, 2016)

Specialization/Areas of interest: Cryptography, Data Mining, Networks security and Bio-informatics

E-mail: dkb@tezu.ernet.in

S K Sinha, PhD (Tezpur)

Specialization/Areas of interest: Workflow Automation, Semi-structured Databases, Web Technology

E-mail: smriti@tezu.ernet.in

S M Hazarika, PhD (Leeds, England)

Head of the Department

Specialization/Areas of interest: Qualitative Spatial Reasoning, Cognitive robotics, Intelligent Assistive Systems

E-mail: smh@tezu.ernet.in

U Sharma, PhD (Tezpur)

Specialization/Areas of interest: Natural Language Processing

E-mail: utpal@tezu.ernet.in

N Sarma, PhD (IIT Guwahati)

Specialization/Areas of interest: Mobile Networks, Networks Security

E-mail: nitya@tezu.ernet.in

Associate Professors

B Borah, PhD (Tezpur)
Specialization/Areas of interest: Data Mining, Image Processing
E-mail: bgb@tezu.ernet.in

S Saharia, PhD (Tezpur)
Specialization/Areas of interest: Image processing, Pattern Recognition
E-mail: sarat@tezu.ernet.in

B Nath, PhD (Tezpur)
Specialization/Areas of interest: Data Mining, Artificial Neural Network
E-mail: bnath@tezu.ernet.in

S S Satapathy, PhD (Tezpur)
Specialization/Areas of interest: Networking, Bioinformatics
E-mail: ssankar@tezu.ernet.in

Assistant Professors

SI Singh, MCA (Manipur)
Specialization/Areas of interest: Data Mining
E-mail: sis@tezu.ernet.in

SK Deka, PhD (Tezpur)
Specialization/Areas of interest: Computer Networks
E-mail: skdeka@tezu.ernet.in

Rosy Sarmah, PhD (Tezpur)
Specialization/Areas of interest: Data Mining
E-mail: rosy8@tezu.ernet.in

L Basantakumar Singh, MTech (Tezpur)
Specialization/Areas of interest: Pattern Recognition
E-mail: lbsingh@tezu.ernet.in

D Boro, MTech (Tezpur)
Specialization//Areas of interest: Mobile Computing
E-mail: deb0001@tezu.ernet.in.

AK Karmakar, PhD (ISI, Kolkata)
Specialization/Areas of interest: Computational geometry
E-mail : arindam@tezu.ernet.in

Sanghamitra Nath, MTech (Tezpur)
Specialization/Areas of interest: Data Mining
E-mail: snath@tezu.ernet.in

S Patra, PhD (Jadavpur)
Specialization/Areas of interest: Pattern Recognition, Evolutionary Computing, Neural Networks
E-mail: swpatra@tezu.ernet.in





Z Bhuyan, MTech(Tezpur)
Specialization/Areas of interest: Knowledge Representation & Reasoning
E-mail: zubin@tezu.ernet.in

Shobhanjana Kalita, MTech(Tezpur)
Specialization/Areas of interest: Knowledge Representation & Reasoning
E-mail: kalitas@tezu.ernet.in

THE STAFF OF THE DEPARTMENT

Technical Staff

P J Dutta, PhD (Tezpur)
System Analyst
E-mail: pjd@tezu.ernet.in

R Goswami, MCA (Gauhati)
System Analyst
E-mail: rgos@tezu.ernet.in

D Das, PhD (Gauhati)
System Analyst
E-mail: ddas@tezu.ernet.in

G K Das, BE (JEC)
Technical Officer
E-mail: gautamd@tezu.ernet.in

A K Sharma, MTech (Tezpur)
Technical Assistant
E-mail: ajay@tezu.ernet.in

A Chetri, MCA (IGNOU)
Laboratory Assistant
E-mail: arunch@tezu.ernet.in

RChoudhary, Diploma (N.G.P. Patna)
Laboratory Assistant
E-mail: raghu@tezu.ernet.in
Office Staff
PranatiBoro, BA
UDC
E-mail: pranati@tezu.ernet.in

G Baruah
MTS
E-mail: golapb@tezu.ernet.in



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

2015-16

THE DEPARTMENT

One of the oldest Departments of the University, the Department of Electronics and Communication Engineering, was established in 1997 and since then it has been involved in research activities in different areas including Signal & Image Processing, Bioelectronics, Biosensors, Microwave Engineering, Communication Engineering and Microelectronics. At present, the Department has a faculty strength of 19 and a student strength of 419. The Department has research/infrastructure projects from almost all major research funding sources of The Government of India.

Academic programmes and Student intake

| Academic programmes | Student Intake |
|---|--|
| BTech in Electronics and Communication Engineering | 60 |
| BTech in Electrical Engineering | 30 |
| MTech in Electronics Design & Technology | 28 |
| MTech in Bioelectronics | 15 |
| PhD | Intake variable 09 in the Academic year 2015-16 |
| Advanced Diploma in Healthcare Informatics and Management | 30 <i>Under UGC career oriented course(2012-2017)</i> |

Major facilities and equipment available: Microfabrication Facility, National MEMS Design Center





MAJOR RESEARCH FINDINGS/RESEARCH AND DEVELOPMENT ACTIVITIES

| Principal Investigator | Salient Research Findings |
|------------------------|--|
| B Deka | <p>Design and Development of Compressed Sensing Based Image Reconstruction Prototype Hardware Architecture for Medical Imaging Applications</p> <ul style="list-style-type: none"> Designed an efficient k-space under-sampling pattern namely the 'variable density under-sampling pattern' to efficiently acquire k-space data in MRI. Designed CS-based image reconstruction algorithms using the hardware description language (HDL) e.g. VHDL (Very High Speed Integrated Circuit-HDL) and implemented the prototype hardware architecture using the Field-Programmable Gate Array (FPGA). <p>Development of Compressed Sensing Based Image Reconstruction Techniques for Medical Imaging Applications</p> <ul style="list-style-type: none"> Developed a high throughput reconstruction technique for compressed sensing based MRI Developed a wavelet tree sparsity based compressed sensing MR image reconstruction technique Designed an efficient interpolated compressed sensing for 2D multi-slice MR image reconstruction. |
| M Bhuyan | <p>Automated Flushing and Deodorizer of Public Toilets using MOS gas Sensor based Electronic Nose (E-Nose)</p> <ul style="list-style-type: none"> An effective and efficient automatic flushing system is developed, which senses the smell of human flatus. The sensing mechanism comprises of two parts, (a) IR sensor- For sensing the presence of a person, (b) MOS array- For picking up the smell of flatus Based on the presence of smell the toilet is automatically flushed, if not flushed or improperly flushed. <p>Portable Peripheral Nerve testing Instrument.</p> <ul style="list-style-type: none"> Developed a stimulator circuit for nerve stimulation Developed a signal processing unit for proper nerve signal acquisition and analysis Developed an automatic nerve triggering system with respect to human skin resistance |
| S Bhattacharyya(Co-PI) | <p>Design and realization of light weight shields to reduce electromagnetic interference (EMI) at microwave ranges (C and X band) with different geometries for customized applications like anechoic chamber, as terminations and stealth for strategic device camouflaging</p> <ul style="list-style-type: none"> Selection and processing of materials started <p>Studies of ferromagnetic resonance in spinal ferite and granets for high power</p> <ul style="list-style-type: none"> Synthesis and development of spinel ferrites <p>Microwave Technology based Tea Processing Systems for NE states</p> <ul style="list-style-type: none"> Development of two microwave sources, magnetron of 5kW each (frequency: 2.45 GHz) Conveyor belt system developed. |





Research projects, ongoing and new

| Project Title | Funding Agency | Amount (in INR) | Duration | Principal Investigator |
|---|----------------|-----------------|-----------|-------------------------|
| Design of Ultra Low Power FHSS transceiver for wireless Communication Applications | ISRO | 29.50 lakh | 2014-2016 | A Baishya |
| Portable peripheral nerve testing instrument | MSME | 5.90 lakh | 2014-2016 | M Bhuyan |
| Automated flushing of public toilets | ASTEC | 1.78 lakh | 2014-2016 | M Bhuyan |
| To study the impact and compensation of process-induced variations bin junction-less transistors for improved reliability | DST | 13.62 lakh | 2013-2016 | R K Baruah |
| Design and realization of light weight shields to reduce electromagnetic interference (EMI) at microwave ranges (C and X band) with different geometries for customized applications like anechoic chamber, as terminations and stealth for strategic device camouflaging | DeitY | 216.04 lakh | 2016-2019 | S Bhattacharyya (Co-PI) |
| Studies of ferromagnetic resonance in spinal ferite and granets for high power | DeitY | 32.37 lakh | 2014-2017 | S Bhattacharyya (Co-PI) |

PUBLICATIONS

International and National Journals

Barik, M. A., Deka, R., and Dutta, J. C. Carbon Nanotube-Based Dual-Gated Junctionless Field-Effect Transistor for Acetylcholine Detection. *IEEE Sensors Journal*, 16(2) 2016.

Baruah, R. K. and Paily, R. P. A surface-potential based drain current model for short-channel symmetric double-gate junctionless transistor. *Journal of Computational Electronics*, 15(1), 2016.

Bardoloi, B., and Roy, S., Bioinspired Silicon Neuron. *Journal of Advanced Research in Electrical and Electronic Engineering*, 2(11), 2015.

Bhagawati, A. J., and Chutia, R. Design of Single Channel Portable EEG Signal Acquisition System for Brain Computer Interface Application, *International journal of Biomedical Engineering and Science*, 3(1), 2016.

Bonjyotsna, A. and Bhuyan, M. Analytical Study of Vocal Vibrato and Mordent of Indian Popular Singers. *Journal of Voice*, 2015 [In press].

Borah, P. and Bhattacharyya, S. Design of a dual band V-shaped patch antenna using shorting posts. *Microwave and Optical Technology Letters*, 58(2), 2016.

Das, M. P., Bhuyan, M., and Talukdar C. Readout Circuits for Noise Compensation in ISFET Sensory System r, *Sensing and Imaging*, 16(1), 2015

Das, D., Sharma, M., Das, H. K., Sahu, P. P. and Doley, R. Purification and Characterization of Nk-3FTx: A Three Finger Toxin from the Venom of North East Indian Monocled Cobra. *Journal of Biochemical and Molecular Toxicology*, 30(2), 2016.

Das, H., Das, D, Doley, R. and Sahu, P. P. Quantifying Demyelination in NK venom treated nerve using its electric circuit model. *Scientific Reports*, 6 2016.

Das, K., and Roy, S., Power Efficient Comparator using Adiabatic Logic. *Journal of Advanced Research in Electrical and Electronic Engineering*, 2(11), 2015.

Deka, B., Handique, M., and Datta, S. Sparse regularization method for the detection and removal of random-valued impulse noise. *Multimedia Tools and Applications*, 2016 [In press].

Gogoi, N. and Sahu, P. P. All optical compact surface plasmonic two mode interference device for optical logic gates, *Applied Optics*, 54(5), 2015

Gogoi, N. and Sahu, P. P. All-optical surface plasmonic universal logic gate devices. *Plasmonics*, 2016 [Accepted].

Gogoi, N. and Sahu, P. P. Design of All-optical Inverter using Nonlinear Plasmonic Two-mode Waveguide. *Advanced Research in Electrical and Electronic Engineering*, 2, 2015.



- Gogoi, P. J., Rabha, M. M., Bhattacharyya, S., and Bhattacharyya, N. S. Miniaturization of body worn antenna using nano magneto-dielectric composite as substrate in C-band. *Journal of Magnetism and Magnetic Materials*, 414, 2016.
- Gogoi, P. J., Bhattacharyya, S., and Bhattacharyya, N. S. Linear low density polyethylene (LLDPE) as flexible substrate for wrist and arm antennas in C-band. *Journal of Electronic Materials*, 44(4), 2015.
- Hazarika, D., Nath, V. K. and Bhuyan, M. SAR Image Despeckling Based on Lapped Transform Domain Dual Local Wiener Filtering Framework. *International Journal of Computer Science*, 42(4), 2015.
- Hazarika, D., Nath, V. K., and Bhuyan, M. SAR Image Despeckling Based on Lapped Transform Domain Dual Local Wiener Filtering Framework. *IAENG International Journal of Computer Science*, 42(4), 2015.
- Kakoty, N. M., Saikia, A. and Hazarika, S. M. Exploring a Family of Wavelet Transforms for EMG based Grasp Recognition. *Journal of Signal Image and Video Processing*, 9(3), 2015.
- Mondal, B., Meetei, M. S., Das, J., Roychaudhury, C. and Saha, H. Quantitative recognition of flammable and toxic gases with artificial neural network using metal oxide gas sensors in embedded platform. *Engineering Science and Technology*, 2016 [In press].
- Saharia, B.J., Manas, M. and Talukdar, B.K. Comparative Evaluation of Photovoltaic MPP Trackers: A Simulated Approach. *Cogent Engineering*, 3, 2016.
- Saharia, B.J. and Manas, M. Viability analysis of Photovoltaic/Wind hybrid standalone Distributed Generation based system as applicable in isolated community of north-east region of India. *Distributed Generation and Alternative Energy Journal*, 2015 [Accepted].
- Saharia, B.J., and Saharia, K.K. A Simulated Study on non-isolated DC-DC Converters for MPP tracking for Photovoltaic Power systems. *Journal of Energy Engineering*, 142(1), 2016.
- Sahu, P. P. Optical pulse controlled two mode interference coupler based logic gates. *Optik- International Journal for Light and Electron Optics*, 126(4), 2015
- Sahu, P. P. Compact component for integrated quantum optic processing. *Scientific Reports*, 5, 2015.
- Sahu, P.P. Theoretical Investigation of All optical switch based on compact surface plasmonic two mode interference coupler. *Journal of Lightwave Technology*, 34(4), 2016.
- Sarma, K. C. D., and Sharma, S. An approach for complete 2-D analytical potential modelling of fully depleted symmetric double gate junction less transistor. *Journal of Computational Electronics*, 14(3), 2015.
- Sarma, K. C. D., and Sharma, S. Scale Length Determination of Gate All Around (Regular Hexagonal Cross Section) Junctionless Transistor. *International Journal of Applied Engineering Research*, 10(2) 2015.
- Sonowal, D. and Bhuyan, M. Multi Channel Sensor Linearization in Field Programmable Gate Array for Real Time Applications. *Sensors & Transducer*, 191(8), 2015.
- Sonowal, D. and Bhuyan, M. Linearization of Sensor Signal in FPGA: A Multichannel Approach for High Speed Real Time Applications. *Advances in Sensors*, 3, 2016.
- Sonowal, D., and Bhuyan, M. Multi Channel Sensor Linearization in Field Programmable Gate Array for Real Time Applications. *Sensors & Transducers*, 191(8), 2015.
- Zaheeruddin and Manas, M. A New Approach for the Design and Development of Renewable Energy Management System through Microgrid Central Controller. *Energy Reports*, 1, 2015

Conference proceedings

- Ahmed, R. U. and Baruah, R.K. Modeling of Potential and Threshold Voltage in presence of Hot-Carriers for Short-Channel Double-Gate MOSFET. In *Proceedings of the International Conference on Electronic Devices, Circuits, Applied Electronics and Communication Technology (EDCAECT 2015)*, Gauhati University, Guwahati, 8-10 October, 2015.
- Baruah, R.K. and Paily, R. P. Effects of Substrate-Bias on the Reliability and Process-Induced Parameters of a Short-Channel Junctionless Transistor. In *Proceedings of the 18th International Workshop on Physics of Semiconductor Devices (IWPSD 2015)*, 7-10 December, IISc, Bangalore.
- Baruah, R.K. and Paily, R. P. Reliability of Silicon Carbide based Double-gate Junctionless Transistor for High Temperature Applications. In *Proceedings of the 7th IEEE International Workshop on Reliability Aware System Design and Test (In*



conjunction with the 29th International Conference on VLSI Design), Kolkata, India, 7-8 January, 2016.

Chakraborty, S., Bhattacharyya, N. S. and Bhattacharyya, S. Activated Carbon from Used Tea Leaves for Development of Thin Sheet Composite Absorbers in X-band. In Proceedings of the International Conference on Electronic Devices, Circuits, Applied Electronics and Communication Technology, Guwahati, October, 2015.

Dehingia, S., Kakoty, N. M., Gokhlani, R., Prasad, G. V., Sarma, S. J. and Sonowal, D. User Interface System of an Assistive Kitchen for Aging People. In Proceedings of the IEEE International Conference on Man and Machine Interfacing, at Bhubaneswar, India, 17-19 December, 2015.

Deka, B., Handique, M. and Datta, S. Random-Valued Impulse Denoising using Sparse Regularizations. In Proceedings of the 2015 3rd International Conference on Image Information Processing (ICIIP 2015), 21-24 December, 2015.

Kakoty, N. M., Borah, S. and Hazarika, S.M. Tezpur University Bionic Hand: From EMG signals to Grasp Emulation. In Proceedings of the North Eastern Orthopaedic Surgeons Conference, Silchar, India, 2016.

Kakoty, N. M., Sarma, J., Sinha, A., Konwar, D., Kumar, S. B., Mishra, S. K. and Hazarika, S. M. Jaipur Foot Gait Control through a Predictive Controller. In Proceedings of the ACM/ International Conference on Advances in Robotics, Goa, India, 2015.

Nath, V. K., Hazarika, D. and Bhuyan, M. A lapped transform domain enhanced Lee filter with edge detection for speckle noise reduction in SAR images. In Proceedings of the 2nd IEEE International Conference on Recent Trends in Information Systems (ReTIS-15), Jadavpur University, India, July 9-11, 2015.

Nath, V. K., Hazarika, D. and Dutta, S. A wavelet domain method with edge detection to reduce speckle in ultrasound images. In Proceedings of a National conference on recent advances in biomedical engineering, NEHU, Shillong, Meghalaya, 28-29 August, 2015.

Nath, V. K., Hazarika, D. and Dutta, S. K. Statistical distributions of 2D discrete Hartley transform (DHT) coefficients for magnetic resonance (MR) brain images. In Proceeding of a National conference on recent advances in biomedical engineering, NEHU, Shillong, Meghalaya, 28-29 August, 2015.

Saharia, B. J., Zaheeruddin, Manas, M. and Ganguly, A. Optimal Sizing and Cost Assessment of Hybrid Renewable Energy Systems for Assam Engineering College. In Proceedings of the 12th IEEE India International Conference INDICON 2015, Jamia Millia Islamia, New Delhi, 17-20 December, 2015.

Saharia, B.J., Manas, M. and Sen, S. Comparative study on buck and buck-boost converters for MPP tracking for Photovoltaic Power Systems. In Proceedings of the 2nd ICICT 2016 (IEEE-sponsored) at ABES Engineering College, Ghaziabad, India, 12-13 February, 2016.

Saharia, B.J. A Brief Theoretical Overview of DC-DC Converters used in the Tracking of Photovoltaic Power Generators. In the Souvenir of the One Day National Seminar on Solar Energy Utilization- Opportunities and Challenges in NER at Assam Engineering College, Guwahati, Assam, India, 4 April, 2015.

Saharia, B.J., and Talukdar, B.K. Theoretical Study on Performance Constraints of a DC-DC Buck-Boost Converter. In Proceedings of the IEEE International Conference on Energy, Power and Environment (ICEPE), At National Institute of Technology (NIT), Meghalaya, Shillong, India, 12-13 June, 2015.

Zaheeruddin and Manas, M. Development of Self-Sustainable Technologies for Smart Grid in India. In Proceedings of the 2015 International Conference on Cognitive Computing and Information Processing, CCIP 2015. At JSS Academy of Technical Education, Noida, India, 3-4 March, 2015.

Zaheeruddin, Manas, M. and Sharma, B.B. Development of a benchmark for the Interpretation of Transformer Frequency Response Analysis result. In Proceedings of the 2015 International Conference on Cognitive Computing and Information Processing, CCIP 2015. At JSS Academy of Technical Education, Noida, India, 3-4 March, 2015.

Books and Book Chapters

Das, K., and Kakoty, P. 2015. Design, Simulation and Performance Evaluation of a High Temperature and Low Power Consumption Microheater Structure for MOS Gas Sensor. In Bora, P.K, Prasanna, S.R.M., Sarma, K.K., and Saikia N. (eds). Advances in Communication and Computing – Lecture Notes in Electrical Engineering, Springer India.

Datta, S and Deka, B. 2015. A Practical Under-Sampling Pattern for Compressed Sensing MRI. In Bora, P.K, Prasanna, S.R.M., Sarma, K.K., and Saikia, N. (eds). Advances in Communication and Computing, Lecture Notes in Electrical Engineering, Springer India.

**SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED****International and National**

R K Baruah attended an International Workshop on Physics of Semiconductor Devices (IWPSD), IISc, Bangalore, 7-10 December, 2015.

R K Baruah attended the VLSI Design, Kolkata, 4-8 January, 2016.

TALKS BY THE FACULTY ABROAD AND IN INDIA

S Bhattacharyya delivered an invited lecture in a workshop, Microwave Measurement with Devices and Testing Instruments, NIT Mizoram, 22-26 September, 2015.

P P Sahu delivered an Invited lecture on Wireless Communication, NIT Allahabad, 20-21 November, 2015.

P P Sahu delivered an Invited lecture on Physical Design - VLSI, NIT Arunachal Pradesh, 15-18 September, 2015.

SEMINAR/WORKSHOP/SYMPOSIA/INVITED LECTURES ORGANISED BY THE DEPARTMENT

2-Day Familiarization Workshop on Nanofabrication Technologies organized by IIT Bombay and TU, 25-26 April, 2015.

DISTINGUISHED VISITORS TO THE DEPARTMENT

Mr C Dutta, ISRO Satellite Centre, Bangalore

Prof G Saha, Indian Institute of Technology Kharagpur

Dr J Akhtar, Chief Scientist and Head, Sensors and Nanotechnology Group, CEERI Pilani

Prof M K Naskar, Jadavpur University

Prof R Bandyopadhyay, Jadavpur University

Prof R K Mallik, Indian Institute of Technology Delhi

AWARDS & HONOURS RECEIVED BY THE FACULTY/RESEARCH SCHOLARS/STUDENTS

M Manas, Best Paper Award, Power & Energy Track, IEEE International Conference CICT-15, ABES Ghaziabad, 2015.

OTHER IMPORTANT ACTIVITIES OF THE DEPARTMENT/ACHIEVEMENTS OF THE FACULTY

- The BTech(ECE) programme is accredited by NBA for the period 2015-2017
- The Department is recognized with the major projects namely, DST-FIST, UGC-SAP-DRS1

NUMBER OF STUDENTS WHO PASSED NET-JRF/GATE[2015-2016]

| | |
|-----------|----|
| NET-JRF : | 01 |
| GATE : | 08 |



**NOTABLE PLACEMENT [2015-2016]****BTech in Electronics and Communication Engineering : Batch 2015**

| Company | No. of Students Recruited/ Designation |
|---------------------------------|--|
| Tata Consultancy Services (TCS) | 15 Assistant System Engineer |
| IBM | 5 Associate System Engineer |
| Wipro | 3 Software Engineer Trainee |
| L&T Infotech | 2 Software Engineer Trainee |
| Tech Mahindra | 2 Entry Level Soft. Engineering. |

THE FACULTY OF THE DEPARTMENT**Professors**

M Bhuyan, PhD (Gauhati)

Pro Vice Chancellor (from 08 February, 2016)

Specialization/Areas of Interest: Instrumentation Engineering

E-mail: manab@tezu.ernet.in

P P Sahu, PhD (Jadavpur)

Specialization/Areas of Interest: Optical Network, Clinical Instrumentation

E-mail: pps@tezu.ernet.in

J C Dutta, PhD (Jadavpur)

Specialization/Areas of Interest: Biosensors and Bioelectronics

E-mail: jitend@tezu.ernet.in

S Bhattacharyya, PhD (Delhi)

Head of the Department

Specialization/Areas of Interest: Microwave Antennas, Absorbers and Materials

E-mail: sb@tezu.ernet.in

Associate Professors

S Sharma, PhD (Tezpur)

Specialization/Areas of Interest: Device (Bioelectronics), Vehicular power electronics

E-mail: sss@tezu.ernet.in

S Roy, PhD (Tezpur)

Specialization/Areas of Interest: Neuro Engineering

E-mail: xoumik@tezu.ernet.in

B Deka, PhD (IIT Guwahati)

Specialization/Areas of Interest: Image processing, Computer Vision

E-mail: bdeka@tezu.ernet.in

V K Nath, PhD (IIT Guwahati)

Specialization/Areas of Interest: Image and Video processing

E-mail: vkn@tezu.ernet.in

N M Kakoty, PhD (Tezpur)

Specialization/Areas of Interest: Rehabilitation Robotics

E-mail: nkakoty@tezu.ernet.in

**Assistant Professors**

Deepika Hazarika, MTech (IIT Guwahati)
Specialization/Areas of Interest: Image processing
E-mail: deepika@tezu.ernet.in

R Chutia, PhD (Tezpur)
Specialization/Areas of Interest: Instrumentation, Machine Olfaction and Embedded System
E-mail: riku@tezu.ernet.in

R K Baruah, PhD (IIT Guwahati)
Specialization/Areas of Interest: Nano Electronics
E-mail: ratul@tezu.ernet.in

B Mondal, PhD (Jadavpur)
Specialization/Areas of Interest: Microsensors and Microfabrications
E-mail: bjplobm@tezu.ernet.in

D Sonowal, MTech (Tezpur)
Specialization/Areas of Interest: FPGA based system, ANN: Hardware Implementation
E-mail: dsn@tezu.ernet.in

Ananya Bonjyotsna, MTech (Tezpur)
Specialization/Areas of Interest: Audio Processing
E-mail: ananyab@tezu.ernet.in

Priyanka Kakoty, MTech (Tezpur)
Specialization/Areas of Interest: MOS Gas sensor fabrication
E-mail: priyankak@tezu.ernet.in

A Sharma, MTech (JEC, Jorhat)
Specialization/Areas of Interest: Power system
E-mail: angshu@tezu.ernet.in

B J Saharia, MTech (NIT, Agartala)
Specialization/Areas of Interest: Power Electronics and Drives
E-mail: bjsece@tezu.ernet.in

M Manas, Ph.D (Jamia Milia Islamia, New Delhi)
Specialization/Areas of Interest: Power System
E-mail: munish@tezu.ernet.in

THE STAFF OF THE DEPARTMENT**Technical Staff**

A C Baishya, M Tech (Tezpur)
Technical Officer
E-mail: anukul@tezu.ernet.in

K Sharma, BE
Technical Assistant
E-mail: kulen@tezu.ernet.in



J C Boro, Diploma in ETE
 Technical Assistant
 E-mail: j_boro@tezu.ernet.in

S Das, BE
 Technical Assistant
 E-mail: saya@tezu.ernet.in

S P Saikia, ITI, Electrical
 Technician
 Email: satyap@tezu.ernet.in

R Sharma, ITI, Electronic Mechanic
 Lab Assistant
 E-mail: rupak@tezu.ernet.in

N K Roy, ITI, Electronic Mechanic
 Lab Assistant
 E-mail: navanit@tezu.ernet.in

Office Staff

D C Das, BA
 Assistant
 E-mail: rdas@tezu.ernet.in

N Ali,
 MTS
 E-mail: nurali@tezu.ernet.in





DEPARTMENT OF ENERGY

THE DEPARTMENT

The Department of Energy was established in 1996 with an aim to produce manpower pools in the field of Energy; develop new and efficient energy technologies; and to carry out research and extension activities in diverse areas of Energy. The thrust areas of teaching, research and extension activities for the Department have been new and renewable energy technologies and systems, relevant to regional/national needs and current international trends. Energy planning, management and conservation including the climate change issues have been the special thrust areas for the Department.

Academic Programmes and Student intake

| Academic programmes | Student Intake |
|-------------------------------------|--|
| BVoc in Renewable Energy Management | 18 |
| MTech in Energy Technology | 27 |
| PhD | Intake variable 05 in the Academic year 2015-16 |

Major facilities and equipment available

- PG StatAuto Lab, Model: 302N
- Gas Chromatograph, Model: HP 4890
- Portable Digital Power Meter, Make: Yokogawa
- Biomass Gasifier with Wood Cutter, Make: Ankur Scientific
- TOC Analyzer, Make/Model: LiquiTOCII, Elementar
- UV-VIS Spectrophotometer, Make: Shimadzu, Model: 1700
- Research Radiometer, Make: International Light
- Sunshine Recorder, Make: National Instruments
- Angstrom Compensation Pyrheliometer, Make: National Instruments
- Pyranometer, Make: Kipp and Zonen Model: CNP 11
- Single Cylinder 4-Stroke Petrol Engine Test Rig with Electrical Dynamometer, Make: Apex Innovation
- Computerized Diesel Engine Test Rig, Make: Apex Innovation
- Laboratory Scale Pyrolyser with Temperature Control System
- Air Quality Monitor and Dust Track Aerosol Monitor (Nephelometer), Model: Q Trak CEE-717
- Auto-bomb Calorimeter, Make: Changsha Kaiyuan Instruments Co Ltd. Model: AC-5E
- Rotary Vacuum Evaporator Strike, Model: 102/B
- Oxidation Stability Apparatus, Model: Rancimat-743





- Duel Fuel Engine, Make: Apex Innovation, Model: P228
- Micro Hydro-Power Generating Equipment (Demonstration Unit)
- Fuel Cell Kit Stack, Make:H-Tech,Model: XX2 3002
- Integrated Biodiesel Production Plant, Make: Malnad Industries, Model
- Muffle Furnace, Labtech
- Biomethanation Plant
- Biogas analyzer, Make:Ambetronics Pvt Ltd. Model: IR 5000
- Rotary vacuum evaporator, Make: RVF-E, Make: Relitech
- Ramsbottom carbon residue apparatus, Make: Hamco, India, Model: HAMCO 31
- Semi Automatic Flash and Fire point apparatus, Make: Hamco, India, Model: HAMCO 19C
- Biomass pyrolyser set-up, Make: Montech Instrument

MAJOR RESEARCH FINDINGS/RESEARCH AND DEVELOPMENT ACTIVITIES

| Principal Investigator | Salient Research Findings |
|------------------------|--|
| B K Kakati | <p>Biomass derived graphene based cathode catalyst for Polymer Electrolyte Fuel Cells</p> <ul style="list-style-type: none"> • One-pot synthesis of Nitrogen and Sulphur co -doped 'biomass derived graphene' based cathode catalyst for Polymer Electrolyte Fuel Cells <p>Oxygen reduction reaction catalyst for potential application in Polymer Electrolyte Fuel Cells</p> <ul style="list-style-type: none"> • Synthesis of novel dual doped 'biomass derived graphene' based Oxygen Reduction Reaction catalyst • Potential application in Polymer Electrolyte Fuel Cells |
| D C Baruah | <p>Instrumented solar hot air generator (ISHAG) for optimum thermal load in tea processing</p> <ul style="list-style-type: none"> • Design and development of efficient solar collector with porous medium and crossed collector configuration that aims to reduce pressure drop in solar collectors, to be tested in Tea Industry. <p>Rural Hybrid Energy Enterprise Systems</p> <ul style="list-style-type: none"> • Assessment and mapping of energy resources availability in selected rural area • Analysis of existing energy consumption pattern and future projected energy demand, Characterization of potential energy resources and their assessment as anaerobic digestion and gasification feedstock. <p>Development of a fuel efficient all purpose biomass cook stove</p> <ul style="list-style-type: none"> • Designing and development of an improved cook stove • Performance testing with different biomass feedstock |
| D Deka | <p>Assessment and analysis of plant oil feedstock available in North -east India for biodiesel production</p> <ul style="list-style-type: none"> • Identification of non-edible oil seeds available in North Eastern region of India • Biodiesel production and analysis of the available seeds in Biomass Conversion Laboratory, Department of Energy, Tezpur University. |
| N Sarmah | <p>Development and validation of a spectrum dependence integrated optical -thermal-electrical model to evaluate the performance of high concentrating photovoltaic module</p> <ul style="list-style-type: none"> • Evaluating the performance of refractive type HCPV module using MATLAB • Comparison of the developed model with the previously reported models for HPCV system • Experimental validation of the developed model |
| P K Choudhury | <p>Development of a test setup for solar thermal collector with air as working fluid and design a microcontroller-based mechanism for controlling the collector output</p> <ul style="list-style-type: none"> • A test setup of solar thermal collector with air as medium has been constructed • The collector output is measured and controlled using a micro -controller based mechanism |
| R Katakai | <p>Biochar application for sustainable soil management and mitigation of GHG emission</p> <ul style="list-style-type: none"> • Biochar application is found to improve crop yield with an overall improvement in the soil physico-chemical characteristics. • Biochar has been found to be effective in heavy metal removal. |

**Research projects, ongoing and new**

| Project Title | Funding Agency | Amount (in INR) | Duration | Principal Investigator |
|---|----------------|-----------------|-----------|------------------------|
| Development of a fuel efficient all-purpose biomass cook stove | ASTEC | 1.75 lakh | 2014-2016 | D C Baruah |
| Rural Hybrid Energy Enterprise Systems | DST-UKRC | 198 lakh | 2013-2016 | D C Baruah |
| Instrumented solar hot air generator (ISHAG) for optimum thermal load in tea processing | DST | 28.54 lakh | 2012-2016 | D C Baruah |
| Development of a test setup for solar thermal collector with air as working fluid and design a microcontroller-based mechanism for controlling the collector output | ASTEC | 1.25 lakh | 2014-2017 | P K Choudhury |
| Production of biochar from various bio-wastes and its soil application for sustainable soil management and mitigation of GHG emission | UGC | 12.95 lakh | 2013-2017 | R Kataki |

PUBLICATIONS**In International and National Journals**

Bora, P., Boro, J., Konwar, L. J. and Deka, D. Formulation of microemulsion based hybrid biofuel from waste cooking oil - A comparative study with biodiesel, *Journal of the Energy Institute*, 2015 [In press].

Bora, P., Konwar, L. J., Phukan, M. M., Deka, D. and Konwar, B. K. Microemulsion based hybrid biofuels from *Thevetia peruviana* seed oil: Structural and dynamic investigations, *Fuel*, 157, 2015.

Bora, P., Konwar, L. J. and Deka, D. Microemulsion based hybrid biofuels using glycerol monooleate. *Energy Conversion and Management*, 117, 2016.

Borah, N., Barua, R., Nath, D., Hazarika, K., Phukan, A., Goswami, K. and Baruah, D. C. Low Energy Rice Stubble Management through in Situ Decomposition, *Procedia Environmental Sciences*, 35, 2016.

Borah, P., Singh, M K. and Mahapatra, S. Estimation of degree-days for different climatic zones of North-east India. *Sustainable Cities and Society*, 14, 2015.

Bordoloi, N., Narzari, R., Chutia, R.S., Bhaskar, T. and Kataki, R. Pyrolysis of *Mesua ferrea* and *Pongamia glabra* seed cover: Characterization of bio-oil and its sub-fractions, *Bioresource Technology*, 178, 2015.

Bordoloi, N., Narzari, R., Sut, D., Saikia, R., Chutia, R. S. and Kataki, R. Characterization of bio-oil and its sub-fractions from pyrolysis of *Scenedesmus dimorphus*, *Renewable Energy*, 98, 2016.

Boro, B., Rajbongshi, B. M. and Samsarshi, S. K. Synthesis and fabrication of TiO₂-ZnO nanocomposite based solid state dye sensitized solar cell, *J Mater Sci: Mater Electron*, 27, 2016.

Brahma A., Saikia K., Hiloidhari, M., Baruah, D.C. GIS based planning of a biomethanation power plant in Assam, India, *Renewable and Sustainable Energy Reviews*, 62, 2016.

Chutia, R.S., Phukan, M. M., Kataki, R., Bhaskar, T. and Konwar, B. K. Exploitation of *Pongamia glabra* deoiled cake for alternate energy: Physico-chemical characterization and Thermogravimetric studies, *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, 38(1), 2016.

Devi, A., Das, V. K. and Deka, D. Designer Biodiesel: Preparation of Biodiesel Blends by Mixing Several Vegetable Oils at Different Volumetric Ratios and their Corresponding Fuel Quality Enhancement, *Research Journal of Chemical Sciences*, 5(9), 2015.

Gogoi, B. and Baruah, D. C. Steady state heat transfer modeling of solid fuel biomass stove: Part 1, *Energy*, 97, 2016.

Hormozi, M. A., Abdeslahi, A., Asoodar, M. A. and Baruah, D. C. Energy use pattern of paddy production systems in Khuzestan province, Iran, *Iran Agricultural Research*, 35(2), 2016



- Kakati, B. K., Unnikrishnan, A, Rajalakshmi, N, Jafri, RI, Dhattatreyan, K. S. and Kucernak, A. R. J. Recovery of Polymer Electrolyte Fuel Cell exposed to sulfur dioxide, *International Journal of Hydrogen Energy*, 41, 2016.
- Kataki R., Chutia, R. S., and Borah, M. Woody shrubs as a potential source of domestic energy in the eastern Himalayan regions of India, *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, 37(10), 2015.
- Kataki, S., Helen, W., Clarke, M. and Baruah, D. C. Phosphorus recovery as struvite from farm, municipal and industrial waste: feedstock suitability, methods and pre-treatments, *Waste Management*, 49, 2016.
- Kataki, S., Helen, W., Clarke, M. and Baruah, D. C. Phosphorus recovery as struvite: Recent concerns for use of seed, alternative Mg source, nitrogen conservation and fertilizer potential, *Resources Conservation & Recycling*, 107, 2016.
- Konwar, L. J., Sugano, Y., Chutia, R. S., Shchukarev, A., Arvela, P. M., Kataki, R., Mikkola, J.P., Sustainable synthesis of N and P co-doped porous amorphous carbon using oil seed processing wastes, *Materials Letters*, 173, 2016.
- Konwar, L. J., Mäki-Arvela, P., Begum, P., Kumar, N., Thakur, A. J., Mikkola, J. P., Deka, R. and Deka, D. Shape selectivity and acidity effects in glycerol acetylation with acetic anhydride: Selective synthesis of triacetin over Y-zeolite and sulfonated mesoporous carbons, *Journal of Catalysis*, 329, 2015.
- Micheli, L., Fernández, E., Sarmah N., Senthilarasu, S., Reddy, K. S. and Mallick, T. K. Small-Volume Fabrication of a 144-Cell Assembly for High-Concentrating Photovoltaic Receivers, *Journal of Solar Energy Engineering*, 138, 2016.
- Micheli, L., Sarmah, N., Luo, X., Reddy, K. S., Mallick, T. K., Design, Development and Analysis of a Densely Packed 500× Concentrating Photovoltaic Cell Assembly on Insulated Metal Substrate, *International Journal of Photoenergy*, 2015.
- Patowary, D., West, H., Clarke, M. and Baruah, D. C. Biogas Production from Surplus Plant Biomass Feedstock: Some Highlights of Indo-UK R&D Initiative, *Procedia Environmental Sciences*, 35, 2016.
- Saikia, P., Gupta, U. N., Barman, R. S., Kataki, R., Chutia, R. S. and Baruah, B. P. Production and characterization of bio-oil produced from *Ipomoea carnea* bio-weed, *BioEnergy Research*, 8(3), 2015.
- Saikia, R., Chutia, R. S., Kataki, R. and Pant, K. K. Perennial grass (*Arundo donax* L.) as a feedstock for thermo-chemical conversion to energy and materials, *Bioresource Technology*, 88, 2015.
- Sedai, P., Kalita, D. and Deka, D. Assessment of the fuel wood of India: A case study based on fuel characteristics of some indigenous species of Arunachal Pradesh, *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, 38(7), 2016.
- Shanks, K., Sarmah, N., Ferrer-Rodriguez, J. P., Senthilarasu, S., Reddy, K. S., Fernández E. F. and Mallick, T. K. Theoretical investigation considering manufacturing errors of a high concentrating photovoltaic of cassegrain design and its experimental validation, *Solar Energy*, 131, 2016.
- Singh, M. K., Attia, S. and Mahapatra, S., Teller, J. Assessment of thermal comfort in existing pre-1945 residential building stock, *Energy*, 98, 2016.
- Singh, M. K., Mahapatra, S. and Teller, J. Development of thermal comfort models for various climatic zones of North-East India, *Sustainable Cities and Society*, 14, 2015.
- Sut, D., Bordoloi, N. J., Narzari., R., Chutia, R. S. and Kataki, R. Complete utilization of non-edible oil seeds of *Cascabela thevetia* through a cascade of approaches for biofuel and by-products, *Bioresource Technology*, 213, 2016.

Conference proceedings

- Balachandra, P., Mahapatra, S., Baruah, D. C., Chanakya, H. N. and Dasappa, S. Eco-Enterprises, Policies and Institutional Setup for RHEES - North East India. In *Proceedings of the International Bioenergy (Shanghai) Exhibition and Asian Bioenergy Conference*, China, 2015.
- Balachandra, P., Mahapatra, S., Baruah, D. C. Chanakya, H. N. and Dasappa, S. Policies and Institutional Setup for RHEES, In *Proceedings of the International Bioenergy (Shanghai) Exhibition and Asian Bioenergy Conference*, Sanghai, China, 2015.
- Basumatary, V., Saikia, R., Narzari, R., Bordoloi, N., Gogoi, L., Sut, D. and Kataki, R. Tea factory waste as a feedstock for thermo-chemical conversion to biofuel and biomaterial, In *Proceedings of the 5th International conference on Advances in Energy Research*, IIT Bombay, Mumbai, 15-17 December, 2015.
- Bora, N., Singh, J. P. and Mahapatra, S. Establishment of Smart Micro Grid for Demand Side Management. In *Proceedings of the Fifth International Conference on Advances in Energy Research*. IIT Bombay, Mumbai, December 15-17, 2015.
- Borah, N., Barua, R., Nath, D., Hazarika, K., Phukon, A., Goswami, K. and Baruah, D. C. Low energy rice stubble management through in situ decomposition. In *Proceedings of the International Conference on Solid Waste Management*.



Indian Institute of Science, Bangalore, 2015.

Bordoloi, N., Narzari, R., Sut, D., Chutia R.S. and Kataki, R. Characterization of bio-oil and its sub-fractions from pyrolysis of *Scenedesmus dimorphus*. In Proceedings of the International conference on New Horizons in Biotechnology, CSIR-NIIST Trivandrum, Kerala, India, 22-25 November, 2015.

Boro, N., Boro, B. and Kakati, B. K. Multi doped graphene electrocatalyst for high performance Polymer Electrolyte Fuel Cell: A review. In Proceedings of the Revive 2016 - National Conference on Advances in Renewable Energy, AEC, Guwahati, Assam, 26 - 27 March, 2016.

Buragohain, S., Mahapatra, S., Sarmah, N. and Kumar, S. Shading and Mismatch effect on the Performance of PV Module. In Proceedings of the Fifth International Conference on Advances in Energy Research. IIT Bombay, Mumbai, 15-17 December, 2015.

Chutia, S., Narzari, R., Bordoloi, N., Saikia, R., Gogoi, L., Sut, D. and Kataki, R. Pyrolysis of Dried Black Liquor Solids and Characterization of the Biochar and Biooil. In Proceedings of the 5th International conference on Advances in Energy Research, IIT Bombay, Mumbai, 15-17 December, 2015.

Das, S., Sarkar, P. K. and Mahapatra, S. Thermodynamic optimization of coal-biomass co-gasification process by using non-stoichiometric equilibrium modelling. In Proceedings of the Fifth International Conference on Advances in Energy Research, IIT Bombay, Mumbai, 15-17 December, 2015.

Das, V., Devi, A. and Deka, D. A Study on the different strains of Microalgae *Chlorella* as Potential Feedstock for biodiesel production. In Proceedings of the CHEMCON 2015 - Indian Chemical Engineering Congress 2015 (68th Annual Session of Indian Institute of Chemical Engineers), 27-30 December, 2015.

Das, V., Devi, A., Das, V. K. and Deka, D. Microalgae *Chlorella*: A Potential Feedstock For Biodiesel Production - A Review. In Proceedings of the 5th International Conference of Advances in Energy Research, IIT Bombay, Mumbai, 15-17 December, 2015.

Devi, A., Das, V. K., Das, V. and Deka, D. Fuel Quality Assessment of Biodiesels Produced through Alcoholysis from *Pongamia glabra*, *Mesua Ferrea* and their blend: A novel yet cinch approach. In Proceedings of the 5th International Conference of Advances in Energy Research, IIT Bombay, 15-17 December, 2015.

Kataki, S., Dev Sarma, G., Patowary, D. and Baruah D. C. Prospects of utilization of Biogas residue as growth supplement in mushroom cultivation. In Proceedings of the International Conference on Waste Management, Indian Institute of Technology, Guwahati, 2016.

Kataki, S., Helen, W., Clarke, M. and Baruah, D. C. Farm, Industrial and Municipal Waste: Prospects of nutrients (Phosphorus) recovery by presented. In Proceedings of the International Conference on Solid Waste Management. Indian Institute of Science, Bangalore, 2015.

Kumar, A., Bora, B., Bangar M., Rai, S., Singh, R., Renu. Mahapatra, S. and Sastry, O. S. Power Rating of Six Different Photovoltaic Technology Modules as Per IEC 61853-1 Under Natural Sunlight. In Proceedings of the fifth International Conference on Advances in Energy Research. IIT Bombay, Mumbai, 15-17 December, 2015.

Patowary, D., West, H., Clarke, M. and Baruah, D. C. Biogas production from surplus plant biomass feedstock: Some highlights of Indo-UK R & D initiative. In Proceedings of the International Conference on Solid Waste Management. Indian Institute of Science, Bangalore, 2015.

Patowary, R., Baruah, D. and Baruah, D. C. Rice husk as substitute fuel for food processing industry: techno-economic investigation of an industrial biomass gasifier in Assam (India). In Proceedings of the International Conference on Waste Management. Indian Institute of Technology, Guwahati, 2016.

Sut, D., Chutia, R.S., Bordoloi, N., Narzari, R. and Kataki, R. A bio refinery approach for complete utilization of *Cascabela thevetia* seed. In International conference on New Horizons in Biotechnology. CSIR-National Institute for Interdisciplinary Science and Technology Trivandrum, Kerala, India, 22-25 November, 2015.

Talukdar, B., Mahapatra, S. and Sarmah, N. A comparative study of grid-connected photovoltaic systems in four different locations of India. In Proceedings of the International Conference on Advances in Energy Research. IIT Bombay, India, 15-17 December, 2015.

Talukdar, B., Mahapatra, S. and Sarmah, N., A comparative study of grid-connected photovoltaic systems in four different locations of India. In Proceedings of the fifth International Conference on Advances in Energy Research. IIT Bombay, Mumbai, 15-17 December, 2015.



Tasnin, W. and Choudhury, P. K. Design and development of an automatic solar water heater controller. In proceedings of International Conference on Energy, Power and Environment: Towards Sustainable Growth. 2015.

Books and Book Chapters

Devi, A., Barman, R. and Deka, D. 2016. Designer Biodiesel: An Optimization of Fuel Quality by Blending Multiple Oils. In Kumar, S. and Khanal, S. K. (eds). Proceedings of the First International Conference on Recent Advances in Bioenergy Research. Springer.

Kalita, P., Borah, M., Kataki, R., Yadav, D., Patowary, D. and Patowary, R. (Forthcoming). Biogas and fuel cell as vehicular fuel in India. In Chandel, A. and Sukumaran, R. (eds). Sustainable Biofuels Development in India. Springer.

Kataki, R. and Hiloidhari, M. (Forthcoming). Co-generation of heat and electricity from biomass in India: Current status and future challenges. In Chandel, A. and Sukumaran, R. (eds). Sustainable Biofuels Development in India, Springer.

Kataki, R., Bordoloi, N., Saikia, R. Sut, D., Narzari, R. and Gogoi, L. (Forthcoming). An assessment on Indian Government initiatives and policies for the promotion of biofuels implementation, commercialization through private investments. In Chandel, A. and Sukumaran, R. (eds.). Sustainable Biofuels Development in India. Springer.

Kataki, R. Chutia, R. S., Mishra, M., Bordoloi, N., Saikia, R. and Bhaskar, T. 2015. Feedstock suitability for thermochemical processes. In Pandey, A., Bhaskar, T., Sukumaran, R. and Stocker, M. (eds.). Advances in Thermochemical Conversion of Biomass. Elsevier.

Kataki, R., Konwar, L. J., Mikkola, J. P., Bordoloi, N., Saikia, R. and Chutia, Rahul S. Side-streams from bioenergy and biorefinery complexes as a resource for circular bio-economy. In Pandey, A., Bhaskar, T., Venkata Mohan, S., Khanal, S., Lee, Duu-Jong (eds). Waste Biorefinery: Potential and Perspectives. Elsevier. (Forthcoming).

Kataki, R., Chutia, R.S., Bordoloi, N.J., Saikia, R., Sut, D., Narzari, R., Gogoi, L. Nikhil, G.N., Sarkar, O., Venkata Mohan, S. 2016. Biohydrogen production scenario for Asian countries. In Singh, A. and Rathore, D. (eds). Biohydrogen Production: Sustainability of Current Technology and Future Perspective. Springer.

Kataki, R., Goswami, K., Bordoloi, N., Saikia, R. Sut, D., Narzari, R. and Gogoi, L. 2015. Biomass Resources for Biofuel Production in North-East India. In Purkayastha, J (ed). Bioprospecting of Indigenous Bioresources of North East India. Springer.

Narzari, R., Bordoloi, N., Chutia, R. S., Borkotoki, B., Gogoi, N., Bora, A. and Kataki, R. 2015. Biochar-an overview on its production, properties and potential benefits. In Choudhury, H. (ed). Biology, Biotechnology and Sustainable Development. Delhi: Research India Publications.

SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED

International and National

B K Kakati attended and presented a paper, Multi-doped graphene electrocatalysts for high performance Polymer Electrolytic Fuel Cell: A Review, in a National Conference on Advances in Renewable Energy, organized by Assam Engineering College, Guwahati, 26-27 March, 2016.

D C Baruah attended, 103rd Indian Science Congress, Mysore University, Mysore, 3-7 January, 2016.

D C Baruah attended a National Conference on Advances in Renewable Energy, organized by Assam Engineering College, Guwahati, 26-27 March, 2016.

D C Baruah attended a National Seminar on Non-Conventional Sources of Energy: Prospects and Challenges, organized by Royal Group of Institutions, Guwahati, 30 January, 2016.

D C Baruah attended a sponsored National seminar, Achieving sustainable rural livelihood through financial intervention and skilling India with special reference to the North Eastern Region, organized by Department of Business Administration, Tezpur University, 4-5 March, 2016.

D C Baruah attended an International Conference on Solid Waste Management, organized by Indian Institute of Science, Bangalore, 24- 27 November, 2015.

D Deka attended an International Congress and Expo on Biofuels & Bioenergy, organized by OMICS International at Valencia, Spain, 25-27 August, 2015 .

D Deka attended a National Conference on the theme, Challenges and Opportunities for the energy Sector in North East under the present Scenario, SECONE (Synergy for Energy Challenges & Opportunities in North East India), Guwahati, June 20, 2015 .



S Mahapatra attended the Fifth International Conference, Advances in Energy Research (ICAER), at IIT Bombay, Mumbai, 15-17 December, 2015.

S Mahapatra attended a QIP short term course, Photovoltaics and Application to Smart Grid, Centre for Continuing Education, Indian Institute of Science, Bangalore, 18-22 January, 2016.

TALKS BY THE FACULTY ABROAD AND IN INDIA

B K Kakati delivered a talk, Polymer Electrolyte Fuel Cell contamination: impacts, mechanism and mitigation strategies, at a TEQIP short term course on Recent Trends in Fuel Cell Technology, Centre for Energy, IIT Guwahati, Assam, India, 28-29 December, 2015.

D C Baruah delivered a talk, Bridging urban rural livelihood divide through bioenergy: highlight of Jhawani Initiative, in a National Seminar, Achieving sustainable rural livelihood through financial intervention and skilling India with special reference to the North Eastern Region, Department of Business Administration, Tezpur University, 4-5 March, 2016.

D C Baruah delivered a talk, Renewable Energy for North East India: with special focus with Biomass Energy, in a National Conference on Advances in Renewable Energy, Assam Engineering College, Guwahati, 26-27 March, 2016.

D C Baruah delivered a talk, Renewable Energy, Education and Manpower Development, in the Industry Academia Meet on Renewable Energy Application at North-East India and Interaction of Finishing Students with Industry, Tezpur University, 2-3 November, 2015.

D C Baruah, D.C. delivered plenary talk on Biogas Technology for rural development of Northeast India, 103rd Indian Science Congress, Mysore University, January 3-7, 2016.

D Deka delivered a talk, Bio-inspired heterogeneous catalyst for sustainable biofuel production, in the International Congress and Expo on Biofuels & Bioenergy, Valencia, Spain, 25-27 August, 2015.

D Deka delivered a talk, Towards production of biofuel and chemicals - a reference to North-East India, in a National Conference, Challenges and Opportunities for the energy Sector in North East under the present Scenario, SECONE (Synergy for Energy Challenges & Opportunities in North East India), Guwahati, 20 June, 2015.

R Katakati delivered an invited lecture, A bio-refinery approach for complete utilization of Cascabela thevetia seed, in an International Conference on New Horizons in Biotechnology (NHBT 2015), organized jointly by the CSIR-National Institute for Interdisciplinary Science & Technology, Trivandrum, Kerala and Biotech Research Society of India, 22-25 November, 2015.

R Katakati delivered an invited lecture, Effect of pyrogenic carbon (Biochar) on soil management and C-sequestration, in the International Conference on Advances in Bioprocess Technology, organized by the School of Biosciences, Mar Athanasios College for Advanced Studies, Tiruvalla (MACFAST), Kerala, 26-28 November, 2015.

R Katakati delivered an invited lecture, Biomass and biowastes inventorization and thermo-chemical conversion of waste biomass, in an International Conference on Natural Resource Restoration Technologies (ICNRRT 2015), organized by the Department of Biotechnology, PSG College of Technology, Coimbatore, India, 17-18 April, 2015.

S Mahapatra delivered a talk, Approach towards energy efficient bioclimatic design for housing in the NER, at the HUDCO-HSMI Training Programme on Planning Issues and Interventions for Hill Towns of NER, Hotel Lily, Guwahati, 15 September, 2015.

S Mahapatra delivered a talk, Climate responsive buildings and thermal comfort, at a one-day awareness programme on Renewable Energy, Department of Energy Engineering, NEHU, Shillong, 20 August, 2015.

S Mahapatra delivered a talk, Design and performance analysis of roof top grid connected PV system, at a one-day awareness programme on Renewable Energy, Department of Energy Engineering, NEHU, Shillong, 20 August, 2015.

S Mahapatra delivered a talk, Design, Performance and Economic Analysis of Roof-top Grid-connected Solar Photovoltaic System, Industry-Academia Meet, Department of Energy, Tezpur University, Tezpur, 4 November, 2015.

S Mahapatra delivered a talk, Performance analysis of grid connected photovoltaic systems, at a short term course on Advances in Renewable Energy and its Applications, Department of Electrical Engineering, Assam Engineering College, Guwahati, 8 March, 2016.

S Mahapatra delivered a talk, Solar passive features of vernacular buildings and Thermal comfort, at a NEQIP short term course on Advances in Renewable Energy and its Applications, Department of Electrical Engineering, Assam Engineering College, Guwahati, 8 March, 2016.



S Mahapatra, S. delivered a talk on Solar Passive Architecture, TEQIP Short term course on Solar Energy Conversion and Management, Centre for Energy, IIT Guwahati, November 26, 2015.

SEMINAR/WORKSHOP/SYMPOSIA/INVITED LECTURES ORGANISED BY THE DEPARTMENT

Industry - Academia Meet on Consultative cum Awareness Meeting on Renewable Energy Application at North East India and Interaction of Finishing Students with Industry, 3-4 November, 2015.

Workshop on NGO-Academia meet to upgrade rural technology through S&T intervention, sponsored by RuTAG-NE, IIT Guwahati, 20 June, 2015.

Workshop on Academic Support Programme, sponsored by AICTE-NEQIP, 29-30 April, 2015.

Skill Development Training Program on Improved Cook stove, sponsored by ASTEC under the project Development of a fuel efficient all-purpose biomass cook stove, 6-10 October, 2015.

Two-day workshop, Issues and Prospect of Nutrient recovery from Bio-energy systems for rural community, sponsored by UGC-UKIERI collaborative project (Optimizing phosphate recovery from community bio-energy system: low cost sustainable fertilizer production for rural community), 27-28 July, 2015.

DISTINGUISHED VISITORS TO THE DEPARTMENT

Mr. A Das, Assistant Manager, Adani Transmission Limited, Akola, Maharashtra, India

Dr. Amararesh Dalal, IIT Guwahati, Assam, India

Prof. Chris Atkin, University of Nottingham, UK

Dr. Debadayita Raha, University of Derby, UK

Dr. Helen West, School of Biosciences, University of Nottingham, UK

Prof. HN Chanakya, IISc., Bangalore

Dr. Jennifer Atkin, University of Stirling, UK

Prof. M Clarke, Professor, School of Geography, University of Nottingham, UK

Dr. Nitin Labhsetwar, NEERI, Nagpur

Er. P Thakur, Chief Engineer (Production), OIL, Duliajan, Assam, India

Mr. Rama Siva, CEO, Founder, Anthro Power, New Delhi, India

Dr. Richard Quilliam, University of Stirling, UK

Dr. Sadhana Rayalu, NEERI, Nagpur

Prof. Susan Baines, Macheater Metropolitan University, UK

Dr. Tamara McNeill, Macheater Metropolitan University, UK

AWARDS & HONOURS RECEIVED BY THE FACULTY/ RESEARCH SCHOLARS/STUDENTS

Sampriti Katak, received Excellent Paper Award for the paper, Katak, S., West, H., Clarke, M. and Baruah, D.C., Farm, Industrial and Municipal Waste: Prospects of nutrients (Phosphorus) recovery, International Conference on Solid Waste Management, Indian Institute of Science, Bangalore, 24-27 November, 2015.

Borah, N., Barua, R., Nath, D., Kailash, H., Phukon, A., Goswami, K. and Baruah, D.C. received Excellent Paper Award for the paper, Low energy rice stubble management through in situ decomposition, International Conference on Solid Waste Management, Indian Institute of Science, Bangalore, 24-27 November, 2015.

OTHER IMPORTANT ACTIVITIES OF THE DEPARTMENT/ACHIEVEMENTS OF THE FACULTY

III semester students of MTech programme developed a Photovoltaic Assisted Human Rickshaw (PHAR) under the supervision of Prof. H Patangia, Adjunct Professor, Department of Energy, Tezpur University.

**NUMBER OF STUDENTS WHO PASSED NET-JRF/GATE [2015-2016]**

GATE: 9

THE FACULTY OF THE DEPARTMENT***Professors***

D C Baruah, PhD (PAU, Punjab)

Dean, Students' Welfare

Specialization/Areas of Interest: Renewable Energy Planning, Energy modeling, Bioenergy by-product

E-mail: baruahd@tezu.ernet.in

D Deka, PhD (Tezpur)

Head of the Department

Specialization/Areas of Interest: Bio-energy, Energy-Environment

E-mail: dhanapati@tezu.ernet.in

Associate Professor

R Kataki, PhD (Tezpur)

Specialization/Areas of Interest: Biofuels & Bio-refinery, Shale-oil, Energy & Environment Interface

E-mail: rupam@tezu.ernet.in

Assistant Professors

S Mahapatra, MTech (Jadavpur)

Specialization/Areas of Interest: Biomass gasification, Climate responsive buildings, Energy conservation & management

E-mail: sadhan@tezu.ernet.in

P K Choudhury, MTech. (Tezpur)

Specialization/Areas of Interest: Hybrid Energy System, Energy Conservation & Management, Instrumentation & Control

E-mail: pkc@tezu.ernet.in

B K Kakati, PhD (IIT, Guwahati)

Specialization/Areas of Interest: Fuel Cell, Hydrogen Technology, Redox Flow Batteries, Graphene nanotechnology

E-mail: bkakati@tezu.ernet.in

N Sarmah, PhD (Heriot-Watt, Edinburgh)

Specialization/Areas of Interest: Solar energy, Photovoltaic, Energy systems

E-mail: nabin@tezu.ernet.in

Bibha Boro, MTech (Tezpur)

Specialization/Areas of Interest: Solar cell, Dye sensitized solar cell, Energy management, Solar thermal

E-mail: bibha@tezu.ernet.in

Adjunct Professor

H Patangia, PhD (McGill)
Department of Engineering Technology
University of Arkansas at Little Rock
Little Rock, AR 72204
E-mail: hcpatangia@ualr.edu

THE STAFF OF THE DEPARTMENT

Technical Staff

B Gogoi, MTech. (Tezpur)
Technical Officer
E-mail: biswa27@tezu.ernet.in

T Borah, Diploma
Technical Assistant
E-mail: tapanji@tezu.ernet.in

T Lahon, BSc (Dibrugarh)
Laboratory Assistant
E-mail: tlahon@tezu.ernet.in

Office Staff

C R Gogoi
UDC
E-mail: ranjan7@tezu.ernet.in

AAI
MTS







DEPARTMENT OF FOOD ENGINEERING AND TECHNOLOGY

THE DEPARTMENT

The Department of Food Engineering and Technology is one of the six constituent departments under the School of Engineering. The Department, earlier known as Department of Food Processing Technology, started in 2006 with a two-year MSc programme in Food Processing Technology. The Department is currently offering BTech, IntMTech, BVoc, MTech and PhD programmes.

The vision of the Department is to create skilled human resources in the engineering aspect of food processing in order to cater to the needs of the rapidly growing food processing sector. The Department aims at providing knowledge and skills for better preservation, processing and value addition to agro-products. It also aims at promoting R&D for product and process development. It seeks to assure high level hygiene and safety of processed food through food safety laws and regulations, which will support a competitive, modern and safe food market for the consumers.

The Department has been supported by DST-FIST, UGC-SAP and by Ministry of Food Processing Industries (MoFPI), Government of India for running various programmes. Also, with the support of MoFPI, New Delhi, the Department is running a Food Quality Control Laboratory for testing food and tea samples. The Department has several ongoing projects sponsored by various funding agencies like UGC, MoFPI, DST, DBT, DRDO, ICAR, AICTE, MSME, ASTEC, etc. The main objective of the scientific research and other activities of the Department is to contribute to the national food industry, its engineering and technology development.

Academic programmes and Student intake

| Academic Programmes | Student Intake |
|---|--|
| BTech in Food Engineering & Technology | 38 |
| MTech in Food Engineering & Technology | 18 |
| Integrated MTech in Food Engineering & Technology | 18 |
| BVoc in Food Processing | 50 |
| PhD in Food Engineering & Technology | Intake variable 07 in the Academic year 2015-16 |

Major facilities and equipment available

| | |
|--|---|
| Milk Pasteuriser Unit (GOMA Engineering) | Modified atmospheric packaging unit (Vacstar) |
| Hunter Color Spectrophotometer (Hunter Lab, USA) | DSC-TGA (Netzsch) |
| Texture Analyser (Newport, Australia) | Encapsulator (Buchi) |
| Rapid Viscosity Analyser (Stable Micro System) | Gas pycnometer (Porous Materials Inc.) |
| Freeze Dryer (Labtech) (Analytical Type) | Fermenter (Sartorius) |
| Falling Number Apparatus (Perten, Australia) | Atomic absorption spectrophotometer (Thermo Scientific) |
| Automatic Solvent Extraction System (Pelican) | Soxhlet apparatus (Pelican Equipments) |
| Automatic Fibre Extraction System (Pelican) | Kjeldahl apparatus (Pelican Equipments) |
| FTIR (Perkin Elmer) | GC – MS system (Perkin Elmer) |
| HPLC (Waters) | |



MAJOR RESEARCH FINDINGS/RESEARCH AND DEVELOPMENT ACTIVITIES:

| Principal Investigator | Salient Research Findings |
|------------------------|--|
| A B Das | <ul style="list-style-type: none"> Developed pineapple fruit leather using extrusion cooking Developed probiotic fruit leather from pineapple Extracted polyphenols from banana inflorescence (<i>M. balbisiana</i>) |
| BSrivastava | <ul style="list-style-type: none"> Process development for mango pulp using ohmic heating Development of pilot scale process technology for preparation of BhimKol (Musa Balbisiana) powder by using hybrid drying method Development of weaning formula using malted rice and fruits of Assam Microwave mediated processing of turmeric (Patent Filed). |
| CharuLataMahanta | <ul style="list-style-type: none"> Bioactive peptides from napin protein of rapeseed meal with ACE inhibitory and bile binding properties were identified. Bioactive peptides from napin protein of rapeseed meal with good emulsion stabilising and foam stabilising properties were identified. Optimised extract of polyphenols from <i>Pleurotus citrinopileatus</i> mushroom enhanced phenolic content and antioxidant activity of different fruit juices. Improved quality of elephant juice was obtained on incorporation of microencapsulates of ginger extract. Low calorie gel fortified with bioactive compounds from Punarnava (<i>Boerhaaviadiffusa Linn.</i>) and Hatikhutara (<i>Amaranthus spinosus Linn.</i>) was developed. |
| L S Badwaik | <ul style="list-style-type: none"> Utilized chicken feather protein and pomelo peel pectin for developing composite film. Developed potato peel and sweet lime pomace based biopolymer film. Studied the effect of ultrasound and centrifugal force on carambola (<i>Averrhoa carambola L.</i>) slices during osmotic dehydration |
| M K Hazarika | <ul style="list-style-type: none"> Technology up gradation of <i>KomalChawal</i> Production Swelling behaviour in food on hydration Traditional foods: assessment for quality and safety |
| N Sit | <ul style="list-style-type: none"> Lipase from Tomato seeds were successfully extracted using aqueous two phase extraction. Tomato seeds can be used as a source of lipase for interesterification of oils. Soup using resistant starch from potato and modified okara was developed for use by Geriatric population. 3. Cheese using taro leaf extract was developed which has properties similar to cheese prepared by adding rennet. Rennet can be replaced with taro leaf extract for preparation of cheese which will make the process economical. |
| Poonam Mishra | <ul style="list-style-type: none"> Synthesized and characterized casein and conjugated casein-Ag nanocomposite Developed casein and conjugated casein-Ag nanocomposite containing functional edible bilayer films. Synthesis and characterization of copper nanocomposites and its utilization as an active ingredient in edible film. Extraction and encapsulation of bioactive constituents from <i>Terminalia chebula</i> |
| R K Duary | <ul style="list-style-type: none"> Slow Digestible Starch Casein nanoparticle for colon targeted controlled delivery of biologically active agents in food systems (Patent Filed). |



Research projects, ongoing and new

| Project Title | Funding Agency | Amount (in INR) | Duration | Principal Investigator |
|--|----------------|-----------------|-------------|------------------------|
| Pilot Scale Process Technology for 'BhimKol' (<i>Musa Balbisiana</i>) slice, grits and powder using hybrid drying methods | DST | 36.50 lakh | 2013-2015 | B Srivastava |
| <i>In vivo</i> hypocholesterolemic effect of bioconjugates of starch nanoparticles with gamma-oryzanol and tocotrienols extracted from rice bran. | DBT | 80.00 lakh | 2016-2018 | CharuLataMahanta |
| Characterisation of technofunctional and biofunctional properties of napin protein hydrolysates of rapeseed meal | DRDO | 5.00 lakh | 2014-2016 | CharuLataMahanta |
| Development of functional carambola juice incorporated with anthocyanins from bran of pigments rice varieties of Assam | ASTEC | 2.65 lakh | 2016-2018 | CharuLataMahanta |
| Development of ready to reconstitute freeze dried mistidahi powder | SERB-DST | 5.00 lakh | 2.16-2017 | D Seth |
| Production of natural antioxidant enriched sandesh using single screw extruder | MSME | 8.00 lakh | 2014- 2015 | KK Dash |
| Development of active packaging film from food processing wastes | ICAR | 31.00 lakh | 2016-2018 | LS Badwaik |
| Development of technology for quick cooking rice production through up gradation of a traditional method | AICTE | 16.50 lakh | 2014 – 2017 | MK Hazarika |
| Development and fabrication of small capacity paddy parboiling system with process completion indicator | MSME | 5.50 lakh | 2014 – 2016 | MK Hazarika |
| Comparative metagenome of human gut of North and North-eastern region of India | DBT | 64.70 lakh | 2014-2017 | R K Duary |
| Encapsulation and controlled delivery of herbal extracts in dairy food matrix using cow milk protein against <i>in vitro</i> simulated inflammatory cell line models | SERB-DST | 19.70 lakh | 2014-2017 | R K Duary |
| Designing bioactive peptides from whey liquid waste of the dairy industry: Functionality and health benefit in Obesity, Obesity associated disorders with exploration of molecular mechanism | DBT | 60.29 lakh | 2016-2018 | R K Duary |
| Establishment and evaluation of probiotics potentiality of isolated lactobacilli strains and comparative analysis of their gene expression profile during transit in a simulated gastrointestinal tract conditions | DST-SERB | 11.00 lakh | 2016-2018 | R K Duary |
| Quality improvement of a traditional probiotic beverage of North-East India as combat food | DRDO | 21.27 lakh | 2013-16 | SC Deka |
| Development of value added food products from leaf protein concentrate of green leafy vegetables of Assam | DST | 21.55 lakh | 2015-17 | SC Deka |
| Development of a probiotic vegetable drink based upon bottle gourd with blends of other vegetables and utilization of its wastes for making value added products | DBT | 59.35 lakh | 2016-2019 | SC Deka |

**PUBLICATIONS****In International and National Journals**

- Badwaik, L. S., Gautam, G., and Deka, S. C. Influence of blanching on antioxidant, nutritional and physical properties of bamboo shoot, *Journal of Agricultural Sciences*, 10(3), 2015
- Barman, N., and Badwaik, L. S. Effect of ultrasound and centrifugal force on carambola (*Averrhoa carambola* L.) slices during osmotic dehydration. *Ultrasonics Sonochemistry*, 34, 2017.
- Bhattacharjya, B., Dutta, H., Patwari, K., Mahanta, C.L. (2015). Properties of annealed jackfruit (*artocarpusheterophyllus* lam.) seed starch. *Acta Alimentaria- An International Journal of Food Science*, 44 (4): 501-510.
- Bora, A., and Mishra, P. Characterization of casein and casein-silver conjugated nanoparticle containing multifunctional (pectin-sodium alginate/casein) bilayer film. *Journal of Food Science and Technology*, 2016 [Accepted].
- Bora, J., Chakraborty, S. and Mahanta, C.L. Antimicrobial activity of selected medicinal plants against the pathogenic bacteria isolated from soil, *Pharmacognosy and Phytochemistry*, 5(1), 2016.
- Borah, A., Mahanta, C. L., and Kalita, D. Optimization of process parameters for extrusion cooking of low amylose rice flour blended with seeded banana and carambola pomace for development of minerals and fiber rich breakfast cereal. *Journal of food science and Technology*, 53(1), 2016.
- Das Purkayastha, M., Borah, A.K., Saha, S., Manhar, A.K., Mandal, M. Mahanta, C.L. Effect of maleylation on physicochemical and functional properties of rapeseed protein isolate, *Journal of Food Science and Technology*, 2016 [In press].
- Das, A. J., Das, G., Miyaji, T. and Deka, S. C. In vitro antioxidant activities of polyphenols purified from four plant species used in rice beer preparation in Assam, India, *International Journal of Food Properties*, 19(3), 2016
- Das, A. J., Khawas, P., Seth, D., Miyaji, T. and Deka, S. C. Optimization of the extraction of phenolic compounds from *Cyclosorus extensa* with solvents of varying polarities, *Preparative Biochemistry and Biotechnology*, 2016 [In press].
- Das, B., Chattopadhyay, P., Maji, S., Aadesh Upadhyay, A., Das Purkayastha, M, Mahanta, C.L., Maity, T. K. and Karak, N. Bio-functionalized MWCNT/hyperbranched polyurethane bionanocomposite for bone regeneration. *Biomedical Materials*, 2015 [In press].
- Dutta, H., Mahanta, C. L., Singh, V., Das, B. B., Rahman, N. Physical, physicochemical and nutritional characteristics of Bhojachaul, a traditional ready-to-eat dry heat parboiled rice product processed by an improvised laboratory soaking technique, *Food Chemistry*, 191(5), 2016.
- Dutta, H., Mahanta, C.L., and Singh, V. Changes in the properties of rice varieties with different amylose content on dry heat parboiling. *Journal of Cereal Science*, 65, 2015.
- Gautam, G., and Mishra, P. Development and characterization of copper nano composite containing bilayer film for coconut oil packaging, *Journal of Food Processing and Preservation*, 2016 [Accepted].
- Gope, S., Samy, D., Paul, A.K., and Das, A. B. Effect of alcohol-acid modification on physicochemical, rheological and morphological properties of glutinous rice starch, *International Journal of Biological Macromolecules*, 2016 [In press].
- Hazarika, B.J. and Sit, N. Effect of dual modification with hydroxypropylation and cross-linking on physicochemical properties of taro starch, *Carbohydrate Polymers*, 140, 2016
- Khawas, P. and Deka, S. C. Comparative nutritional, functional, morphological and diffractogram study on culinary banana (*Musa ABB*) peel at various stages of development, *International Journal of Food Properties*, 2016 [In press].
- Khawas, P. and Deka, S. C. Effect of modified resistant starch of culinary banana on physicochemical, functional, morphological, diffraction and thermal properties, *International Journal of Food Properties*, 2016 [In press].
- Khawas, P. and Deka, S. C. Moisture sorption isotherm of underutilized culinary banana flour and its antioxidant stability during storage. *Journal of Food Processing and Preservation*, 2016 [Accepted].
- Khawas, P., and Deka, S. C. Encapsulation of natural antioxidant compounds from culinary banana by cocrystallization. *Journal of Food Processing and Preservation*, 2016 [In press].
- Khawas, P., and Deka, S. C. Isolation and characterization of cellulose nanofibres from culinary banana peel using high intensity ultrasonication combined with chemical treatment, *Carbohydrate Polymers*, 137, 2016.
- Khawas, P., Das, A. J., and Deka, S. C. Production of renewable cellulose nanopaper from culinary banana (*Musa ABB*) peel and its characterisation. *Industrial Crops and Products*, 2016 [In press].



- Makroo, H.A. Rastogi, N.K., and Srivastava, B. Enzyme inactivation of tomato juice by ohmic heating and its effects on physico-chemical characteristics of concentrated tomato paste, *Journal of Food Process Engineering*, 2016[In press].
- Malakar, B., Das, A. J. and Deka, S. C. In vitro probiotic potential of *Enterococcus* species isolated from tungrymbai, a fermented soybean product of Meghalaya, India. *ActaAlimentaria*, 2016[In press].
- Mangang, Kh. C. S., Das, A. J., and Deka, S. C. Shelf-life improvement of rice beer by incorporation of *Albiziamyriophylla* extracts, *Journal of Food Processing and Preservation*, 2016 [Accepted].
- Mishra, P. and Mahanta, C. L.. Extraction, Identification and Antioxidant Properties of bioactive component of Amla (*Emblicoefficialis*) pomace powder. *International Journal of Food and Nutritional Sciences*, 5, 2016.
- Mishra, P., and Kalita, D. Assessment of pre-treatment of edible coatings prepared from gelatin and polyphenols (extracted under optimized conditions from Amla fruit powder) on stability of banana chips, *ActaAlimentaria*, 2016 [Accepted].
- Mishra, P., and Mahanta, C.L. Comparative analysis of functional and nutritive values of Amla (*Emblica officinalis*) Fruit, seed and seed coat powder. *American Journal of Food Technology*, 9, 2015.
- Mishra, P., Dutta, N., and Mahanta, C.L. Partial extraction and identification of phenolics in Amla (*Emblica officinalis*) seed coat powder, *Journal of Food Science and Technology*, 52, 2015
- Mishra, P., Rai, G.K., and Mahanta, C.L. Process standardization for development of spray dried lemon juice powder and optimization of amla–lemon based RTS (ready to serve drink) using Response Surface Methodology, *Journal of Food Processing and Preservation*, 39, 2015
- Rafiq, A., Chowdhary, J., Hazarika, M.K., and Makroo, A.H. Temperature dependence on hydration kinetic model parameters during rehydration of parboiled rice. *Journal of Food Science and Technology*, 52(9), 2016.
- Saha, J., and Deka, S. C. Functional properties of sonicated and nonsonicated extracted leaf protein concentrate from *Diplaziumesculentum*. *International Journal of Food Properties*, 2016[In press].
- Saikia, S. and Mahanta, C.L. In Vitro Physicochemical, Phytochemical and Functional Properties of Fiber Rich Fractions Derived from By-Products of Six Fruits, *Journal of Food Science and Technology*, 2016[In press].
- Saikia, S., Mahnot, N. K., and Mahanta, C. L. Phytochemical content and antioxidant activities of thirteen fruits of Assam, India, *Food Bioscience*, 13, 2016.
- Saikia, S., Mahnot, N.K., and Mahanta, C.L. A comparative study on the effect of conventional thermal pasteurisation, microwave and ultrasound treatments on the antioxidant activity of five fruit juices. *Food Science and Technology International*, 2015 [In press].
- Saikia, S., Mahnot, N.K., and Mahanta, C.L. Effect of spray drying of four fruit juices on physicochemical, phytochemical and antioxidant properties. *Journal of Food Processing and Preservation*, 2015 [In press].
- Saikia, S., Mahnot, N.K., and Mahanta, C.L. Optimisation of phenolic extraction from *Averrhoa carambola* pomace by response surface methodology and its microencapsulation by spray and freeze drying. *Food Chemistry*, 171, 2015.
- Saxena, J., Makroo, H.A., and Srivastava, B. Optimization of time-electric field combination for PPO inactivation in sugarcane juice by ohmic heating and its shelf life assessment, *LWT - Food Science and Technology*, 71, 2016.
- Saxena, J., Makroo, H.A., and Srivastava, B. Effect of ohmic heating on Polyphenol Oxidase (PPO) inactivation and color change in sugarcane juice, *Journal of Food Process Engineering*, 2016[In press].
- Seth, D., Deka, S.C. and Kalita, N.K. Optimization and development of Mistidahi (sweetened yoghurt) from mixture of cow and goat milk. *International Food Research Journal*, 2016 [Accepted].
- Seth, D., Mishra, H.N., and Deka, S.C. Effect of spray drying process conditions on bacteria survival and acetaldehyde retention in sweetened yoghurt powder: an optimization study, *Journal of Food Process Engineering*, 2016[In press].
- Seth, D., Mishra, H.N., and Deka, S.C. Functional and Reconstitution Properties of Spray Dried Sweetened Yoghurt Powder as Influenced by Processing Conditions, *International Journal of Food Properties*, 2016[In press].
- Sharma, P., Ramchiary, M., Samyoy, D., and Das, A. B. Study on the phytochemical properties of pineapple fruit leather processed by extrusion cooking, *LWT-Food Science and Technology*, 72, 2016.
- Vivek, K., Subbarao, K.V., and Srivastava, B. Optimization of postharvest ultrasonic treatment of kiwifruit using RSM. *Ultrasonics Sonochemistry*, 32, 2016.

**Conference proceedings**

Seth, D., Mishra H.N. and Deka, S.C. Optimization of a lab-scale spray drying process for mistidahi, using response surface methodology. In Proceedings of the 50th Annual Convention of Indian Society of Agricultural Engineers and Symposium on Agricultural Engineering in Nation Building: Contributions and Challenges, organized by Orissa University of Agriculture & Technology, Bhubaneswar, Orissa, India, 19-21 January, 2016.

Mangang, K. C. S., Das, A. J. and Deka, S. C. Comparative shelf-life study of two different rice beers prepared using wild type and established microbial starters. In Proceedings of the International Conference on Ethnic Fermented Foods and Beverages: Microbiology and Health Benefits, organized by Sikkim University, Gangtok, India in association with Swedish South Asian Network on Fermented Foods (SASNET-FF), 20-21 November, 2015.

Samyot, D., Das, A. B. and Deka, S. C. Kiwi (*Actinidiadeliciosa*) antioxidant powders obtained by cocrystallization and its characterization. In Proceedings of the International Conference on Advances in Food Science and Technology (ICAFST-2015) Kottayam, Kerala, India, 20-22 November, 2015.

Das, A. B., Goud V.V. and Das, C. Ultrasound-assisted extraction of anthocyanin from pigmented rice bran. In Proceedings of the 68th Annual Session of Indian Institute of Chemical Engineers, Guwahati, India, 27-30 December, 2015.

Mishra, P. and Mahanta, C. L. Process optimization for extraction of total phenolic. In Proceedings of the National Conference on ICFP, 2015 at Department of Food Engineering and Technology, Tezpur University, 2015

Gautam, G. and Mishra, P. Study of effect of copper nanoparticle on pectin sodium alginate based composite films. In Proceedings of the National Conference on ICFP, 2015 at Department of Food Engineering and Technology, Tezpur University, 2015.

Books and Book Chapters

Mahatma, C. L. and Saikia, S. 2016. Bioactive compounds of rice as health promoters. In Luis Rodrigues da Silva, Branca Maria Silva (eds). Natural Bioactive Compounds from Fruits and Vegetables as Health Promoters: Part 2, Bentham Science ebook.

Other publications

D Seth contributed various modules to the subject Food Technology in UGC e-PG PATHSHALA.

Poonam Mishra contributed four modules to the subject Food Technology in UGC e-PG PATHSHALA.

SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**International and National**

A B Das attended and presented a poster in the 68th Annual session of Indian Institute of Chemical Engineers (CHEMICON 2015) at IIT, Guwahati, 27-30 December, 2015.

B Srivastava attended and delivered an oral Presentation in the 50th Annual convention of Indian Society of Agricultural Engineers (ISAE) and Symposium, Agricultural Engineers in nation building and challenges, at College of Engineering and Technology, Orissa University of Agriculture and Technology, Bhubaneswar, India, 19-21 January, 2016.

L S Baswaik attended and presented a paper on "Process optimization for Osmo dehydrated carambola" in the International Conference on Innovations in Food Value innovations and challenges" (held during March 17-18, 2016 at NIFTEM, Sonapat Haryana.

MK Hazarika attended the UKIERI-UGC Leadership Development Programme for Skill Development Institutions, New Delhi, 29 February – 5 March, 2016.

Poonam Mishra attended and presented a paper, Development of casein and casein-silver conjugated nanoparticle containing multifunctional bilayer (pectin-sodium alginate/casein) film, in the International Conference on Innovations in Food Value innovations and challenges, at NIFTEM, Sonapat, Haryana, 17-18 March, 2016.

DK Seth attended and delivered an oral presentation in the 50th Annual convention of Indian Society of Agricultural Engineers (ISAE) and Symposium on "Agricultural Engineers in nation building and challenges held at College of Engineering and Technology, Orissa University of Agriculture and Technology, Bhubaneswar, India, 19-21 January, 2016.



TALKS BY THE FACULTY ABROAD AND IN INDIA

Charu Lata Mahanta delivered an invited lecture in Half day lecture series at CSIR-NEIST on broad topic of the lecture series, New advances in nutraceuticals and agrochemicals, 30 October, 2015.

Charu Lata Mahanta delivered an invited lecture in the First International Conference on Advances in Food Science and Technology (ICAFST-2015), Kottayam, Kerala, 20-22 November, 2015.

DISTINGUISHED VISITORS TO THE DEPARTMENT

Prof H N Mishra, IIT Kharagpur

Dr KSMS Raghavarao, CFTRI, Mysore

Dr Mihir K Purkait, IIT, Guwahati

Dr NK Rastogi, CFTRI, Mysore

Dr P PSrivastav, IIT Kharagpur

Dr P Siluvainathan, CFTRI, Mysore

Prof Pradyuman Kumar, SLIET, Longowal

AWARDS & HONOURS RECEIVED BY THE FACULTY/ RESEARCH SCHOLARS/STUDENTS

Faculty

- R K Duary received Best Teachers Award from School of Engineering, Tezpur University for the year 2016
- KK Dash received post-doctoral fellowship in the Ohio State University, USA for a period of 1 year.

Research Scholars

- Duiy Samyor is selected for Newton Bhabha PhD placement programme for the year 2015-2016
- Hilal Ahmed Makroo is selected for Commonwealth Split-Site PhD Programme for the year 2015-2017
- Pallab Kumar Borah is selected for Commonwealth Split-Site PhD Programme for the year 2015-2017
- Shah Faisal have been recommended Chinese Government Scholarship for the year 2016-18

Students

- Monjurul Hoque received GE foundation fellowship for the year 2016-17
- Onkar Sharma received IASc-INSA-NASI summer research fellowship, 2016
- Riya Bhadra received IASc-INSA-NASI summer research fellowship, 2016

OTHER IMPORTANT ACTIVITIES OF THE DEPARTMENT/ACHIEVEMENTS OF THE FACULTY

- Received NBA accreditation for BTech program for the year 2016-2018
- Received DST – FIST with grant of Rs. 70.00 Lakhs (2014-16)
- Received UGC SAP assistance with grant of Rs. 116.50 Lakhs (2016-21)
- A patent, Slow Digestible Starch Casein nanoparticle for colon targeted controlled delivery of biologically active agents in food systems (2016), was filed.
- A patent, Microwave mediated processing of turmeric (2016), was filed.

NUMBER OF STUDENTS WHO PASSED NET-JRF/GATE

NET : 5

GATE : 12

**NOTABLE PLACEMENT [2014-2015]**

| Name | Course | Year | Present status | Organisation/Institute | Location |
|----------------------|--------------------|------|---------------------------|-------------------------------|----------------------|
| AnuSethi | Post BSc IntM.Tech | 2015 | R&D | Himalaya Drug Company | Bangalore |
| AshimDey | M Tech | 2015 | Analyst | Vimta Labs Ltd. | Hydrabad |
| Avik Panda | M Tech | 2014 | Food Tech Trainer | Orion EduTech | Guwahati |
| BidyutJyoti Hazarika | M Tech | 2014 | Senior Executive | DS Group | Guwahati, assam |
| DebashisBorkakoti | B.Tech | 2015 | Nutrition Officer | Nestle | Kolkata (NER) |
| HimakshiBaishya | B.Tech | 2015 | Microbiologist | Kusum Beverage | Guwahati, Assam |
| ImdadulHoqueMondal | M Tech | 2015 | Guest Lecturer | Assam University | Silchar |
| Jayanta Pal | M Tech | 2015 | Chemist | SRD Nutrients | Mangaldoi |
| Jinku Bora | M Tech | 2014 | Assistant Professor | JamiaHumdard University | New Delhi |
| Kamal Gauli | M Tech | 2015 | Food Tech Trainer | Orion EduTech | Lakhimpur |
| KhagendraDahal | M Tech | 2014 | Food Tech Trainer | Orion EduTech | Guwahati, Assam |
| Khunthi Rani Owary | M Tech | 2015 | Chemist | Hills Dew (BMK Industries) | Kokrajhar |
| Kumarjit Sharma | B.Tech | 2014 | Technical (Grade III) | FCI | Tezpur, Assam |
| M. Dayananda Singh | M Tech | 2014 | Extension Officer | Indian Overseas Bank | Kolkata, West Bengal |
| MaitreSaikia | Post BSc IntM.Tech | 2015 | Nutrition Counsellor | Truweight | Guwahati |
| Naireeta Biswas | B.Tech | 2015 | Associate System Engineer | IBM | Bangalore |
| Nijw M Mushahary | M Tech | 2015 | Microbiologist | Subhankar Beverages Pvt. Ltd. | Guwahati |
| Nirmali Barman | Post BSc IntM.Tech | 2015 | Assistant Professor | JN College | Boko |
| Om Prakash | M Tech | 2014 | Quality manager | Britannia | Patna, Bihar |
| Prerana Bora | M Tech | 2014 | Production Manager | Rage Chocolatier | Bangalore |
| Priyanka Hazarika | Post BSc IntM.Tech | 2015 | Technical Assistant | FCI | Guwahati |
| Sangeeta Gope | Post BSc IntM.Tech | 2015 | QC Executive | LahkarUdyog (Spring Valley) | Tezpur |
| SanjitMazumdar | Post BSc IntM.Tech | 2015 | R&D | Himalaya Drug Company | Bangalore |
| Sourav Chakraborty | M Tech | 2014 | Assistant Professor | Tezpur, Assam | Tezpur, Assam |
| Suvansha Nigam | Post BSc IntM.Tech | 2015 | QC Executive | Perfetti Ltd. | Delhi |

THE FACULTY OF THE DEPARTMENT**Professors**

Charu Lata Mahanta, PhD (CFTRI, Mysore)

Dean, Research & Development

Specialization/Areas of Interest: Rice Science and Technology, Product Development and Product Quality

E-mail: charu@tezu.ernet.in

S C Deka, PhD (HAU, Hissar)

Specialization/Areas of Interest: Food Biochemistry, Food Quality, Fermented Foods

E-mail: sankar@tezu.ernet.in

Associate Professors

M K Hazarika, PhD (IIT Kharagpur)

Head of the Department

Specialization/Areas of Interest: Dairy & Food Engineering, Transport Processes, Process Modeling.

E-mail: mkhazarika@tezu.ernet.in



B Srivastava, PhD (IIT Kharagpur)

Specialization/Areas of Interest: Process & Food Engineering, Fruits & Vegetable Processing and Machineries, Drying & Dehydration, Unit Operations in Food Engineering.

E-mail: brijesh@tezu.ernet.in

N Sit, PhD (Tezpur)

Specialization/Areas of Interest: Food Engineering, Biochemical Engineering, Oils and Fats

E-mail: nandan@tezu.ernet.in

Assistant Professors

Poonam Mishra, PhD (Tezpur)

Specialization/Areas of Interest: Food Technology

E-mail: Poonam@tezu.ernet.in

L S Badwaik, PhD (Tezpur)

Specialization/Areas of Interest: Food Engg. & Tech., Fermentation Technology, Food Packaging

E-mail: badwaik@tezu.ernet.in

D Seth, MTech (IIT Kharagpur)

Specialization/Areas of Interest: Dairy & Food Engineering, Dairy Technology, Transport Processes

E-mail: dibya05@tezu.ernet.in

R K Duary, PhD (NDRI, Karnal)

Specialization/Areas of Interest: Dairy Technology, Dairy Microbiology, Molecular Biology

E-mail: duary@tezu.ernet.in

K K Dash, PhD (IIT Kharagpur),

Specialization/Areas of Interest: Food process Modeling, Dairy and Food Engineering

E-mail: kshirod@tezu.ernet.in

A B Das, MS (IIT Kharagpur)

Specialization/Areas of Interest: Food Processing, Food Engineering

E-mail: amittu@tezu.ernet.in

S Chakraborty, MTech (Tezpur)

Specialization/Areas of Interest: Food Engineering

E-mail: souravc@tezu.ernet.in

THE STAFF OF THE DEPARTMENT

Technical Staff

D Kalita, MSc (AAU, Jorhat)

Technical Officer

E-mail: dkalita@tezu.ernet.in

A J Das, MSc (Rajasthan)

Senior Technical Assistant

E-mail: arupdas@tezu.ernet.in

L Kalita, Diploma

Technician

E-mail: labadeep@tezu.ernet.in

Office Staff

S Baruah

Assistant

A Keot

MTS



AICTE NEQIP sponsored Short Term Course on Advances in Mechanical Engineering and Industrial applications July 20-24, 2015



DEPARTMENT OF MECHANICAL ENGINEERING

THE DEPARTMENT

The Mechanical Engineering (ME) Department in Tezpur University was established in 2006. The Department aims at producing skilled human resources with a strong foundation in mechanical engineering for the heavy engineering and manufacturing industry. Another mission of the Department is to train scholars in handling mechanical engineering as well as interdisciplinary problems exploiting their domain knowledge and using latest technologies. There are at present 15 regular faculty members specialized in various areas and 11 technical staff members in the Department. Presently the Department is offering a BTech in Mechanical Engineering; an MTech (with specialization in Applied Mechanics or Thermofluids Engineering); and a PhD programme in Mechanical Engineering. The Department has laboratories with the state-of-the-art facilities and also one Central Workshop with all kinds of machineries. The BTech and MTech programmes offered in the Department are AICTE approved. The BTech Mechanical Engineering programme is accredited by NBA (National Board of Accreditation with effect from 01/01/2016). The Department has the vision to emerge as a centre of excellence producing quality engineers and conducting cutting-edge research. The Department is planning to offer a new MTech programme in Machine Design from next academic year 2017.

Academic programmes and Student intake

| Academic programmes | Student Intake |
|---------------------------------|---|
| BTech in Mechanical Engineering | 52 |
| MTech in Mechanical Engineering | 18 |
| PhD | Intake variable, 02 in the Academic year 2015-16 |

Major facilities and equipment available

| | |
|---|--|
| Central Workshop <ul style="list-style-type: none"> All Geared Precision Lathe CNC Lathe Machine CNC Milling Machine Universal Milling Machine HMT High Speed Precision Lathe | Theory of Machine lab <ul style="list-style-type: none"> Static and Dynamic balancing Sound level meter with sound level calibrator |
| | Vibration lab <ul style="list-style-type: none"> Universal vibration apparatus Sound level meter with sound level calibrator |
| Fluid Mechanics Lab <ul style="list-style-type: none"> Bernoulli's theorem demo module Reynolds Osborn Apparatus | CAD lab <ul style="list-style-type: none"> Ansys academic teaching Pro-E software |
| Turbo-machinery Lab <ul style="list-style-type: none"> Pelton turbine Propeller turbine | Metrology lab <ul style="list-style-type: none"> Dial gauge Sine bar |
| Strength of Material Lab <ul style="list-style-type: none"> Universal testing machine Inverted metallurgical microscope with accessories and interface software | IC Engine and Automobile lab <ul style="list-style-type: none"> Diesel Engine test set up VCR AVL Smoke meter with accessories |



MAJOR RESEARCH FINDINGS/RESEARCH AND DEVELOPMENT ACTIVITIES

| Principal Investigator | Salient Research Findings |
|------------------------|--|
| P P Dutta ¹ | <p>Combined Heat and Power for Tea Processing Industries</p> <ul style="list-style-type: none"> Survey work on energy consumption pattern in selected tea factory is completed. 10 kW_e gasifier system has been installed in the laboratory Exhaust waste heat recovery compact heat exchanger for producer gas engine generator is completed and performance study is completed. <p>Locally available woody and non woody biomass gasification for tea processing</p> <ul style="list-style-type: none"> Survey and sample collection of different species of woody and solid surplus biomass available in Assam prominently nearby tea processing industries has been completed. Characterization of this biomass has been completed. The gasification efficiency has been evaluated by measuring calorific value of producer gas generated from woody as well as some selected variety of by use of gas chromatograph. |
| S Banerjee | <p>Processing and Mechanical Property Evaluation of Micro alloyed 2219 Al Alloys</p> <ul style="list-style-type: none"> Melting and casting of the Al-Cu alloys microalloyed with Cd has been completed. Composition analysis of the alloys has been completed by ICP technique, and verified by iodometric (titration) analysis. Mechanical characterization (Hardness and impact) has been done for homogenized and peak-aged alloys. |
| S Kashyap | <p>Calcium carbonate based Polyethylene composites</p> <ul style="list-style-type: none"> Utilization of an industrial waste to develop polymeric composites. Increasing the commercial viability of both industrial waste and composites. |

Research projects, ongoing and new

| Project Title | Funding Agency | Amount(in INR) | Duration | Principal Investigator |
|---|----------------|-----------------|-----------|------------------------|
| Development of an Innovative Model of Combined Heat and Power from Purely Producer Gas Based Engine Alternator System for Partial Conventional Energy Substitution of Tea Processing Industries in North East India. | DST-SERB | 18.45 lakh | 2012-2015 | PP Dutta ¹ |
| Characterization of producer gas generated from different locally available woody and non woody biomass through gasification by using Gas Chromatograph analysis and their potential application as renewable energy to supplement thermal energy requirement for tea processing industries in Assam. | UGC | 14.90 lakh | 2012-2015 | P P Dutta ¹ |
| Design development and testing of a green fuel power energy efficient vehicle. | MSME | 6.25 lakh | 2015-2016 | PP Dutta ¹ |
| Processing and Mechanical Property Evaluation of Micro alloyed 2219 Al Alloys. | DST | 18.38 lakh | 2013-2016 | S Banerjee |
| Fabrication of Calcium Carbonate filled composites and Optimization of their manufacturing parameters using multi-objective Evolutionary Algorithms. | DST-SERB | 24.30 lakh | 2013-2016 | S Kashyap |



PUBLICATIONS

In International and National Journals

- Biswas, S. and Chowdhury, B. Industrial Applications and Practices of Six Sigma: A Literature Review. *International Advanced Research Journal in Science, Engineering and Technology*, 3(3), 2016.
- Borah, S., Chowdhury, B., Gogoi, S. and Askary, Z. A Theoretical Study of Design Parameters of an Archimedean Screw Turbine. *Journal of Material Science and Mechanical Engineering*, 2(14), 2015.
- Das, R., Singh, K. and Gogoi, T.K. Estimation of critical dimensions for a trapezoidal-shaped steel fin using hybrid differential evolution algorithm. *Neural Computing and Applications*, 2016 [In press].
- Das, S, Pathak, H, Doley, R, and Kashyap, S. Cutting process optimisation and modelling in dry turning of AISI H13 tool steel with brazed carbide tip. *International Journal of Precision Technology*, 6(1), 2015.
- Dutta, P.P., Konwar, A., Baruah, A. and Kumar, V. A technical review of lawn mower technology. *ADBU-Journal of Engineering Technology*, 4(1), 2016.
- Dutta, P.P., Saharia J., Kumar T., Gupta, A., Singh A. K. Gasification of some locally available biomass using a downdraft gasifier. *Journal of biofuel and bioenergy*, 1(2), 2016.
- Dutta, P.P., Saharia, J., Kumar, T., Gupta, A. and Singh, A. K. Fuel characterization of some indigenous biomass. *Journal of biofuel and bioenergy*, 1(2), 2016.
- Gogoi, T.K. and Konwar, D. Exergy analysis of a H₂O-LiCl absorption refrigeration system with operating temperatures estimated through inverse analysis. *Energy Conversion and Management*, 110, 2016.
- Gogoi, T.K. Estimation of Operating Parameters of a Water–LiBr Vapor Absorption Refrigeration System Through Inverse Analysis. *ASME J. of Energy Resources Technology*, 138(2), 2016.
- Kakati, J. and Gogoi, T.K. Biodiesel Production from Kutkura (*Meynaspinosa Roxb. Ex.*) Fruit seed oil: its characterization and engine performance evaluation with 10% and 20% blends. *Energy Conversion and Management*, 121, 2016.
- Kalita, P. and Dass, A.K. A diffusion-regulated scheme for the compressible Navier-Stokes equations using a boundary-layer sensor. *Computers and Fluids*, 129, 2016.
- Kalita, P. and Gogoi, A. Performance of some limiters on the higher order computation of inviscid hypersonic flows. *ADBU-Journal of Engineering Technology*, 4(1), 2016.
- Kalita, P., Dass, A.K. and Sarma, A. Effects of numerical diffusion on the computation of viscous supersonic flow over a flat plate. *International Journal of Applied Computational Mathematics*, 2015 [In press].
- Kashyap, S. and Datta, D. Process parameter optimization of plastic injection moulding: a review. *International Journal of Plastics Technology*, 19(1), 2016.
- Kirtania, S. and Chakraborty, D. Failure analysis of carbon nanotube/epoxy composites having a broken carbon nanotube. *Journal of Reinforced Plastics and Composites*, 34(9), 2015.
- Kumar, V, Nishant, Hussain, Md. A. and Kalita, P. Effect of free stream parameters on the laminar separation in hypersonic shock wave boundary layer interaction. *ADBU-Journal of Engineering Technology*, 4(1), 2016.
- Nath, M.K., Chowdhury, A. and Dutta, Polash, P. Finite Element Simulation for thermal analysis in Laser forming of D36 ship building steel. *ADBU-Journal of Engineering Technology*, 4(1), 2016.
- Paul, A., Narasimhan, A., and Das, S. K. Investigation of thermal damage of tissues embedded with large blood vessels during PPTH. *International Journal of Numerical Methods for Heat and Fluid Flow*, 26 (2), 2016.
- Saxena, M. and Kirtania, S. Stiffness analysis of symmetric cross-ply laminated composite plates. *ADBU-Journal of Engineering Technology*, 4(1), 2016.
- Talukdar, K. and Gogoi, T.K. Exergy analysis of a combined vapor power cycle and boiler flue gas driven double effect water-LiBr absorption refrigeration system. *Energy Conversion and Management*, 108, 2016.

Conference proceedings

- Barua, E. Kirtania, S. and Das, A. Determination of elastic moduli of single layered Graphene sheets using finite element method. In *Proceedings of the Advances in Civil and Infrastructure Engineering (ACIE-2015)*, Tezpur University, Assam, India, 8-9 May, 2015.



Biswas, S. and Chowdhury, B. Industrial Applications and Practices of Six Sigma: A Literature Review. In Proceedings of the 3rd International Conference on Industrial Engineering (ICIE-2015) & 57th National Convention of Indian Institution of Industrial Engineering, Sardar Vallabhbhai National Institute of Technology, Surat, Gujarat, 26-28 November, 2015.

Borah, S., Chowdhury, B., Gogoi, S. and Askary, Z.A Theoretical Study of Design Parameters of an Archimedean Screw Turbine. In Proceedings of the National Conference On Recent Trends in Mechanical, Electrical, Electronics, Civil, Computer Science and Information Technology (MECIT-2015), Jawaharlal Nehru University, New Delhi, 21-22 November, 2015.

Dutta, P.P., Dutta, P., Das, A. and Kalita, P. Heat transfer and pressure drop in V corrugated channels of different heights applicable to a waste heat recovery compact heat exchanger. In Proceedings of the 5th Annual International conference on Sustainability, Inspiration, Innovation, and Inclusion, IIM Shillong, 17-19 March, 2016.

Dutta, P.P., Konwar, A., Kumar, V. and Baruah, A. Design, Fabrication and analysis of a hybrid lawn mower. In Proceedings of the 5th Annual International conference on Sustainability, Inspiration, Innovation, and Inclusion, IIM Shillong, 17-19 March, 2016.

Dutta, P.P., Saharia, J., Kumar, T., Gupta, A., Singh, A.K. Fuel characterization of some indigenous biomass. In Proceedings of the Second International Conference on Recent Advances in Bioenergy Research, ICRABR, 25-27 February, 2016.

Dutta, P.P., Saharia, J., Kumar, T., Gupta, A., Singh, A.K. Gasification of some locally available biomass using downdraft gasifier. In Proceedings of the Second International Conference on Recent Advances in Bioenergy Research (ICRABR), 25-27 February, 2016.

Gautam, U., Das, S., Das, S. and Gogoi, T.K. A parametric study on the effect of varying open water heater pressure on thermodynamic performance of a combined cycle power plant. In Proceedings of the 17th ISME Conference on Advances in Mechanical Engineering, IIT Delhi, New Delhi, 3-4 October, 2015.

Kashyap, D., Kalita, P. and Dass, A. K. Aspects of computation of incompressible viscous flows through a compressible flow solver. In Proceedings of the XXVII IUPAP Conference on Computational Physics, Indian Institute of Technology Guwahati, 2-5 December, 2015.

Kirtania, S. and Chakraborty, D. Investigation of stress distribution and strain energy release rate in carbon nanotube/aluminum composites having a broken carbon nanotube. In Proceedings of the 4th Int. Conf. on Advanced Nanomaterials and Nanotechnology (ICANN-2015), IIT Guwahati, Assam, India, 8-11 December, 2015.

Nath, M.K., Chowdhury, A., Dutta, P.P.². Thermal Analysis Of Laser Forming Process For D36 Ship Building Steel By Using Finite Element Method. In Proceedings of the National Conference on Emerging Global Trends in Engineering & Technology (EGTET), Don Bosco College of Engineering and Technology, Assam Don Bosco University, Guwahati, Assam India, 26-27 February, 2016.

Sarmah, P. and Gogoi, T.K. Exergy analysis of a solid oxide fuel cell (sofc) integrated combined power cycle. In Proceedings of the 17th ISME Conference on Advances in Mechanical Engineering, IIT Delhi, New Delhi, 3-4 October, 2015.

Shukla, S.S., Kumar, B., Kumar, A. and Kirtania, S. Modeling and analysis of an in-house built tadpole type base structure of a human powered vehicle using finite element method. In Proceedings of the Advances in Civil and Infrastructure Engineering (ACIE-2015), Tezpur University, Assam, India, 8-9 May, 2015.

Talukdar, K. and Gogoi, T.K. Comparative analysis of performance of a combined power and cooling system with vapor compression and absorption refrigeration system as bottoming cycle. In Proceedings of the COMET, 16 IIT BHU, 14-17 January, 2016.

Talukdar, K., Gogoi, T.K. and Hoque, S.Z. Thermodynamic analysis of a combined vapor power cycle and absorption refrigeration system. In Proceedings of the Global conference on Renewable energy, NIT Patna, 4-6 March, 2016.

Trinavee, K., Gogoi, T.K. and Pandey, M. Flow and Heat transfer analysis in a circular microchannel with alumina based nanofluid. In Proceedings of the XXVII IUPAP Conference on Computational Physics, IIT Guwahati, 2-5 December, 2015.

SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED

International and National

Bannali Chowdhury attended one week AICTE-NEQIP sponsored short term course on Advances in Mechanical Engineering and Industrial Applications at Department of Mechanical Engineering, Tezpur University, 20-24 July, 2015.



Bannali Chowdhury attended two weeks ISTE Main Workshop on Environmental Science, conducted by IIT Bombay, 2-12 June, 2015.

Bannali Chowdhury attended two weeks Workshop on Research Methodology, conducted by Department of Education, Tezpur University, Tezpur, 15-24 February, 2016.

Bannali Chowdhury attended Workshop cum Training on Patent Search and Analysis conducted by IPR cell, Tezpur University, Tezpur, 21 November, 2015.

Bannali Chowdhury attended Induction cum Orientation Program on Professional qualities in Education, conducted by IQAC, Tezpur University, Tezpur, 20-21 April, 2015.

M Bardalai attended 5th International Conference on Materials Processing and Characterization (ICMPC 2016) at GIET, Hyderabad, 17-19 March, 2016.

M Bardalai attended one week AICTE-NEQIP sponsored short term course on Advances in Mechanical Engineering and Industrial Applications at Department of Mechanical Engineering, Tezpur University, 20-24 July, 2015.

M Bardalai attended one week Short term training programme on Teaching of Theory of Machines at NITTTR, Kolkata (Guwahati extension Centre), 28 December, 2015 – 01 January, 2016.

M Bardalai attended two weeks equivalent online STTP on Effective Mentoring of Online students in Thermodynamics-WME209x conducted by IIT Bombay, 5 February – 29 April, 2015.

M Bardalai attended two weeks ISTE STTP on Environmental Studies, conducted by IIT Bombay at Tezpur University, 2-12 June, 2015.

P Haloi attended one week AICTE-NEQIP sponsored short term course on Advances in Mechanical Engineering and Industrial Applications at Department of Mechanical Engineering, Tezpur University, 20-24 July, 2015.

P Haloi attended one week Short Term Training programme on Teaching of Theory of Machines, conducted by NITTTR, Kolkata, 5 – 9 January, 2016.

P Haloi attended Two -week ISTE STTP on Environmental Studies, conducted by IIT, Bombay, 2 -12 June, 2015.

P Haloi attended Two -week ISTE STTP on Technical Communications, conducted by IIT, Bombay, 8 October – 5 December, 2015.

P Haloi attended Workshop on Mathematical Analysis and its Applications to Engineering, at Department of Mathematics, IIT-Guwahati, 2 – 4 January, 2016.

P Kalita attended one week AICTE-NEQIP sponsored short term course on Advances in Mechanical Engineering and Industrial Applications at Department of Mechanical Engineering, Tezpur University, 20-24 July, 2015.

P P Dutta¹ attended one week AICTE-NEQIP sponsored short term course on Advances in Mechanical Engineering and Industrial Applications at Department of Mechanical Engineering, Tezpur University, 20-24 July, 2015.

P P Dutta² attended one week AICTE-NEQIP sponsored short term course on Advances in Mechanical Engineering and Industrial Applications at Department of Mechanical Engineering, Tezpur University, 20-24 July, 2015.

R Bhadra attended one week AICTE-NEQIP sponsored short term course on Advances in Mechanical Engineering and Industrial Applications at Department of Mechanical Engineering, Tezpur University, 20-24 July, 2015.

S Banerjee attended two weeks ISTE STTP Workshop on Environmental Studies, conducted by IIT Bombay, 2-12 June, 2015.

S Kashyap attended 5th International Conference on Materials Processing and Characterization (ICMPC 2016) at GRIET, Hyderabad, 17-19 March, 2016.

S Kirtania attended one week AICTE-NEQIP sponsored short term course on Advances in Mechanical Engineering and Industrial Applications at Department of Mechanical Engineering, Tezpur University, 20-24 July, 2015.

S Kirtania attended one week short-term course on Practical Aspects of Finite Element Analysis conducted under the TEQIP and sponsored by the MHRD, held at Department of Mechanical Engineering, IIT Guwahati, 25 – 29 January, 2016.

S Kirtania attended three days short-term course on Advances in Vibration Engineering conducted under the TEQIP and sponsored by the MHRD, held at Department of Mechanical Engineering, IIT Guwahati, 13– 15 December, 2015.

S Kashyap attended one week AICTE-NEQIP sponsored short term course on Advances in Mechanical Engineering and Industrial Applications at Department of Mechanical Engineering, Tezpur University, 20-24 July, 2015.

Zahnupriya Kalita attended one week AICTE-NEQIP sponsored short term course on Advances in Mechanical Engineering and Industrial Applications at Department of Mechanical Engineering, Tezpur University, 20-24 July, 2015.



Zahnupriya Kalita attended two weeks ISTE STTP on Environmental Studies, conducted by IIT Bombay at Tezpur University, 2-12 June, 2015.

SEMINAR/WORKSHOP/SYMPOSIA/INVITED LECTURES ORGANISED BY THE DEPARTMENT

One week AICTE-NEQIP sponsored short term course on Advances in Mechanical Engineering and Industrial Applications, 20-24 July, 2015.

Invited lecture on Features and applications of the Acusolver software, by Er. Abinash Baruah, Technical Manager CFD Altair Engineering India, 11 June, 2015.

Invited lectures on Faculty and Staff Development to improve competency, by Prof. Anoop Kumar Dass, Professor & Head, Department of Mechanical Engineering, IIT Guwahati, 21 May, 2015.

DISTINGUISHED VISITORS TO THE DEPARTMENT

Prof. Anoop Kumar Dass, IIT Guwahati.

AWARDS & HONOURS RECEIVED BY THE FACULTY/RESEARCH SCHOLARS/STUDENTS

A J Chutia won best poster award in Research Conclave 2016 (IIT Guwahati) and EGTET 2016 (Don Bosco College, Guwahati), 2016.

Kumari Trinavee won best technical paper award in National conference on Emerging trends in engineering: opportunities in NE India at Royal Group of Institutions, Guwahati, 2016.

NUMBER OF STUDENTS WHO PASSED NET-JRF/GATE[2015-2016]

GATE -17

NOTABLE PLACEMENT [2015-2016]

Tech Mahindra: A Chakraborty, PSarma

TCS: N Saikia, K Jaiswal

THE FACULTY OF THE DEPARTMENT

Associate Professors

TK Gogoi, PhD (Tezpur)

Specialization/Areas of interest: Thermal Energy and Environment Engineering

E-mail: tapan_g@tezu.ernet.in

D Datta, PhD (IIT Kanpur)

Specialization: Optimization/Design

E-Mail: ddatta@tezu.ernet.in

PP Dutta¹, PhD (Tezpur)

Head of the Department

Specialization/Areas of interest: Energy Technology

E-mail: ppdutta@tezu.ernet.in

Assistant Professors

P Kalita, MTech (BHU)

Specialization/Areas of interest: Heat Power Engineering

E-mail: paragmk@tezu.ernet.in

P P Dutta², ME (BIT, Mesra)

Specialization/Areas of interest: CAD/CAM

E-mail: polashd@tezu.ernet.in

S Kirtania, MTech (IIT Guwahati)

Specialization/Areas of interest: Machine Design

E-mail: sushen@tezu.ernet.in

P Haloi, ME (AEC, Gauhati)

Specialization/Areas of interest: Fluid and Thermal Engineering/Energy

E-mail: haloi_p@tezu.ernet.in

S Banerjee, PhD (IIT Guwahati)

Specialization/Areas of interest: Materials and Manufacturing

E-mail: sanjibb@tezu.ernet.in

M Bardalai, ME (AEC, Gauhati)

Specialization/Areas of interest: Bioenergy

E-mail: monojb@tezu.ernet.in

S Kashyap, MSc (University of Alberta, Canada)

Specialization/Areas of interest: Material Science,
Mechanical Metallurgy, Characterization Techniques, Bioceramics

E-mail: satadru@tezu.ernet.in

Zahnupriya Kalita, MEgg (AIT, Thailand)

Specialization/Areas of interest: Mechatronics

E-mail: zk@tezu.ernet.in

R Bhadra, ME (IIEST)

Specialization/Areas of interest: Manufacturing / Production Engineering.

E-mail: r.bhadr@tezu.ernet.in

Barnali Choudhury, ME (AEC, Gauhati)

Specialization/Areas of interest: Thermal Engineering.

E-mail: barnali@tezu.ernet.in





THE STAFF OF THE DEPARTMENT

Technical Staff

PK Bora, BTech
Technical officer
E-mail: pkbora@tezu.ernet.in

H Malakar, BTech
Senior Technical Assistant
E-mail: heman@tezu.ernet.in

G K Borah, Diploma
Technical Assistant
E-mail: gunakt@tezu.ernet.in

A Nath, Diploma
Technical Assistant
E-mail: anupn@tezu.ernet.in

D Gogoi, ITI
Technician
E-mail: dgogoi@tezu.ernet.in

MHandique, ITI
Technician
E-mail: mitharam@tezu.ernet.in

P Rabha, ITI
Technician
E-mail: prabha@tezu.ernet.in

K Rangpi, ITI
Technician
E-mail: rangpi@tezu.ernet.in

SK Nath, ITI
Technician
E-mail: sknath@tezu.ernet.in

U K Nath, Diploma
Draftsman
E-mail: uttam@tezu.ernet.in

B Baruah, Diploma
Draftsman
E-mail: bbaruah@tezu.ernet.in

Office Staff

B K Mech, BA (Dibrugarh)
UDC
E-mail: bijoy@tezu.ernet.in

M Bania
MTS

P PDutta¹: Partha Pratim Dutta;
PP Dutta²: Polash Pratim Dutta



School of Humanities and Social Sciences

Education in India, be it higher or secondary, is passing through constant challenges emerging from continually changing social scenario in the country and abroad. In an age of unfathomable advancement in science, technology and communication, the educational sector, the institutions of higher learning have been trying to respond to such emerging challenges coming from the globalized world and at the same time negotiate with regional issues of development in all sectors. No university or such other institutions with whatever graph line of achievement, can remain passive to such increasing challenges or complaisant with their past glory. Disciplines of Humanities and Social Sciences in Indian universities like those of Science and Technology, with societies around and beyond as their sites of work including research, are constantly striving to rise to the occasion in teaching, research and extension. They are too, are trying to reorient themselves by formulating their pedagogy and research to address ground realities of the social environment and explore avenues of placement for their graduates not limiting themselves merely to traditional mode of teaching and imparting of knowledge, however without compromising the core philosophy of respective disciplines.

Tezpur University, situated in the mythical and historically famed city of Tezpur in Assam (estd 1994) in its journey over two decades has been striving to cope with the aforementioned challenges and contribute to the advancement of higher education and research in the country. The School of Humanities and Social Sciences in the University, constituted of seven academic departments and three centres, have contributed significantly to the enrichment of the University's academic environment in terms of teaching and research in particular. The School also shares the pride and joy of the series of accolades that have come to the University during the year 2015-16 which have also placed further responsibility on it to redeem the pledge and sustain the record of achievements in the years to come.

The Department of Cultural Studies has successfully completed the Phase I of UGC's SAP-DRS and has been selected for UGC's Centre of Potential for Excellence in Particular Areas (CPEPA), the Department of Sociology has been brought under SAP-DRS-I and the department of EFL under SAP-DRS-II during the year. The Department of Education through its effort has brought the Teaching Learning Centre (TLC) under the PanditModan Mohan Malaviya National Mission on Teachers and Teaching, MHRD, New Delhi.

The reports of individual departments and centres under the School will illustrate the nature of activities



undertaken by each of them. The University, while looking forward to meet the increasing challenges of the day is also committed to the preservation of the heritage of Assam and India as well, towards which the University in general and the School in particular, undertake efforts from time to time through observance of various programmes.

It is satisfying to note that research activities in various departments and centres and publications brought out by them and also by individual members are significantly increasing every year. The list furnished by respective departments and centres for the year testifies to the statement.

The expanding range of activities and achievements of the departments as well as the centres are reassuring which however always leave space for further strengthening in striving for excellence in each field. The University has placed a monumental complex dedicated to the School which will house almost all the departments under it and be a place of pride for the School when commissioned in the coming months.

Staff of the office of the Dean

P J Mahanta

Dean, School of Humanities and Social Sciences

Email- pjm@tezu.ernet.in

Staff: A J Bharali,

Upper Division Clerk, Email- amar@tezu.ernet.in

G Bora, MTS

MTS, email- guna@tezu.ernet.in



DEPARTMENT OF CULTURAL STUDIES

THE DEPARTMENT

The Department of Cultural Studies is fully devoted to the pursuit of Cultural Studies in India. 'Culture' is the repository of ideas and values, lifeways, modes of communication and ways of making sense of the 'self'. Today, culture is perceived as a premise from within which identities are being authenticated as a rapidly transforming world grapples with ethnicity, notions of nation, radical revision of history and space.

Founded in 1995, the Department of Cultural Studies has been a vibrant academic platform, engaging itself with cultural products, practices and forms in all its dimensions, with a special focus on Northeast India. Students and faculty in the Department are engaged in exciting, interdisciplinary approaches to traditional fields of study where the aim is to explore new cultural and cross-cultural phenomena from multiple points of view. Furthermore, the Department undertakes social intervention using folklore and culture as media. Researchers and faculty, drawn from various disciplines like Anthropology, Performance Studies, Literatures, Folklore, Media and Film Studies, Gender Studies are actively engaged in exploring subjects like ethnicity, religious institutions, folklore and culture, local and national media, cultural theory, transformation and transaction in translated literatures and formation of nationalities.

Academic programmes and Student intake

| Academic programmes | Student Intake |
|------------------------|---|
| MA in Cultural Studies | 46 |
| PhD | Intake variable, 04 in the Academic year 2015-16 |

Major facilities and equipment available

- Departmental Library & Archive
- Departmental Museum
- Audio-Visual Class Room cum Seminar Hall with Projector

MAJOR RESEARCH FINDINGS/RESEARCH AND DEVELOPMENT ACTIVITIES

| Principal Investigator | Salient Research Findings |
|------------------------|--|
| P J Mahanta | The Department of Cultural Studies was bought under UGC's SAP -DRS I w. e. f April 2011 – March 2016, 'Vaishnavite Music of Assam : Its Institutionalization and Performative Context' being the focus area of the study, the department during the period conducted research in the allied area of the subject and that of Cultural Studies through documentation, lectures, seminars and publications. |

Research projects, ongoing and new

| Project Title | Funding Agency | Amount (in INR) | Duration | Principal Investigator |
|---|----------------|-----------------|-----------|------------------------|
| Border trade at Pangsau: Transcending boundaries between India – Myanmar | MAKAIAS | 3.08 lakh | 2016-2017 | Juri G Konwar |
| Using Folklore for Community Messaging: Adolescents as Agents for Social Change and Empowerment | UNICEF | 73.22 lakh | 2015-2016 | P Dutta |
| The Vaishnava Music of Assam in the Performative Context | UGC | 41.00 lakh | 2011-2016 | PJ Mahanta |



PUBLICATIONS

In International and National Journals

Baruah, Mandakini. Representing the Female Body and the Concept of Feminine Beauty in the Context of Assamese Proverbs, *Proverbium, Yearbook of International Proverb Scholarship*, 32, 2015

Konwar, J. G. and Swargiyari, D. Conflicting Idea of Victim and Perpetrator in Witch- Hunting: A Case Study in the State of Assam, *International Journal of Humanities and Social Studies*, 3, 2015.

Nath, D. P. Inequality of Languages and the Question of Choice in Translation, *Translation Today*, 9, 2015.

Nath, D. P. and Liyanage, D. Intertextuality and Localization in Sri-Lankan Advertisements: A Contemporary Analysis with Special Reference to Telecommunication TV Commercials, *Critical Arts*, 29(3), 2015.

Conference proceedings

Baruah, Mandakini. No Life Stirs in her Belly Now. In *North-Eastern Indian Writings in English, Modes and Concerns (A Book of Proceedings)*, ADP College, Nagaon, 2015.

Konwar, J. G. and Konwar, C., Urban Health Versus Rural Health in Tezpur: A case Study. In *Proceedings of the International Conference on Public Health: Issues, Challenges, Opportunities, Prevention, Awareness*. KrishiSanskriti Publications, New Delhi, 2016.

Books and Book Chapters



- Baruah, M. 2016. Gendered Understanding of Purity and Profanity: The Case of Assamese Folk Genres. In Nath, D. P. (ed). Women's Narratives from North East India: Lives in the Margins. Guwahati: Purbanchal Prakash.
- Bordoloi, M. 2016. Practicing Tradition and Emergence: Some Observations on Music in the Performance of Bhaona. In Mahanta, P.J. (ed). Vaisnavite Music of Assam: Its Institutionalization and Performative Context. Guwahati: Purbanchal Prakash.
- Bordoloi, M. 2016. Shifting of Gender Role in the Performance of Bhaona. In Nath, D. P. (ed). Women's Narratives from North East India: Lives in the Margins. Guwahati: Purbanchal Prakash.
- Borah, M. 2016. Syncretism in Musical Performance: A Study on the Vaisnavite Tiwas of Assam. In Mahanta, P J (ed). Vaisnavite Music of Assam: Its Institutionalization and Performative Context. Guwahati: Purbanchal Prakash.
- Borah, M. 2016. Gender Identity in Verbal Art: A Case Study of the Tiwas of Assam. In Nath, D. P. (ed). Women's Narratives from North East India: Lives in the Margins. Guwahati: Purbanchal Prakash.
- Dutta, P. 2016. Satriya under the Classical Gaze. In Mahanta, P J (ed). Vaisnavite Music of Assam: Its Institutionalization and Performative Context. Guwahati: Purbanchal Prakash.
- Das, J V. 2016. Documenting Lives in the Margins: Narratives from Manipur. In Nath, D. P. (ed). Women's Narratives from North East India: Lives in the Margins. Guwahati: Purbanchal Prakash.
- Konwar, J. G. 2016. An Understanding of Tribe Caste-Continuum among the Morans in the Context of the Mayamora Vaisnavas. In Mahanta, P. J. (ed). Vaisnavite Music of Assam: Its Institutionalization and Performative Context. Guwahati: Purbanchal Prakash.
- Mahanta, P.J.(Ed). 2016. Vaisnavite Music of Assam: Its Institutionalization and Performative Context. Guwahati: Purbanchal Prakash.
- Nath, D.P. (Ed). 2016. Women's Narratives from North East India: Lives in the Margins. Guwahati: Purbanchal Prakash.
- Nath, D. P. and Dutta, P. (Eds). 2016. Perspectives in Cultural Studies. Guwahati: Purbanchal Prakash.
- Nath, D. P. 2016. Of Violence, Performance and Pornography: Analyzing Media Texts from Assam, India. In Nath, D. P. and Dutta, P. (eds). Perspectives in Cultural Studies. Guwahati: Purbanchal Prakash.
- Hashik, N. K. 2016. Sacred Grove and Social Formation: Towards Environmental History of Kerala. In Vulli Dhanaraju (ed). Regional Environmental History: Issues and Concept in Indian Subcontinent. Delhi: Aakar Books.

SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED

International and National

- D P Nath attended a Roundtable Conference on Tribal Worldview, North East Regional Centre of the Indian Council of Social Science Research (NERC-ICSSR), Shillong, 2015.
- Juri G Konwar and C Konwar attended an International Seminar, Public Health: Issues, Challenges, opportunities, prevention, awareness, Daulat Ram College, New Delhi, 2016
- Mandakini Baruah attended an International Seminar, Performing Puberty Rites for Constructing Female Subjectivity: A Study with Reference to Puberty Rites in Assam, South Asian University (SAU), New Delhi, 2015.
- P J Mahanta attended an International Conference, Ramlila: Tradition, Performance, Religion and Culture, Indira Gandhi National Centre for Arts, 2015
- S K Dutta attended a National seminar, Tribes of Eastern India, Common Culture Contents, Visva Bharati University, 2016
- S K Dutta attended a National seminar, Towards Composing History of Literature: The Indian Scenario, Dibrugarh University, 2016.
- Hashik N. K. attended and chaired a session, State, Politics and Neoliberal Development, in an International conference on Governance, Development and the State in Contemporary Times, organized by Department of Sociology, Tezpur University, 9-12 March, 2016.



Hashik N. K. attended a workshop on Memory Studies, Sources and Historical Analysis, Department of Sociology, Tezpur University, 2015.

TALKS BY THE FACULTY ABROAD AND IN INDIA

DP Nath delivered a lecture, The Cultural Stake in Cognition in a workshop, The Mind Matters: Language, Cognition and Other Correlations, Indian Institute of Information Technology, Guwahati, 12 March, 2016.

J V Das delivered a lecture, Radio and Television, at a National Conference, Media and Public Policy in India at IIM Kashipur, Uttarakhand, 21-22 January, 2016.

J V Das delivered a talk, Insurgency in Northeast, Assam Administrative Staff College, Guwahati on 30 September, 2015.

J V Das delivered a talk, Women in Violence, Assam Administrative Staff College, Guwahati, 30 September, 2015.

J V Das delivered a talk, Ethnic Violence and Women in Displacement, Assam Administrative Staff College, Guwahati, 17 September, 2015.

J V Das delivered a talk, Insurgency and AFSPA, Assam Administrative Staff College, Guwahati, 17 September, 2015.

P J Mahanta delivered a lecture as a resource person in a National Workshop on Traditions of Indigenous Knowledge with special reference to Majuli, organized by IGNCA, New Delhi and TERI, New Delhi, 21 November, 2015.

P J Mahanta delivered the Panchanan Burma Memorial Lecture, Exploring Cultural Harmony between Assam and North Bengal, Centre for Indigenous Languages and Culture, North Bengal University, Siliguri, 9 March, 2016.

P J Mahanta delivered a lecture, Oral History as Alternative Source of Historiography, Cotton College, Guwahati, 12 March, 2016.

P J Mahanta delivered a lecture, Ankiya Bhaona: A Historical Perspective on Performance, Religion and Society in the National Conference and Festival of Ankiya Bhaona, Sangeet Natak Akademi, 29 March, 2016.

SEMINAR/WORKSHOP/SYMPOSIA/INVITED LECTURES ORGANISED BY THE DEPARTMENT

Photography competition on Craft Traditions of Assam and an Essay writing competition on Heritage and Development on the occasion of World Heritage Day, 18 April, 2015.

A special lecture by Prof. Amarjyoti Choudhury, Pro Vice Chancellor, Tezpur University, World Heritage Day, 18 April, 2015.

A one day College Principal's Meet to discuss the under-graduate courses: Prospects and Possibilities exploring the possibilities of starting undergraduate programme in the colleges of Assam, 22 November, 2015.

A special lecture delivered by Prof. Brenda E.F. Beck, a world-renowned Anthropologist and Folklorist, University of Toronto, Canada, on Tamil folklore, 6 February, 2016.

Professor Mihir Ranjan Bhattacharyya Founder Professor, Film Studies, Jadavpur University, delivered a series of lectures as visiting fellow during 29 March–01 April, 2016.

DISTINGUISHED VISITORS TO THE DEPARTMENT

Aribam Syam Sharma, Padmashri, National Award Winning Filmmaker

Prof. Brenda E.F. Beck, University of Toronto, Canada

Ellen Howe, Senior Conservator, Metropolitan Museum of Art, New York

Prof. Mihir Ranjan Bhattacharyya, Jadavpur University, Kolkata

OTHER IMPORTANT ACTIVITIES OF THE DEPARTMENT/ACHIEVEMENTS OF THE FACULTY

The Department along with the Department of English and Foreign Languages and the Centre for Assamese Studies has been granted a "Centre with Potential for Excellence in Particular Areas" (2016-2021) by the UGC.

Outreach programmes organized

A guided tour for school students to mark the occasion of International Museum Day, 2015

Heritage Awareness Campaign for women in four different locations of Tezpur, in collaboration with Tezpur Mahila Samiti, International Museum Day, 18 May, 2015

1-Day block level orientation programme for the project "Using Folklore for Community Messaging: Adolescents as Agents for Social Change and Empowerment, 22 August, 2015

3-day orientation programme for faculty members and others on adolescent empowerment, 20 - 22 September, 2015

3-day workshop on developing a training module on Empowerment of Adolescents (boys and girls) through folk arts, 18 - 20 November, 2015.

5-Day Block Level Training on Adolescent Empowerment for Select Adolescent Groups of Tai-Khamyang Community of Sapekhati Community Development Block, 8 - 10 January, 2016.

5-day Block Level Training on Adolescent Empowerment for Select Adolescent Groups of the Tea Community of Sapekhati Community Development Block, 7 - 11 February, 2016.

Industry/Academia Interface

The Department of Cultural Studies, Tezpur University in collaboration with Prag News organized an exhibition of Assamese cinema of the last 81 years. This event is a part of the prestigious Prag Cine Awards held during 13-15 May, 2016 at Tezpur. The exhibition was formally inaugurated by Dr Lakshmi Goswami on 13th May 2016 at Kalabhumi, Tezpur
Contribution of the Department to the Society

The Department has undertaken social intervention for the sake of promotion of indigenous culture, folklore and heritage through a project titled 'Using Folklore for Community Messaging: Adolescents as Agents for Social Change and Empowerment' in collaboration with UNICEF. The project is an attempt to explore the possibility of using folk art forms as a medium of communication. The project aims to identify and sensitize a group of adolescents (boys and girls) on their rights and entitlements and issues affecting their lives such as child marriage, exploitation, child labour, gender-based violence, etc. Further the intent is to encourage and mobilize these adolescents to create awareness about the above issues and motivate their peers.

NUMBER OF STUDENTS WHO PASSED NET-JRF/GATE [2015-2016]

02 : NET

02 : NET JRF

NOTABLE PLACEMENTS [2015-2016]

Ivy Daimary, Research Associate, Tezpur University

Minakshi Dutta, Assistant Professor, Assam Women's University



**THE FACULTY OF THE DEPARTMENT****Professors**

P J Mahanta, PhD (Gauhati)

Dean, School of Humanities & Social Sciences

Specialization/Areas of interest: Performance Studies, Old Assamese Literature, Cultural History of NE India

E-mail: pjm@tezu.ernet.in

S K Dutta, PhD (VisvaBharati)

Specialization/Areas of interest: Folklore Studies, Assamese Language & Culture.

E-mail: skd@tezu.ernet.in

D P Nath, PhD (RGU)

Head of the Department

Specialization/Areas of interest: Cultural and Literary Theory, Comparative Literature and Translation, Cultural History

E-mail: dpnath@tezu.ernet.in

Assistant Professors

Madhurima Goswami, PhD (Tezpur)

(On lien as Head & Associate Professor, Chandraprabha Saikiani Centre for Women's Studies)

Specialization/Areas of interest: Indian poetics, Performing studies, Women's studies

E-mail: mgs@tezu.ernet.in

P M Dutta, PhD (Tezpur)

Specialization/Areas of interest: Heritage Studies, Popular Culture

E-mail: paras@tezu.ernet.in

Juri Gogoi Konwar, PhD (Dibrugarh)

Specialization/Areas of interest: Anthropology of Textile, Anthropology of Food Ethnicity, Medical Anthropology

E-mail: jgkon@tezu.ernet.in

J V Das, PhD (Tezpur)

Specialization/Areas of interest: Media and Culture, Sites of Media Production, Television Studies,

E-mail: jvdas@tezu.ernet.in

Mandakini Baruah, PhD (Tezpur)

Specialization/Areas of interest: Gender Studies, Folklore Studies, Paremiology

E-mail: mb@tezu.ernet.in

Hashik N. K., PhD (Hyderabad)

Specialization/Areas of interest: Performance Studies, Community Studies

E-mail: hashikk@tezu.ernet.in

THE STAFF OF THE DEPARTMENT**Technical Staff**

Subhra Devi, PhD (National Museum Institute, Delhi)

Assistant Curator

Areas of interests: Heritology and Heritage Studies, Museum Education, Preventive Conservation, Indigenous Art

E-mail: sd@tezu.ernet.in

Office Staff

A Dutta, BCom

Upper Division Clerk

E-mail: ashish@tezu.ernet.in

D Deka

MTS

DEPARTMENT OF EDUCATION

2015-16

THE DEPARTMENT

The Department of Education, which was established in the 2014, is currently running four programmes. The first of these is an Integrated BEd (BSc/BA) (in collaboration with the Departments of English and Foreign Languages, Mathematics, Chemical Sciences, and the Deptat of Physics. This 4-year programme aims at producing prospective teachers with a sound knowledge of content and pedagogy. The second is a two-year MA in Education, which provides learners a wider and more comprehensive understanding of education. The third is a two-year BEdprogramme, which prepares students to work as a teacher in schools in the future. The fourth is a PhD programme in Education. The Department is also going to start a 2-year MEdprogramme and a part time BEdprogramme in the near future. The Department has regularly been organizing national level seminars, workshops and invited talks by experts.

Academic Programmes and Student intake

| Academic Programmes | Student Intake |
|---------------------|--|
| MA in Education | 35 |
| BEd | 50 |
| PhD | Variable intake 01 in the Academic year 2015-16 |



**Major facilities and equipment available**

The Department has the following well equipped resource centers:

- A Psychology Resource Centre
- An Art and Craft Resource Centre and
- A Curriculum Lab

PUBLICATIONS**In International and National Journals**

Chakrawarty, S. Behavioural Strategies to Deal ADHD Students, International Journal of Current Research, 7(8), 2015.

Chakrawarty, S. Effect of Intervention programme on development of awareness on environmental pollution, International Journal of Advanced Research, 3(5), 2015.

Padmavathy, R.D. Continuous Comprehensive Evaluation (CCE) 'Maximise' Mathematics Creativity Plus Enjoyment among Learners, Shanlak International Journal of Arts, Science and Humanities, 3(1:SE), 2016.

Padmavathy, R.D. Does Really Academic Stream of Study Influence Post Graduate Students Value Preference?, International Journal of Research – GRANTHAALAYAH, 4(3:SE), 2016

Padmavathy, R.D. Error as an opportunity Tool: To Enhance Statistics and Probability knowledge among high school students, International Journal of scientific Research, 4(5), 2015

Padmavathy, R.D. Impact of Abstract Reasoning and Spatial Relations on Mathematical Errors, Vetri Education Quarterly Journal, X(2), 2015

Padmavathy, R.D. Influence of Demographic Factors on Creative Problem Solving Ability - Elaboration among High School Students, International Journal of Horizons of Holistic Education, 2(2), 2015z

Padmavathy, R.D. Influence of Selected Demographic Factor on Mathematical Concept Error, The Online Journal of New Horizons in Education (TOJNED-International), 5(3), 2015

Padmavathy, R.D. Study on Value Dimensions of Post Graduate Students in Assam, Journal of Educational Thoughts, 2(6), 2015.

Pal, R. and Pallai, P. Relative amount of time devoted for News and Advertisement during the TV News Bulletins, Brics Journal of Educational Research (A peer Reviewed International Journal), 5(2), 2015

Pallai, P. A Qualitative Study on Effectiveness of Different Modes of Teacher Orientation Programme, Education India Journal: A Quarterly Refereed Journal of Dialogues on Education, 4(3), 2015

Pallai, P. Impact of children literature on literacy development of primary school children's, International journal of current research, 7(8), 2015

Pallai, P. Quality and preparedness of resource persons in capacity building programmes, The Ravenshaw Journal of Educational studies, 4(1&2), 2015

Sharma, A. Impact of Academic Achievement on Language creativity of students (in Hindi) Anweshika, A Research journal of Teacher Education (Peer-Reviewed Journal), 10(2), 2015

Sharma, A. Right To Education Act 2009: Is It Power or Plight for Parent? PRIMARY Teacher Journal combined issue April & July 2015, 2015

Sharma, A. Role of Media in Transforming Society University News, A weekly Journal of Higher Education, 53(38), 2015.

Sultana, Y. Developing Speaking Skills in English among School Children using Technology Support, Journal of Indian Education, NCERT, 41(2), 2015

Sultana, Y. Effectiveness of Technology Supportive Learning for the development of Academic Performance in English at Elementary Stage, Educational Research Journal SCERT Assam, 1(1), 2015



Conference proceedings

Sharma, A. Critical Analysis of Role of Higher Education Teacher in fulfilling Societal Expectation, In Proceedings of a National Seminar on Professional Ethics for Higher Education Faculties: Roles and Responsibilities of Teachers in Department of Humanities and Social Sciences, IIT Madras, Chennai, 30-31 August, 2015.

Sharma, A. Bridging the gap between educational institution and society, In Proceedings of the 3rd International Seminar on Knowledge Exchange Path, Collaboration among Universities, Industries, Educational institution and Society: Bridging the outcome-Impact Gap in TNTEU Tamil Nadu Teachers Education University, Kamaraj, Chennai, 20-22 April, 2015.

Books and Book Chapters

Padmavathy, R. D. 2016. Indices in Quality Publications: An Introduction for Research Beginners. New Delhi: V L Media Solutions.

Pal, R, and Pallai, P. 2015. Teacher Orientation programs through EDUSAT: Qualitative Inquiry of some concerns. In Nikose, R. L. (ed). Essentials of Educational Technology, New Delhi: A.P.H. Publishing Corporation.

Sharma, A. 2016. Perspective and Perceptions on Academic Writing & Citation, American Psychological Association Style for Academic Writing, New Delhi: VL Media Solution.

SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED

Anjali Sharma attended and presented a paper, Blended Technologies for qualitative Learning, at the world conference Educon 2015 Education: Within and Beyond the Classroom organized by Global Educational Research Association (GERA), Khalsa College of Education, Amritsar, Punjab, India, 27-29 November, 2015.

Anjali Sharma attended and presented a paper, Critical Analysis of Role of Higher Education Teacher in fulfilling Societal Expectation, at a National Seminar on Professional Ethics for Higher Education Faculties: Roles and Responsibilities of Teachers in the Department of Humanities and Social Sciences, IIT Madras, Chennai, 30-31 August 2015

H Sharma attended a National Seminar on Innovative Pedagogy and Effective Teaching Learning, organized by Teaching Learning Centre in Department of Education, Tezpur University, Assam, 14-16 March, 2016.

H Sharma attended a workshop on Induction cum Orientation Programme on Professional Qualities in Education, organized by IQAC, Tezpur University, 20-21 April, 2015

H Sharma attended a workshop on Instructional Skills organized by Teaching Learning Centre in Department of Education, Tezpur University, 28- 30 January, 2016.

H Sharma attended a workshop on Research Methodology, organized by Teaching Learning Centre in Department of Education, Tezpur University, 15-24 February, 2016

Pratima Pallia attended a workshop on Induction cum Orientation Program on Professional qualities in Education, organized by IQAC, Tezpur University, 20-21 April, 2015.

Pratima Pallia attended a workshop on research methodology Skills organized by Teaching Learning Centre in Department



of Education, Tezpur University, 15 to 24 February, 2016

Pratima Pallia attended and presented a paper on Students' Perspective of Effective Teaching in Higher Education at National Seminar on Innovative Pedagogy and Effective Teaching Learning organized by Teaching Learning Centre in Department of Education, Tezpur University, Assam, 14-16 March, 2016.

Pratima Pallia attended and presented a paper, Choice Based Credit System in India: A Learner Centric Approach, at a National Seminar on Perspective of a New National Policy on Education for the Resurgent India, organized by Shiksha Vikash Samiti, Odisha, 7-8 November, 2015.

Pratima Pallia attended and presented a paper, Choice Based Credit System: A Review, at a National Seminar on Innovative Strategies: A Roadmap for Upliftment of Teaching, Learning and Evaluation in Higher Education, organized by St. Marys College, Shillong, 22-23 September, 2015.

Pratima Pallia attended and presented a paper, Human Rights: Movement Towards Inclusion for the Children with Special Need, at a National Seminar on Human Right Education for the 21st Century: Issues and Challenges, organized by Department of Education, Raha College, Raha, Naogoan, Assam, 14 November, 2015.

Pratima Pallia attended and presented a paper, Interrelationship between Democracy and Education, at a National Seminar on Governance, Development and the State in Contemporary Times, organized by Department of Sociology, Tezpur University, Assam, 9-12 March, 2016.

Pratima Pallia attended and presented a paper, Value Education: A Significant Factor in the Holistic Development Process Holistic, at an International Seminar on Education for a Better World, organized by Mahapurusha Srimanta Sankaradeva Viswavidyalaya (MSSV), Nagoan, Assam, 8-10 October, 2015.

RD Padmavathy attended a workshop, Drafting curriculum for 2-Year B.Ed. and 2-Year M.Ed. Programmes, at School of Education, Pondicherry University, 6-8 July, 2015.

RD Padmavathy attended a workshop, Instructional Skills organized by Teaching Learning Centre, in Department of Education, Tezpur University, 28-30 January, 2016.

RD Padmavathy attended a workshop, Philosophy, Culture, Community, Democracy, organized by Department of Cultural Studies, Tezpur University, 23-25 April, 2015.

RD Padmavathy attended an International workshop, Art of doing good research and publishing, organized by Bharathidasan University and SAM Houston State University, USA, at Bharathidasan University, 4 July, 2015.

RD Padmavathy attended and presented a paper on Education, Teachers and Youth Awareness Promote HRE in Assam, at a National Seminar in Raha College, Assam, 14 November, 2015

RD Padmavathy attended and presented a paper, Role of Personality in Youth Empowerment, at a National Seminar organized by Nongstoin College, West Khasi Hills, Meghalaya, 4-5 March, 2016.

RD Padmavathy attended and presented a paper, Sensitizing Climate Change And Environmental Attitude For Sustainable Development, at International Seminar in Union Christian College, Umiam, Shillong, 15- 17 Oct, 2015

RD Padmavathy attended and presented a paper, Students Engagement in Online Course: MOOC Platform, at a National Seminar on Innovative Pedagogy and Effective Teaching Learning, organized by Teaching Learning Centre in Department of Education, Tezpur University, Assam, 14-16 March, 2016

Sashapra Chakrawarty attended a National Seminar, Innovative Pedagogy and Effective Teaching Learning, organized by Teaching Learning Centre in Department of Education, Tezpur University, Assam, 14-16 March, 2016.





Sashapra Chakrawarty attended a workshop on Induction cum Orientation Programme on Professional Qualities in Education organized by IQAC, Tezpur University, 20-21 April, 2015.

Sashapra Chakrawarty attended a workshop on Value Education: Demand of 21st Century, Mental Haze and Value Education, organized by Faculty of Education (K), BHU, Varanasi, 30-31 March, 2016.

Sashapra Chakrawarty attended a workshop, Preparing and Sharing Guidelines for Making Pre-service Teacher Training Degree Programs Inclusive in the light of Recent Developments, organized by Department of Education, and NCERT, New Delhi, 15-17 March, 2016.

Sashapra Chakrawarty attended a Workshop on Research Methodology organized by Teaching Learning Centre in Department of Education, Tezpur University, 15-24 February, 2016.

Sashapra Chakrawarty attended and presented a paper on Human Rights: Movement Towards Inclusion for the Children with Special Need, at National Seminar on Human Right Education for the 21st Century: Issues and Challenges, in Department of Education, Raha College, Raha, Nagaon, Assam, 14 November, 2015.

Sashapra Chakrawarty attended and presented a paper, Choice Based Credit System in India: A Learner Centric Approach, at a National Seminar on Perspective of a New National Policy on Education for the Resurgent India, in ShikshaVikashSamiti, Odisha, 7-8 November, 2015.

Sashapra Chakrawarty attended and presented a paper, Choice Based Credit System: A Review, at a National Seminar on Innovative Strategies: A Roadmap for Upliftment of Teaching, Learning and Evaluation in Higher Education, at St. Mary College, Shillong, 22-23 September, 2015.

Sashapra Chakrawarty attended and presented a paper, Interrelationship between Democracy and Education, at a National Seminar on Governance, Development and the State in Contemporary Times, in Department of Sociology, Tezpur University, Assam, 9-12 March, 2016.

Sashapra Chakrawarty attended and presented a paper, Value Education: A Significant Factor in the Holistic Development Process Holistic, at a National Seminar on Education for a Better World, in Mahapurusha Srimanta Sankaradeva Viswavidyalaya (MSSV), Nagaon, Assam, 8-10 October, 2015.

Yeasmin Sultana attended a workshop on Instructional Skills organized by Teaching Learning Centre, in Department of Education, Tezpur University, 28-30 January, 2016.

Yeasmin Sultana attended an online workshop on Technical and Scientific Communication, organized by IIT Bombay, 8 November - 5 December, 2015.

Yeasmin Sultana attended and presented a paper, Paradox between Policy and Practice: Implementation of RTE Act, 2009 in Assam, at a National Seminar on Human Rights Education for the 21st century: Issues and Challenges, in Department of Education, Raha College, 14 November, 2015

Yeasmin Sultana attended and presented a paper, Students perception of teaching effectiveness at University level, at a National Seminar on Innovative Pedagogy and Effective Teaching Learning, organized by Teaching Learning Centre in Department of Education, Tezpur University, 14-16 March, 2016

TALKSBYTHE FACULTYABROADAND IN INDIA

Anjali Sharma chaired the technical session, Bridging Gap between Educational Institutes and Society, Knowledge Path, Collaboration among University, Industries, Educational Institution and Society: Bridging the overcome-Impact at Tamil Nadu Teacher Education University, Chennai, 20-22 April, 2015.

Anjali Sharma delivered a talk, E-Learning: Changing approach of Teaching learning and Evaluation system of higher education, Devraj Roy College, Golaghat, Assam, 31 October, 2015.

Anjali Sharma delivered a talk, Expert Discussion and Framing of Course Structure for M.Ed. Syllabus, Workshop on curricular Framework for M.Ed. Syllabus, at National Council for Teacher Education and IDOL, Guwahati, 15-17 May 2016.

H Sharma delivered a talk, Effective teaching techniques in Orientation Programme for Teachers, at Central Institute of Hindi, Regional Centre: Guwahati, 15-16 September, 2015.

H Sharma delivered a talk, Indian constitution, in constitutional day celebration at KendriyaVidyalayaCentral UniversityTezpur, Tezpur, 26 November, 2015.

PratimaPallai delivered a talk, Importance of value education among students, at Service Teacher Training Program in Central Institute of Hindi, Regional Centre: Guwahati, 19 September, 2015.

RD Padmavathy delivered a talk, Peace Education at International Seminar, in Acharya Nagarjuna University, 5 December, 2015.



RD Padmavathy delivered a talk, Teacher Students Relationship at teacher training programme, in Don Bosco Socio-Technical Institute, Assam, 25 January, 2016.

RD Padmavathy delivered a talk, Youth of Meghalaya in higher Education, at a National Seminar in Nongstoin College, Meghalaya, 4 March, 2016.

Sashapra Chakrawarty delivered a talk, Identification & Use of Technical Terminology in Education, Technical Terminology in Humanities and Social Sciences: Preparation, Usage and Problems, at Department of Hindi, Tezpur University, 29-30 August, 2015.

Sashapra Chakrawarty delivered a talk, Motivation in Teaching Learning, Orientation Programme for Teacher, at Central Institute of Hindi, Regional Centre: Guwahati, 19 September, 2015.

Yeasmin Sultana delivered a talk, Language teaching in a multilingual setup, in the 226th Orientation Programme for Senior Secondary Teachers of Assam at Central Institute of Hindi, Regional Centre: Guwahati, 19 September, 2015.

SEMINAR/WORKSHOP/SYMPOSIA/INVITED LECTURES ORGANISED BY THE DEPARTMENT

Workshop on Instructional Skills, 28–30 January, 2016

Workshop on Research Methodology, 14–24 February, 2016

National Seminar on Innovative Pedagogy and Effective Teaching Learning, 14–16 March, 2016

DISTINGUISHED VISITORS TO THE DEPARTMENT

Prof. Harjeet Kaur Bhatia, Head, Department of Educational Studies, Jamia Millia Islamia, New Delhi

Prof. Hemraj Meena, former Director, Central Institute of Hindi, Guwahati

Prof. J.C. Soni, Rajiv Gandhi University, Arunachal Pradesh

Prof. K. C. Vashishtha, Head, Department of Foundations of Education, Dayalbagh Educational Institute, Agra

Prof. M. A. Sudhir, Gandhigram Rural Institute

Prof. Rajendra Pal, Division of Educational Research, NCERT, New Delhi

Prof. Santosh Panda, Former Chairperson, NCTE, IGNOU, New Delhi

Prof. Swarnlata Das, Former Professor, Gauhati University

NUMBER OF STUDENTS WHO PASSED NET-JRF/GATE[2015-2016]: NET: 01

THE FACULTY OF THE DEPARTMENT

Associate Professor

Anjali Sharma PhD (Dr. B R Ambedkar University)

Head of the Department

Specialization/Areas of Interest: Educational Administration, Planning and Financing, Curriculum Development

E-mail: sanjali@tezu.ernet.in

Assistant Professors

Yeasmin Sultana, PhD (Assam)

Specialization/Areas of Interest: Language Education, Research Methodology in Education

E-mail: yeasmin@tezu.ernet.in

R D Padmavathy, PhD (Pondicherry)

Specialization/Areas of Interest: Mathematics Education and Cognitive Science, e-Content Development

E-mail: padma@tezu.ernet.in

H Sharma, PhD (DAVV, Indore)



Specialization/Areas of Interest: Educational Research, Educational Psychology, ICT in Education, Educational Administration

E-mail: hitesh@tezu.ernet.in

Sashapra Chakrawarty, PhD (BHU)

Specialization/Areas of Interest: Educational Psychology, Educational Research, Special need Education

E-mail: sashapra@tezu.ernet.in

Pratima Pallai, PhD (Lucknow)

Specialization/Areas of Interest: ICT in Education, pedagogy of teaching social science, Educational Measurement and Evaluation

E-mail: pratima@tezu.ernet.in

THE STAFF OF THE DEPARTMENT

Office Staff

P Saikia

LDC

E-mail: tinku23@tezu.ernet.in

N Bauri

MTS





DEPARTMENT OF ENGLISH AND FOREIGN LANGUAGES

THE DEPARTMENT

The Department of English and Foreign Languages, which was established in 1994, aims to give instruction and carry out research in English Literature, Women's Writing in English, American Literature, Indian Writing in English, English Language Teaching. Accordingly, it has been running a two-year MA in English; a 5-year Integrated MA in English; a 4-year Integrated BA BEd with Major in English. An MA programme in Linguistics and Language Technology and an MA programme in Linguistics and Endangered Languages were introduced in August 2012 and August 2015, respectively. The Department thus also aims to give instruction and carry out research in General Linguistics, Linguistics Theories, Field Linguistics, Computational Linguistics, Documentation and Archiving. The Department has also been offering a Certificate Course in Chinese.

Academic programmes and Student intake

| Academic programmes | Student Intake |
|---|--|
| MA English | 50 |
| MA Linguistics and Language Technology | 20 |
| MA Linguistics and Endangered Languages | 20 |
| Integrated MA in English | 20 |
| Integrated BABEd | 10 |
| Certificate in Chinese | 39 |
| PhD | Intake variable 3 in the Academic year 2015-16 |

Major facilities and equipment available

The Department has a digital multimedia multi-purpose language laboratory with fifteen booths. Students can improve on their language skills, especially the skills of listening and speaking, in English, Chinese, and French by utilizing the software and other facilities available in the laboratory. The Department also has a computer laboratory for the use of the students and the research scholars.



MAJOR RESEARCH FINDINGS/RESEARCH AND DEVELOPMENT ACTIVITIES

| Principal Investigator | Salient Research Findings |
|------------------------|---|
| Madhumita Barbora | <ul style="list-style-type: none"> • Build a Tagged Text Corpus of 100000 sentences for Assamese • Chunking of the 17 lakhs parallel sentences |
| Madhumita Barbora | <ul style="list-style-type: none"> • Digital preservation of the NE languages • Linguistics analysis and transcription of these languages. • Building an archive for the speech and language resources |
| P K Das | <ul style="list-style-type: none"> • Specific studies are adding to our evolving understanding of Colonial Indian modernity. • An alternative paradigm of modernity is also emerging |

Research projects, ongoing and new

| Project Title | Funding Agency | Amount (in INR) | Duration | Principal Investigator |
|---|----------------|-----------------|-----------|---|
| Indian Languages Corpora Initiative (Phase-2) | DEITY | 61.53 lakh | 2012-2016 | Madhumita Barbora(PI) A K Nath (Co PI) |
| Digital Language Preservation | DEITY | 39.14 lakh | 2013-2016 | Madhumita Barbora (PI) G K Borah (Co PI) |
| SAP - DRS – II | UGC | 98.00 lakh | 2015-2020 | P K Das (Coordinator) |





PUBLICATIONS

In International and National Journals

- Barbora, M., Acharya, P. and Wangno, T. Numerals in Bugun, Deori and Nocte, *North East Indian Linguistics (NEILS)*, 7, 2015
- Barbora, M. and Wangno, T. Bugun Language: Maintenance Issue, *Linguistics of Tibeto Burman Languages (LTBA)*, 38(2), 2015
- Daimari, E. Women, Partition and Memory: A reading of Bapsi Sidhwa's *Ice-Candy-Man* and Sorayya Khan's *Noor*. *Journal of the School of Language, Literature and Cultural Studies*, 19, 2016
- Danta, B. K. Can the Subaltern Sing? Reading Apparatuses of Resistance, *Dibrugarh University Journal of English Studies*, 24, 2015
- Danta, F. Reading Thick Description Backwards: Ezra Pound and the Philosophy of Culture, *Dibrugarh University Journal of English Studies*, 24, 2015
- Gogoi, B. and Das, K. Love in the Time of Revolution: A Study of the Novel and Film Adaptation of Boris Pasternak's *Doctor Zhivago*, *Assonance: A Journal of Russian and Comparative Literary Studies*, 16, 2016.
- Medhi, H. Tribe, Caste, Nation, Gender: Chandraprabha Saikiani's Presidential Address to the First Assam Kachari Mahila Sammilan (1930). *Summerhill: Indian Institute of Advanced Studies Review Journal*, 20(1), 2016
- Mohapatra, D. and Azu, T. Bridging the Gap-Apparent Disconnect in the Teaching and Learning of English in Colleges of Arunachal Pradesh, India, *International Journal of English Language Teaching (IJELT)*, 3(8), 2015
- Sarma, M. M. Gunter Grass: *Jivanaru Karma* (Gunter Grass: *Life and Work*), *Gariyoshi*, 22(9), 2015

Conference proceedings

- Mohapatra, D. and Sultana, Y. Using Animated Videos for Developing Oral Communication Skills among School Children: An Experiment. In *Proceedings of the UGC sponsored National Seminar on English Language Teaching in India: Problems and Prospect*. Sonapur College, Guwahati, 2015.
- Gope, A. and Mahanta, S. An Acoustic Analysis of Sylheti Phonemes. In *Proceedings of the 18th International Conference on Phonetic Sciences*, Glasgow, UK, 10-14 August, 2015.

Books and Book Chapters

- Barbora, M., Acharya, P. and Wangno, T. 2015. Numerals in Bugun, Deori and Nocte. In Stephen Morey, T., Post, M. and Gwendelyn, H. (eds). *North East Indian Linguistics (ebook)*, Asia Pacific Linguistics, Australia.
- Borah, G. K. (forthcoming). *Axamiyar Daxa: Goddiyek Xamasya* (Aspects in Modern Assamese: Some Problems). In D. Das (ed). *Bhaxa-Bikkha* (Knowledge of Language). Guwahati: Bhabani Print and Publications.
- Borah, G. K. 2016. The Fuzzy Boundary Between Projected Realities and Potential Realities an ib. In G. K. Borah and M. Barbora (eds). *Aspects of Modern Assamese*. Guwahati: Bhabani Print and Publications.
- Borah, G. K. 2016. The Indeterminacy of the Bare Noun in Assamese and Its Determination. In Borah, G. K., and M Borbara (eds). *Aspects of Modern Assamese*. Guwahati: Bhabani Print and Publications.
- Borah, G. K. 2016. The Ingressive Progressive in Assamese. In G. K. Borah and M. Barbora (eds). *Aspects of Modern Assamese*. Guwahati: Bhabani Print and Publications.
- Borah, G. K. and Barbora, M (Eds). 2016. *Aspects of Modern Assamese*. Guwahati: Bhabani Print and Publications (SAP-DRS Publication).
- Danta, F. and B. K. Danta. 2016. Competing Imaginaries and the the Female Subject: Indira Goswami's *The Man from Chinnamasta*. In Nath D. P. (ed). *Women's Narrative from North East India*. Guwahati: Purbanchal Prakash.
- Medhi, H. 2015. Diversity and Questions of Alliance: A Case Study of the Assam Mahila, India and the Mahila Shanti Sena, Canada. In Lal, M, Mohan, C., Sharma, E., Narula, D. and Basra, A. (eds). *Gender and Diversity: India, Canada and Beyond*. Jaipur: Rawat Publishers.
- Medhi, H. 2016. Great Sensation in Guwahati: Mini's Marriage, Assam Mahila Samiti and the Sarda Act in late Colonial Assam. In Dutta, N. (ed). *Communities of Women in Assam: Being, Doing and Thinking Together*. Abingdon and Newyork, USA: Routledge Publisher.



Sarma, M. M. and Sahoo, S. (Eds). 2016. *Nine Years Beyond the Patkai* (Translation of Purnakanta Burhagohain's Patkair Xipare Na-Basar). Guwahati: Bhabani Print and Publications (SAP-DRS Publication).

SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED

A Gope attended and presented paper, *An Acoustic Analysis of Sylheti Phonemes* presented in the 18th International Congress of Phonetics Sciences, IChPS-2015, Glasgow, UK, 10-14 August, 2015.

A Gope attended and presented paper, *On the Phonetics and Phonology of Focus marking in Boro* presented in the Annual Meeting of Phonology 2015, Vancouver, 9-11 October, 2015.

A Gope attended and presented paper, *Phonation and Sylheti Tonogenesis* presented at 37th International Conference of the Linguistic Society of India, JNU, India, 15-17 October, 2015.

A Gope attended and presented paper, *Polarization and Tonal Dissimilation: A case of Sylheti Suffixation* presented in the 3rd Workshop of Tone and Intonation (WTI-3), IIT Guwahati, 7-8 January, 2016.

A Gope attended and presented paper, *Tone and Intonation in Sylheti: A preliminary observations* presented in the 3rd Workshop of Tone and Intonation (WTI-3), IIT Guwahati, 7-8 January, 2016.

A K Nath attended and presented a paper, *Does a Multilingual Repertoire Propel Changes in Semantic Domains of a language?: A case of Tiwa and Deori Languages*, in the 21st Himalayan Languages Symposium and 36th Annual Conference of Linguistic Society of Nepal organized by the Tribhuvan University, Kathmandu, Nepal, 26-28 November, 2015.

A K Nath attended and presented a paper, *Quest for Identity: the Politics of Language and Census in Assam*, in an International conference, *Language, Power and Identity in Asia: Creating and Crossing Language Boundaries*, organized by the International Institute for Asian Studies, Leiden, the Netherlands, 14-16 March, 2016.

B K Danta attended and presented a paper, *Life Writing as Moral Fable: Turning Lives into Social Inventories*, in a National Conference on Biography: Western Theories, Indigenous Practices in Assam, organised by SAP-DRS, Dept. of EFL, 30 March, 2016.

B K Danta attended and presented a paper, *Writing Social History: Sankaradeva's Odesa Varnana*, in a National Seminar, *Approaches to Sankaradeva: Text, Performance, Representations and History*, organized by the Centre for Assamese Studies, Tezpur University, 6-7 August, 2015.

Bashabi Gogoi attended and presented a paper, *The Devdas Metaphor: A Dialogue between the Text and the Film Adaptations*, in an International MELOW Conference on *Towards Praxis: Literature, Society and Politics*, organized by MELUS MELOW and GGS Indraprastha University, New Delhi, 19-21 February, 2016.

Bashabi Gogoi attended and presented a paper, *The Written Word and the Moving Image: Translating R.K. Narayan's The Guide on Screen*, in an International Conference on *Evolving Facets of Translation: Comparative Perspectives, Adaptation and Popular Culture*, organized by the Central University of Rajasthan and Rajasthan Association for Studies in English, 23-24 November, 2015.

Bipasha Patgiri attended and presented a paper, *Hiatus Resolution Strategies in Nalbaria Assamese*, in an International Conference on *South Asian Languages and Literatures (ICOSAL-12)*, organized by the Centre for Endangered Languages and Mother Tongue Studies, University of Hyderabad, 7-9 January, 2016.

Bipasha Patgiri, participated in a National Seminar on *Biography: Western Theories, Indigenous Practices in Assam*, UGC-SAP, Department of EFL, Tezpur University, 30 March, 2016

D Mohapatra attended a Professional Development Programme on *Changing Classrooms, Supporting Teachers* organised by TESOL, Chandigarh, 24-25 April, 2015.

D Mohapatra attended and presented a paper, *The Teaching of English in Multilingual Class Rooms of Secondary Schools*, in an International Congress on *English Grammar*, 2016, organised by Department of English, Guru Nanak Dev University, Amritsar, 8-12 February, 2016.

D Mohapatra attended and presented at the International Seminar on *Governance, Development and the State in Contemporary Times* held during March 09-12, 2016 at the Department of Sociology, Tezpur University, Tezpur in partnership with UNICEF, Guwahati and MACCRONEI-MAKAIAS, Kolkata.

D Mohapatra attended and presented at the National Seminar on *Innovative Pedagogy and Effective Teaching Learning* organized by the Department of Education, Tezpur University during 14-16 March, 2016.



D Mohapatra attended the 10th ELTAI International Conference on Learning and Teaching English in India: Setting Standards, at the Raj Kumar Goel Institute of Technology for Women, Ghaziabad, 9-11 July, 2015.

D Mohapatra attended the 4th International Language, Education and Diversity Conference (LED 2015), University of Auckland, New Zealand, 23-26 November, 2015.

D Mohapatra attended the 7th International Conference on Changing Perspectives & Challenges of Teacher Education, organized by Harprasad Institute of Behavioural Studies (HIBS), Agra in Collaboration with Indian Psychometrics and Educational Research Association (IPERA), Patna, 26-28 September, 2015.

D Mohapatra attended the UGC Sponsored National Seminar on English Language Teaching in India: Problems and Prospects, Sonapur College, Sonapur, Assam, 27-28 August, 2015.

Esther Daimari attended and presented a paper, Women, War and Memory: A Reading of Birendra Kumar Bhattacharyya's Love in the Times of Insurgency and Sorraya Khan's Noor, in an International Seminar, Politics, History and Fiction in South Asia with Special Focus on Pakistan and North East India, organized by the Department of English, Gauhati University, February, 2016.

Farheena Danta attended and presented a paper, Telling Lives, Critiquing Representations: Sivanath Barman's Smrita Bismita, in a National Conference on Biography: Western Theories, Indigenous Practices in Assam, organised by SAP-DRS, Dept. of EFL, 30 March, 2016.

G K Borah presented a paper on linguistic quantification at the International Conference of North East India Linguistic Society (NEILS)-9, Tezpur University, 5-7 February, 2016.

Hemjyoti Medhi attended and presented a paper, Archiving Women's Lives: A few Questions on (Im)possibility of Belonging in a Conference on Writing Women's Lives, Bathspa University, Bath, UK, 24-25 April, 2015.

Hemjyoti Medhi attended and presented a paper, Memory, Movement and the Mahila Samiti in Assam: Notes from a Digital Archive Project, in an International Workshop on Digitisation and Archiving, Jadavpur University, Kolkata. 19-21 August, 2015.

Hemjyoti Medhi presented a paper, (read by the panel Chair Uma Chakravarti), Where is the Archive? Women's public performances and the mahila samitis, in an International Federation for Research in Women's History. Jinan, China, 27-29 August, 2015.

Pallavi Jha attended and presented a paper, Nature in the Wake of Modernization: A look into Jahnu Barua's Films, in a National Conference on Ecocinema: Celebrating Landscapes and Waterscapes, organised by the Department of Humanities and Social Sciences, BITS-PILANI, K K Birla Goa Campus, Goa, India, 8-10 October, 2015.

Pallavi Jha attended and presented a paper, The 'Reader' in Literature: Understanding the Shift from 'Print' to 'Digital', in an National Seminar on English Literature in the Digital Era, organised by Department of English, Pondicherry University, 12 February, 2016.

Reetamoni Narzary attended the SAP-DRS Workshop on Working with Modernity and Regional Modernities, organized by Department of English and Foreign Languages, Tezpur University, 18 March, 2016.

S Sahoo attended and presented a paper, Creating Everyday Space: Representations of Nature in Popular Video Discs Films (VCD) in Assamese, at a National Conference on Ecocinema: Celebrating Landscapes and Waterscapes, organized by Department of Humanities and Social Sciences, BITS-PILANI, K.K Birla Goa Campus, Goa, India, 08-10 October, 2015.

Stravani Biswas attended and presented a paper, Geographies of Exile: Ritwik Ghatak's Discourse on Memory and Nature in Sibarnarekha, in a National Conference on Ecocinema: Celebrating Landscapes and Waterscapes, organized by Department of Humanities and Social Sciences, BITS-PILANI, K K Birla Goa Campus, Goa, India. 08-10 October 2015.

Stravani Biswas attended the Inter University National Seminar of DSWs at Alliance University, Bangalore, 11-12 September, 2015.

Stravani Biswas attended the Oxford Women's Leadership Symposium at the Oxford University Club, Oxford, UK, 14-16 March, 2016.

TALKS BY THE FACULTY ABROAD AND IN INDIA

B K Danta delivered a plenary lecture, In the Mahanadi Country: A Reading Jayanta Mahapatra's Relationship - The Wider Significance of Nature, at the XIII International Conference of the Forum on Contemporary Theory, Baroda, Gujarat and Ravenshaw University Cuttack, 21-23 December, 2015.



D Mohapatra chaired a Technical Session in the UGC Sponsored National Seminar on English Language Teaching in India: Problems and Prospects at Sonapur College, Sonapur, Assam, 27-28 August, 2015.

G K Borah chaired a technical session at the International Conference of North East India Linguistic Society (NEILS)-9, Tezpur University, 5-7 February, 2016.

G K Borah delivered a Plenary talk, Language and the World of Literature, in the National seminar on Studies on North East Indian Language and Cultural Heritage, organized by Dept of Assamese, Madhabdev College, Lakhimpur, Assam, 8-9 January, 2016.

G K Borah delivered a Plenary talk, Language: Just a Means of Communication? at a National seminar on Language, Literature of North East India, organized jointly by Gauhati University and Indira Gandhi National Centre for the Arts, New Delhi, 15-16 March, 2016.

G K Borah delivered a Plenary talk, Was in the Beginning the Word or the Deed? (Metaphor and primacy of matter over mind), in a National seminar on The Mind Matters: Language, Cognition and Other Correlations, organized by Indian Institute of Information Technology (IIITG), Guwahati, 12 March, 2016.

Hemjyoti Medhi chaired the Panel 6: Representation and Change of the SSAI Graduate Workshop, SOUTH ASIA CITY-SCAPES: Social, economic and cultural transformations, organized by South Asia Institute, University of London, 8 June, 2015.

Hemjyoti Medhi delivered a talk, The Weaving Co-operatives of the Mahila Samitis in late colonial Assam, at the School of Oriental and African Studies, University of London, 29 April, 2015.

M M Sarma attended as a Chairperson in the National Seminar on Towards Composing History of Literature: the Indian Scenario at Department of Assamese, Dibrugarh University, 15 March, 2016.

M M Sarma attended as a Resource Person in the Asom Vidya International Conference organized by Dept. of M.I.L, Gauhati University, 26 February, 2016

M M Sarma delivered a keynote address in a National Seminar on National Consciousness and Assamese Literature organized by Sahitya Akademi at Kavyakshetra, Cinnamara, Jorhat, 28 October, 2015.

P K Das delivered an invited lecture, Composing History of Literature, in the National Seminar on Towards Composing History of Literature: the Indian Scenario organized by Department of Assamese, Dibrugarh University, 15 March, 2016.

Pallavi Jha chaired a session in a National Seminar on English Literature in the Digital Era, organized by Department of English, Pondicherry University, 12 February, 2016.

R Chakraborty delivered a Guest Lecture, Learning Chinese through Modular Packages or Challenges in Chinese to English Language Translation, at Air Force Station, Bagdogra, 27-28 October, 2015.

SEMINAR/WORKSHOP/SYMPOSIA/INVITED LECTURES ORGANISED BY THE DEPARTMENT

International Conference, 9th North East Indian Linguistics (NEILS9) sponsored by NEILS in collaboration with La Trobe University, Australia and Oregon University, USA, 5-7 February, 2016

Workshop on Working with Modernity and Regional Modernities organised by SAP-DRS, Dept. of EFL, 18 March, 2016

Language Workshop organised by Centre for Endangered Languages, 18-20 March, 2016

National Conference on Biography: Western Theories, Indigenous Practices in Assam organised by SAP-DRS, Dept. of EFL, 30 March, 2016.

DISTINGUISHED VISITORS TO THE DEPARTMENT

Dr Anjali Daimari, Associate Professor, Gauhati University

Prof. Asima Ranjan Parhi, Rajiv Gandhi University, Itanagar

Prof. Gobinda Prasad Sarma, Former Professor of Gauhati University

Prof. Himadri Lahiri, University of Burdwan, West Bengal

Prof. Himanshu Mohapatra, Utkal University, Odisha

Prof. Jyotirmoy Prodhani, Gauhati University

Dr. Kynpham S. Nongkynrih, NEHU, Shillong

Dr. Shakuntala Mahnata, Associate Professor, Indian Institute of Technology, Guwahati

Prof. Subba Rao, Former Professor, Delhi University



AWARDS & HONOURS RECEIVED BY THE FACULTY/ RESEARCH SCHOLARS/STUDENTS

D Mohapatra awarded BEST EFL Scholar 2015 by Indian Psychometric and Educational Research Association (IPERA), Patna on the eve of 7th International Conference of IPERA held at Harprasad Institute of Behavioural Studies, Agra, 26-28 September, 2015.

Hemjyoti Medhi was awarded the Charles Wallace India Trust-SOAS Visiting Fellowship at South Asia Institute, School of Oriental and African Studies, University of London, UK, March-June, 2015.

Raktima Bhuyan, PhD student, secured 1st rank in the recently declared State Eligible Test.

OTHER IMPORTANT ACTIVITIES OF THE DEPARTMENT/ACHIEVEMENTS OF THE FACULTY

The Department is UGC-SAP funded. It has completed DRS Phase-I and UGC has approved DRS Phase-II in 2015.

NUMBER OF STUDENTS WHO PASSED NET-JRF/GATE[2015-2016]

NET (JRF) - 01

NET (LS) - 04

SET - 05

NOTABLE PLACEMENT [2015-2016]

Anjumoni Saikia, Subject Teacher

Asima Gogoi, Assistant Professor, Namrup College

Binoy Chetia, Assistant Professor, Demow College, Demow

Chinmoyee Deka, P.A to Governor, Rajbhawan, Meghalay

Manashi Changmai, Subject Teacher, Saikhuwa Higher Secondary School

Priti Das, Assistant Professor, Tinsukia Womens' College, Tinsukia

Rajashree Dutta, Assistant Professor, Sibsagar Girls' College, Sivasagar

Raktima Gogoi, ONGC, Digboi

Rekibuddin Ahmed, Subject Teacher, Ambagan Higher Secondary School

Rini Banerjee, Assistant Professor, Sarupathar College, Golaghat

Trisha Wangno, Assistant Professor, Yachuli Government College, Arunachal Pradesh

Vikram Das, Junior Accountant, Assam Agricultural University, Jorhat

THE FACULTY OF THE DEPARTMENT

Professors

M M Sarma, PhD (Dibrugarh)

Specialization/Areas of interest: Literature in English, Critical Theory, Fiction, ELT

E-mail: mms@tezu.ernet.in

B K Danta, PhD (Utkal)

Specialization/Areas of interest: American Literature, Critical Theory, Translation and Translation Politics

E-mail: bkdanta@tezu.ernet.in

Farheena Danta, PhD (Dibrugarh)

Specialization/Areas of interest: American Literature, Modernist Poetics, Cultural Studies

E-mail: fdefl@tezu.ernet.in

P K Das, PhD (Gauhati)

Specialization/Areas of interest: Indian Writing in English, American Literature

E-mail: prsntdas@tezu.ernet.in



Madhumita Barbora, PhD (Tezpur)

Head of the Department

Specialization/Areas of interest: Linguistics (Morphology, Syntax, Language Acquisition), Language Documentation

E-mail: mmb@tezu.ernet.in

G K Borah, PhD (NTNU, Norway)

Specialization/Areas of interest: Philosophy of Language, General and Cognitive Linguistics, English Literature and Critical Theory

E-mail: gkb@tezu.ernet.in

Associate Professors

D Mohapatra, PhD (EFLU, Hyderabad)

Specialization/Areas of interest: Curriculum Development, Materials Production, Language Policy

E-mail: deva@tezu.ernet.in

Sravani Biswas, PhD (NEHU)

Specialization/Areas of interest: Critical Theory, Indian Writing in English

E-mail: sravani@tezu.ernet.in

Assistant Professors

Hemjyoti Medhi, PhD(Delhi)

Specialization/Areas of interest: Gender Studies, Women's Studies

E-mail: hjyoti@tezu.ernet.in

R Chakraborty, MPhil (JNU)

Specialization/Areas of interest: Chinese Language & Literature

E-mail: rathijit@tezu.ernet.in

Reetamoni Narzari, MA (NEHU)

Specialization/Areas of interest: Women's Writing, Commonwealth Literature, Indian Writing in English

E-mail: reita@tezu.ernet.in

Pallavi Jha, PhD (Hyderabad)

Specialization/Areas of interest: Children's Literature, Popular Culture and Literature, Postcolonial Writing

E-mail: pjefl@tezu.ernet.in

S Sahoo, PhD (Tezpur)

(On Deputation as Assistant Professor, CODL)

Specialization/Areas of interest: Indian Writing in English, Ecocriticism, Travel Writing

E-mail: ssahoo1@tezu.ernet.in

Bashabi Gogoi, PhD (Gauhati)

Specialization/Areas of interest: Indian Writing in English, Adaptation Theory

E-mail: b_gogoi@tezu.ernet.in



AK Nath, PhD (JNU)

Specialization/Areas of interest: Language Typology, Morphology, Language Endangerment

E-mail: akn@tezu.ernet.in

Bipasha Patgiri, MPhil (JNU)

Specialization/Areas of interest: Phonology (Prosody, Dialectology, Language Typology and Syntax)

E-mail: bipasha@tezu.ernet.in

Esther Daimari, MPhil (Gauhati)

Specialization/Areas of interest: South Asian Literature

E-mail: esther@tezu.ernet.in

Ningshen Zingjarwon, MPhil (JNU)

Specialization/Areas of interest: Chinese Language & Literature

E-mail: zingjar@tezu.ernet.in

B Medhi, M.Phil-German (JNU)

Specialization/Areas of interest: Ecocriticism, Exile Literature, Holocaust Literature, Post-War Literature

E-mail: bid1983@tezu.ernet.in

A Gope, MA (Hyderabad)

Specialization/Areas of interest: Acoustic Phonetics with special interest in Tone, Psychoacoustics

E-mail: amalesh@tezu.ernet.in

Visiting Fellows

SAhmed, Diplôme de deuxième cycle (Université de Paris I. Panthéon-Sorbonne Paris, France)

Specialization/Areas of interest: French Language (Problems and practices of urban development in developing countries)

E-mail: saif@tezu.ernet.in

TK Mazumdar

Specialization: German Language

THE STAFF OF THE DEPARTMENT

Technical Staff

H Das, MSc (Gauhati)

Technical Assistant

E-mail: hemen@tezu.ernet.in

Office Staff

B Bhattarai, MA (IGNOU)

UDC

E-mail: bhattarai@tezu.ernet.in

U Ray

MTS

E-mail: umesh@tezu.ernet.in



DEPARTMENT OF HINDI

THE DEPARTMENT

The Department of Hindi was established in January 2010 and it started an MA programme in Hindi from 2013. At present the Department also runs the following programmes: Post Graduate Diploma Programme in Translation (Hindi); Hindi as a Modern Indian Language (MIL); PhD in Hindi literature/language). Apart from these programmes, the Department also runs a Certificate Course in Official Hindi (Level-1), which is meant for the employees of the University.

Academic programmes and Student intake

| Academic programmes | Student intake |
|--------------------------|---|
| Certificate Course | 10 |
| PGDiploma in Translation | 23 |
| MA in Hindi | 25 |
| PhD | Intake variable, 07 in the Academic year 2015-16 |



**PUBLICATIONS****In International and National Journals**

Anjulata. Nasira Sharma kakatha sahitya: Ekallochanatamkadhyan, Sankhya,3,2016.

Anushabda. Shataranj ke khiladi: Film aur Kahani, Shabdarth, 6,2015.

Anushabda. Pashchatya sahitya mein swachchhandatawad: prawritti banam aandolan, Seemant, 2015

Anushabda. Hinditar Pradeshon me in Hindi shikshan ki rananiti, Bhasha,2,2015.

Anushabda. Natak: Drishyam shrawyam wa yadbhawet, Sahriday,3,2016.

Tripathi, S.K. Yugin yatharth ka nirmal darpan: Bilesur bakariha, Samvad, 4,2015

Tripathi, S.K. Lokgit, Sankhya, 12,2015.

Tripathi, S.K. Vidyapati ke kavyon me inswaron ki sangitmayata, Sankhya,3,2016.

Books and Book Chapters

Anushabda.2015. Poorvottar Bharat ki lokbhashayen; luptprayata aur sanrakshan ka sawal. In Singh, D. P. (ed). Poorvottar rajyon ka loksahitya, New Delhi: Akhil bhartiya sahitya parishad nyas.

Tripathi, Suryakant.2015. Ganesh Chouth (Teez-tyohar aur wrat-upwaski Bhojpuri lokkathayen). Varanasi: Vishwavidyalaya Prakashan.

Tripathi, Suryakant.2015. Rashtriya evam manveey chetna ke jagruk kavi: Dinkar. In Varun K. (ed).Samay ka surya: Dinkar, Patna: Bihar Granth Academy.

SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**International and National**

Anjulata attended a national seminar, Manviki evam Samajik vigyanon mein takniki shabdawali ka nirman, prayog tatha samsyaen, in collaboration of Commission for Scientific and Technical Terminology, New Delhi & Tezpur University, Tezpur, 29-30 August, 2015.

Anushabda attended and presented a paper, Cinema: Sirf manoranjan ya samajik chetana ka Aujar, International Conference and Seminar, Asom Vidya, Department of M.I.L, Guwahati University in Association with NEINAD, 27 February, 2016.

Anushabda attended the 10th World Hindi Conference, Bhopal, 10-12 September 2015.

Anushabda attended and presented a paper, Bhaktikalin sahitya mein naari, at a National Seminar, organized by Asam Rashtrabhasha Prachar Samiti, Guwahati in Association with Uttar Pradesh Hindi Sansthan, Lucknow. 8-9 October, 2015.

Anushabda attended and presented a paper, Purwottar Bharat ki Lokbhashayen: Luptprayata aur Sanrakshan ka sawal, at a National Seminar, organized by the Department of Hindi, Rajiv Gandhi University, Arunachal Pradesh in Association with Akhil Bhartiya Sahitya Parishad, Delhi, 16-17 November, 2015.

Anushabda, attended and presented a paper, Critical and Discourse Analysis on Changing Role of Teachers in information/Knowledge Society, at a National Seminar on Innovative pedagogy and Effective Teaching Learning, organized by the Department of Education & TLC, Tezpur University, 14-16 March, 2016.

S K Tripathi attended and presented a paper, Tulna ke dayre mien Vidyapati aur Shankardev, at a National Seminar, organized by PG and Research Institute, D.B. Hindi Prachar Sabha, Madras, 21-22 April, 2015.

S K Tripathi attended a national seminar, Manviki evam Samajik vigyanon mein takniki shabdawali ka nirman, prayog tatha samsyaen in collaboration of Commission for Scientific and Technical Terminology, New Delhi & Tezpur University, Tezpur, 29-30 August, 2015.

S K Tripathi attended and presented a paper, Bhartiya bhakti aandolan aur Shrimant Shankardev, at a National Seminar, organized by Asam Rashtrabhasha Prachar Samiti, Guwahati in Association with Uttar Pradesh Hindi Sansthan, Lucknow, 8-9 October, 2015.

S K Tripathi attended and presented a paper, Asomiya katha sahityaka teen dashak: katipaya vaishishtya, at a National Seminar, organized by Department of Hindi, Tripura University, Tripura in association with Kendriya Hindi Sansthan, New Delhi, 3-4 March, 2016.

S K Tripathi attended and presented a paper, Lokkasahitya, National Seminar, organized by Department of Hindi, NEHU, Shilong in association with Kendriya Hindi Sansthan, New Delhi, 18-19 March, 2016.

S K Tripathi attended and presented a paper, Ghayal ri gati ghayal jana, at a national Seminar, organized by Department of Hindi, Jawaharlal Nehru College, Pasighat, Arunachal Pradesh in association with Kendriya Hindi Sansthan, New Delhi, 29-30 March, 2016.

TALKS BY THE FACULTY ABROAD AND IN INDIA

Anjulata delivered a lecturer, Hindi bhasha ki samvaidhanik sthiti, organized by Kendriya Hindi Sansthan, Guwahati at Rashtrabhasha Vidyalaya, Tezpur, 9 September 2015.

Anjulata delivered a lecturer, Adhunik kaal evam Hindi Sahitya, Organized by Kendriya Hindi Sansthan, Guwahati at Rashtrabhasha Vidyalaya, Tezpur, 10 September 2015.

Anushabda delivered a lecture, Prayogik Hindi: Samasyaen aur Samadhan, organized by Kendriya Vidyalay, Tezpur (Kendriya Vishwavidyalaya), 3 August, 2015.

Anushabda delivered a lecture, Hinditar Pradeshonmein Hindi-Shikshan: Assam ke wishesh sandarbh mein, organized by Kendriya Hindi Sansthan, Guwahati, at C.I.H. Guwahati Centre, 22 August, 2015.

Anushabda delivered a lecturer, Waishwik Paridrishyamein Hindi ka Mahatwa, organized by Kendriya Hindi Sansthan, Guwahati at Rashtrabhasha Vidyalay, Tezpur, 16 September, 2015.

Anushabda delivered a lecture, Hindi Shikshanki Rananiti, organized by Kendriya Hindi Sansthan, Guwahati, at Rashtrabhasha Vidyalay, Tezpur, 17 September, 2015.

Anushabda delivered a lecture, Hinditar Pradeshonmein Hindi-Shikshan: Samasyaen aur Samadhan, organized by Kendriya Hindi Sansthan, Guwahati, at Rashtrabhasha Vidyalay, Tezpur, 19 September, 2015.

Anushabda delivered a lecture, Technical Terminology: Concept and Importance, in a National seminar, Manawiki evam samajik wiganon par asamiya Bhashamein Takaniki shabdawali ka Nirman: Prayog evam Samasyaen, organized by Kalabari College, Sonitpur, Assam in association with CSTT, MHRD, Delhi, 13 January, 2016.

S K Tripathi delivered a lecture, Hindi bhasha Shikshan aur Hindi vyakaran, organized by Kendriya Hindi Sansthan, Guwahati, at Rashtrabhasha Vidyalay, Tezpur, 11 September, 2015.

S K Tripathi delivered a lecture, Hindi sahitya ka itihās, organized by Kendriya Hindi Sansthan, Guwahati, at Rashtrabhasha Vidyalay, Tezpur, 12 September, 2015.

S K Tripathi delivered a lecture as a Chief guest, Rajbhasha Hindi : Swarup evam prayog, organized by DRL, Tezpur, 28 September, 2015.

S K Tripathi, delivered a lecture, Hindi aalochana, organized by Central Hindi Directorate, New Delhi at Chandrakamal Bezbarua Commerce P.G. Collage, Jorhat, 09 October, 2015.





S K Tripathi delivered a lecture, Hindi bhasha, organized by Central Hindi Directorate, New Delhi at Chandrakamal Bezbarua P.G. Commerce Collage, Jorhat, 10 October, 2015.

S K Tripathi delivered a lecture, Prayojanmoolak Hindi, organized by Central Hindi Directorate, New Delhi at Chandrakamal Bezbarua Commerce P.G. Collage, Jorhat, 11 October, 2015.

S K Tripathi delivered a lecture, Anuwad vigyan, organized by Central Hindi Directorate, New Delhi at Chandrakamal Bezbarua P.G. Commerce Collage, Jorhat, 12 October, 2015.

S K Tripathi delivered a lecture, Bhashaaur Sahitya :Samsamyik mahatwa, organized by Hindi Sahitya Sammelan, Tezpur, 28 December, 2015.

S K Tripathi delivered a lecture, Karyalyee Hindi, organized by Hindi Cell, Tezpur University, Tezpur, 29 March, 2016.

SEMINARS/WORKSHOPS/SYMPOSIA/INVITED LECTURES ORGANISED BY THE DEPARTMENT

National Seminar, Manawiki ewam Samajik wigyanon mein takaniki shabdawali ka Nirman, Prayogtatha Samasyaen, in association with Commission for Scientific and Technical Terminology, New Delhi, 29-30 August, 2015.

NUMBERS OF STUDENTS QUALIFIED NET-JRF/GATE (2105-2016)

SLET – 02

THE FACULTY OF THE DEPARTMENT

Professors

AK Nath, PhD (Manipur)

Specialization/Areas of Interest: Medieval Poetry, Folkloristic, Comparative Literature

E-mail: ananta@tezu.ernet.in

Associate Professors

S K Tripathi, PhD (BHU)

Head of the Department

Specialization/Areas of Interest: Applied Linguistics, Indian Poetics, Folkloristics

E-mail: sktripathi@tezu.ernet.in

Assistant Professors

Anjulata, PhD (Tezpur)

Specialization/Areas of Interest: Medieval Poetry, Fiction

E-mail: anju@tezu.ernet.in

Anushabda, PhD (Delhi)

Specialization/Areas of Interest: Linguistics, Media, Poetry, Indian and Western Poetics.

E-mail: anush@tezu.ernet.in

THE STAFF OF THE DEPARTMENT

Office Staff

S Ingti, BA(Gauhati)

UDC

E-mail: ingti@tezu.ernet.in

B Borah

MTS

DEPARTMENT OF MASS COMMUNICATION AND JOURNALISM

THE DEPARTMENT

The Department of Mass Communication and Journalism was established in 2001. A prominent media Department in the region, it is engaged in teaching and research in Media and Communication studies in tune with emerging trends in the field both locally and globally. The thrust areas of the Department have been social communication, new media and audience studies with emphasis on critical understanding of theory and practice. The faculty is specialized in diverse areas of the discipline. The Department has a state-of-the-art infrastructure and it has been providing finest research facilities to the students, the research scholars as well as the faculty.

The Department offers at the moment two MA programmes: MA in Mass Communication & Journalism and MA in Communication for Development. The syllabi of the programmes have been designed taking into consideration the special demands of the media market in the north eastern region. The Department also offers a PhD programme.

Academic Programmes and Student intake

| Academic programmes | Student Intake |
|---|---|
| MA in Mass Communication and Journalism | 35 |
| MA in Communication for Development | 12 |
| PhD | Intake variable. 05 in the Academic year 2015-16 |





Major facilities and equipment available

Equipment:

- Mac Systems With FCP Software
- PCS With Quark Xpress
- PCS With Sound Forge Software
- TV Production Studio Set-Up
- Audio-Mixing (Console) System With Pro Tools Software
- IC Recorders
- P2 Cameras
- PD 177 Cameras
- DSR 570
- DSLRS

MAJOR RESEARCH FINDINGS/RESEARCH AND DEVELOPMENT ACTIVITIES

| Principal investigator | Salient Research Findings |
|------------------------|---|
| Joya Chakraborty | <p>Advancing Communication for Development as a Strategy for Social Change</p> <ul style="list-style-type: none"> • A research component of the project has identified the cultural, economic and social factors that influence the high tea and salt consumption behaviour among the Tea Communities of Assam, a state recording the highest MMR in the country. • It is further identified that in order to prevent the prevalence of hypertension and anemia among them it is essential to address the superstitions and social norms related to salt consumption and provide information about cost effective source of nutrition through audio-visual media |

Research projects, ongoing and new

| Project Title | Funding Agency | Amount (in INR) | Duration | Principal Investigator |
|---|----------------|-----------------|---------------|------------------------|
| Advancing C4D as a Strategy for Social Change in Assam and in NE Region | UNICEF | 30.30 lakh | Mar-Dec, 2016 | Joya Chakraborty |



ALUMNI SOCIETY
TEZPUR UNIVERSITY
TEZPUR, ASSAM
181122



PUBLICATIONS

In International and National Journals

- Nagraj, A. The use of slang in advertisements, *Dimorian Review*, 2(4), 2015.
- Nagraj, A. Active & Passive Product Placement and Advertisements in Lifestyle Channels, *Dimorian Review*, 3(2), 2016.
- Pegu, U. E-governance in North-East India: Initiatives and Challenges, *Administrative Studies*, 1(1), 2015.
- Pegu, U. Concerns and Constraints of Filmmaking in North-East India, *Mass Communicator- International Journal of Communication Studies*, 9(4), 2015.
- Pegu, U. The Paradox of Sustainable Development: Understanding the Socio-Cultural Impact of Dam-Induced Development in North-East India, *Hilarian Ray*, 3, 2015.
- Chakraborty, J., Borah, A. and Hazarika, M. From Fractures to Frames: Conflict Reporting in Newspapers of Assam, *Global Media Journal*, 6(1&2), 2015.
- Chakraborty, J., Hazarika, M. and Goswami, A. Engendering Media Participation: The case of Women Journalists in Assam, *Global Media Journal*, 6(1&2), 2015.

Conference proceedings

- Bora, A. Media for effective information dissemination: A vital necessity for social welfare. In *Proceedings of a National Seminar, New Media: Issues, Challenges and prospects*, Dhawankar, D. V. (ed), organized by the Department of Mass Communication, RTM Nagpur University, Nagpur, 25–26 February, 2016.
- Pegu, U. Endangered Languages of North-East: A Critical Study. In *Proceedings of a National Seminar organized by the Department of Anthropology, Gauhati University, Guwahati*, 23-25 April, 2015.
- Pegu, U. The Current Debates and Politics on the Quest for an 'In (Ex) Clusive' Assamese Identity: A Critical Analysis. In *Proceedings of a National Seminar organized by St. Joseph's College in collaboration with IIT-Guwahati*, 27-29 April, 2015.
- Pegu, U. Mass Media (ted) Reports on Identity and Ethnic Assertions in North-East. In *Proceedings of an International Conference On Contesting 'Self' and 'Other': Identities of Caste, Tribe, Gender and Beyond*, organized by Assam University, Diphu Campus, 27-28 March, 2015.
- Pegu, U. Gender Diversity in Media Organization: The Case of North-east India, In *Proceedings of a National Seminar on Ethnicity and Gender: North-East India and Beyond*, organized by Assam University, Diphu Campus, 16-17 March, 2015.
- Chakraborty, J. New media and digital democracy: Delineating the development dilemma for indigenous communities. In *Proceedings of a National Seminar on New Media: Issues Challenges and Prospects*, Dhawankar, D. V. (ed), organized by the Department of Mass Communication, RTM Nagpur University, Nagpur, 25–26 February, 2016.

Other publications

- Bora, A. Granthar Bhabishyat: Chapa Grantha ne E book (Future of Books, Print vs. eBook), *Gariyoshi*. 23(2), November, 2015.
- Bora, A. Sampratik Sangbad madhyam: Chapa bonam Baidyutin (Present Media Scenario: Print vs. Electronic), *Gariyoshi*, 22(12), September, 2015.

TALKS BY THE FACULTY ABROAD AND IN INDIA

- A Borad delivered a talk, Community radio as a tool of development, in a Capacity strengthening workshop on the theme - Community Radio stations as a platform to empower adolescents through behavior change communication, organized by the Department of Communication & Journalism, Gauhati University Assam, 18–20 August, 2015.
- A Borad delivered a talk, Puppetry as a medium for development, in a Capacity-building training on 'Implementation of Social and behavior change communication through folk art (Puppetry) for empowering adolescents in Assam and NE', organized by the Department of Communication & Journalism, Gauhati University, Assam, 25-29 August, 2015.

SEMINAR/WORKSHOP/SYMPOSIA/INVITED LECTURES ORGANISED BY THE DEPARTMENT

- An open lecture by Mr AS Panneerselvan, Senior Journalist and Readers' Editor, *The Hindu*, Chennai on the occasion of National Press Day celebration, 16 November, 2015.

**DISTINGUISHED VISITORS TO THE DEPARTMENT**

Mr AS Panneerselvan, Readers' Editor, The Hindu, Chennai

AWARDS & HONOURS RECEIVED BY THE FACULTY/ RESEARCH SCHOLARS/STUDENTS

Ms. Uddipana Goswami and Mr. RupjyotK alita won two years consecutive Best Debater/ Best Team in Parag Das Memorial Inter-college and University Debate Competition organized by Sadin- Pratin Gosthi, Guwahati for 2014-15 and 2015-16.

NUMBER OF STUDENTS WHO PASSED NET-JRF/GATE[2014-2015]:3

NOTABLE PLACEMENT [2014-2015]: OIL, Newstime 18 (TV Channel), The Eastern Chronicle,

THE FACULTY OF THE DEPARTMENT***Professor***

S K Behera, PhD (Berhampur)

Professor of Eminence

Specialization/Areas of Interest: Communication Theory and Research, Gender and Media

E-mail: sunilkb@tezu.ernet.in

Associate Professors

A Bora, PhD (Gauhati)

Head of the Department

Specialization/Areas of Interest: Journalism, Feature writing, Radio, Development and Science Communication

E-mail: abhijit@tezu.ernet.in





P Anbarasan, PhD (JNU)

Specialization/Areas of Interest: Media Studies, Cultural and Subaltern Studies, International Communication

E-mail: anbu@tezu.ernet.in

Assistant Professors

Joya Chakraborty, PhD (Hyderabad)

Specialization/Areas of Interest: ICT for Development, Development Communication, Women and Media

E-mail: jc@tezu.ernet.in

U K Pegu, PhD (JMI)

Specialization/Areas of Interest: ICT Implications on Society, Science Communication, Film Studies, and Media Analysis

E-mail: uttamkp@tezu.ernet.in

A Nagraj, PhD (Tezpur)

Specialization/Areas of Interest: Electronic Media Production, Documentary Filmmaking

E-mail: nagraj@tezu.ernet.in

P J Daimari, MCJ (Tezpur)

Specialization/Areas of Interest: Film Studies, Photography

E-mail: peroshj@gmail.com

Kapou Malakar, MA (Jamia Millia Islamia)

Specialization/Areas of Interest: New Media; Political and International Communication; Culture, media and society;

Communication E-mail: kapou@tezu.ernet.in

Anjuman Borah, MA (Tezpur)

Specialization/Areas of Interest: Development Communication, Television Production,

E-mail: anjuman@tezu.ernet.in

M Hazarika, MA (Tezpur)

Specialization/Areas of Interest: Radio, Gender and ICTs, Participatory Communication

E-mail: mukti@tezu.ernet.in

THE STAFF OF THE DEPARTMENT

Technical Staff

R C Nath

Technical Officer

E-mail: ratul@tezu.ernet.in

C Singha

Senior Technical Assistant

E-mail: chansan@tezu.ernet.in

Office Staff

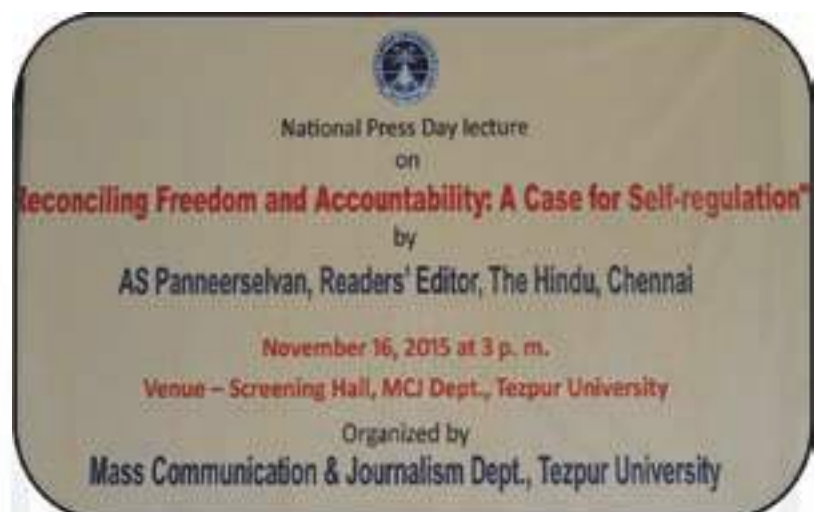
Dipanjali Sinha

LDC

E-mail: dsinha@tezu.ernet.in

L Bhuyan

MTS







DEPARTMENT OF SOCIAL WORK

THE DEPARTMENT

The Department of Social Work was established in 2014 to respond to the dearth of good Social Work schools and trained social work professionals in Northeast India. The Department follows a rigorous theoretical and field-based pedagogy with special focus on the issues of this region. For now, the Department offers a Master's degree programme and follows a credit-based continuous evaluation system. Students from multi-disciplinary backgrounds are trained in the core values and skills of the social work profession. The curriculum is designed to train students with the generic approach of social work, which leads to the conduct of research in emerging areas of social work profession and issues related to Northeast India. Through the fieldwork practicum (a crucial and integral part of social work training), the students are exposed to different economic, socio-cultural and political realities of the region. Additionally, the students are exposed to various social welfare programmes implemented at the grassroots level through the community, NGOs and government settings. The students are also encouraged to carry out internship and volunteering activities during the semester breaks in profit and non-profit sectors and other various government departments. Graduates from the Department are envisaged to be placed in various positions in social welfare organisations, in non-profit and private sectors, and in academics.

Academic Programmes and Student Intake

| Academic programmes | Student Intake |
|---------------------|----------------|
| MA in Social Work | 18 |

PUBLICATIONS

In International and National Journals

Kalarivayil, R. and Desai, P. N. Emerging Trends in Oncological Research in India: Issues and Challenges, *Astrocyte*, 2016 [In press].

Nair, S. Injectable Contraceptives: Failing the Women of the Country, *Economic and Political Weekly*, 2016 [In press].

Nair, S. and Kalarivayil, R. "Saved a Generation": Campaigns against Hazardous Contraceptives in India, *Asian Journal of Social Science*, 2016 [In press].

Nair S. The 'Emergency' Of Repoliticising Rights: Examining Emergency Contraception. *Meridian*, 4(2), 2015.

Books and Book Chapters

Kalarivayil, R. and Nair, S. Unionisation in Post Reform India: A Review of Trends and Trajectories. In George, S. and Sinha, S. (eds). *Redefined Labour Spaces: Organising workers in Post Liberalised India*. London: Routledge Publication, 2016 [In press].

Maydeo, A. and Nair, S. (Eds). 2016. *Social Work Education in the Contemporary World: Issues and Challenges*. Pune :BhashyaPrakashan.

Other publications

Kalarivayil, R. 2016. Exclusion and Vulnerabilities of Children with Special Focus on North East. course material for Post Graduate Diploma in Child Rights and Governance. Centre for Inclusive Development, Tezpur University.

Nair, S. 2016. Child Rights as Human Rights – I. course material for Post Graduate Diploma in Child Rights and Governance. Centre for Inclusive Development, Tezpur University.

Saha.A. (Ed). 2016. Understanding Childhood, course material for Post Graduate Diploma in Child Rights and Governance. Centre for Inclusive Development, Tezpur University.

**SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED****International and National**

A Saha participated in an International Seminar on Governance, Development and the State in Contemporary Times, at Tezpur University, Tezpur, 09-12 March, 2016.

A Saha participated in a Seminar on Ethics in Social Work Practice and Human rights, at LGB Regional Institute of Mental Health, Tezpur, 15 March, 2016.

A Saha participated in an Orientation Programme for the Faculty Members conducted jointly by Centre for Inclusive Development and UNICEF at Tezpur University, Tezpur, 24-27 December, 2015.

A Saha participated in a National Seminar on Role of Self Help Group in Socio-economic Development with Special Reference to North- East India, at Department of Sociology, Sankardeva Mahavidyalaya, Pathalipahar Lakhimpur, 3-4 September, 2015.

Deepshikha Carpenter attended and presented a paper, Mapping Self Help Groups for Livelihood in Dhemaji District, Assam under schemes of Government and Non Government Institutions in an International Seminar on Governance, Development and the State in Contemporary Times, organised by Department of Sociology, Tezpur University Assam India, 9-12 March, 2016.

Deepshikha Carpenter participated in a Seminar on Ethics in Social Work- Practice and Human rights, at LGB Regional Institute of Mental Health, Tezpur, 15 March, 2016.

R Kalarivayil attended and presented a paper, Inclusion, Access and Equity in Health: Trends in Governance of Biomedical Research and Innovation in India, in an International Seminar on Governance, Development and the State in Contemporary Times, organised by Department of Sociology, Tezpur University Assam India, 9-12 March, 2016.

R Kalarivayil attended and presented a paper, Emerging Oncology Science and Technology Systems in India : Mapping Trends, in a Workshop on Quantitative Studies of Growth Diversification and Globalisation of Science and Technology, at Institute of Informatics and Communication, University of Delhi, 8 January, 2016.

R Kalarivayil participated in an Orientation Programme for the Faculty Members conducted jointly by Centre for Inclusive Development and UNICEF at Tezpur University, Tezpur, 24-27 December, 2015.

R Kalarivayil participated in a Seminar on Ethics in Social Work Practice and Human rights, at LGB Regional Institute of Mental Health, Tezpur, 15 March, 2016.

Smitha S Nair participated in an Orientation Programme for the Faculty Members conducted jointly by Centre for Inclusive Development and UNICEF at Tezpur University, Tezpur, 24-27 December, 2015.

Smitha S Nair participated in a Seminar on Ethics in Social Work Practice and Human rights, at LGB Regional Institute of Mental Health, Tezpur, 15 March, 2016.

Veda Yumnam participated in a Seminar on Ethics in Social Work- Practice and Human rights, at LGB Regional Institute of Mental Health, Tezpur, 15 March, 2016.

TALKS BY THE FACULTY ABROAD AND IN INDIA

R Kalarivayil delivered a talk, Exploring the Women's question in India (Pre- Independence to 1975) in a UGC Sponsored National Seminar on Domestic Violence and Women in Kerala, organised by Post Graduate Department of Economics, M. E. S. Asmabi College, Kodungallur, Thrissur, 30 - 31 December, 2015.

R Kalarivayil delivered a talk, Adolescent Health at a Three day orientation Programme on Adolescent Empowerment, as part of the UNICEF sponsored Project, organised by Department of Cultural Studies, Tezpur University, 20 - 22 September, 2015.

Smitha S Nair delivered a talk, Understanding the Women's Health Movement in India, in a UGC Sponsored National Seminar on Domestic Violence and Women in Kerala, organised by Post Graduate Department of Economics, M. E. S. Asmabi College, Kodungallur, Thrissur, 30 - 31 December, 2015.

A Saha delivered a talk, Adolescent Mental Health, at a Three day orientation Programme on Adolescent Empowerment as part of the UNICEF sponsored Project, organized by Department of Cultural Studies, Tezpur University, 20 - 22 September, 2015.



Veda Yumnam presented an invited paper, Conflict as a Social Determinant of Health: Public Health, Ethics, Implications, in the 3rd Annual Conference on Revisiting the Discourse on the Duties and Responsibilities in Health Research, IERB, JNU, New Delhi, 7 January, 2016.

AWARDS & HONOURS RECEIVED BY THE FACULTY/RESEARCH SCHOLARS/STUDENTS

Indranee Kalita won 1st Prize in on Spot Photography Competition, National Level Unifest, held at Mysore University, 2016

Priyanka Borah won Bronze Medal in Folk/Tribal Dance in the 30th University East Zone Youth Festival held at Ranchi University, Jharkhand.

Priyanka Borah won 1st prize in Bihu Husoricompetiton, Bordoisila 2015 in Pyrokinesis, Assam Engineering College.

OTHER IMPORTANT ACTIVITIES OF THE DEPARTMENT/ACHIEVEMENTS OF THE FACULTY

World Social Work Day Celebrated

The Department of Social Work, Tezpur University Celebrated World Social Work Day, 17 March 2016 with various activities, on this year's theme - Promoting the Dignity and Worth of Peoples. A blood donation camp was organized in collaboration with Kanakalata Civil Hospital, Tezpur at the Health Centre of Tezpur University. The students of the Department organized street play at different locations inside and outside the university campus to spread the message on promoting the worth and dignity of people.

Outreach Programmes

Awareness programme on Anemia for Children below 5 years of age was organized by students of the department in Harigaon community. The programme included an awareness session for the pregnant women and nursing mothers from the community. The children were provided Iron and Folic Acid supplements and their weights were also measured.

An awareness programme on tuberculosis for tea plantation workers and their families was organised in Noorbari Tea Estate was organised by the students of the department in collaboration with the Kanaklata Civil Hospital, Tezpur. A DOTs Centre was established in the Tea Estate following the programme.

An Awareness programme was organized in partnership with INCENSE- project of Lokapriya Gopinath Bordoloi Regional Institute of Mental Health (LGBRIMH) in Napaam Village by students of the department. Signs and symptoms of mental illness were discussed during the awareness programme. 42 members from the community attended the programme.

A health camp was organised in Swahid memorial school of Puniyani village to provide free health check-up and distribute medicine. The camp was organised by students of the department in collaboration with Kanaklata Civil Hospital, Office of the Joint Director of Health Services, District Medical Store and local community.

A health camp was organised in Jharoni village by the students of the department in collaboration with Indian Medical Association, Sonitpur branch. The camp was held specifically for the anemic women in the community. There was a mobile dispensary unit which provided medicine to the anemic women. Around 110 women participated and benefited from the health camp.

Awareness programme on reproductive health in Soalmara village was organized by students of the department. The programme provided information regarding reproductive health issues of women. An interactive session with a Gynecologist was also part of the programme which helped the women to raise questions regarding their health.

Mushroom Cultivation training for women of Harigaon was organized by students of the department in collaboration with the Krishi Vigyan Kendra, Sonitpur. The programme led to the women from the area taking a baby step towards mushroom cultivation on a trial basis which they intend to do on a large scale in the long run for economic self reliance.

An awareness programme on soil testing and soil management for small and marginal farmers was organized by the students of the department in collaboration with Krishi Vigyan Kendra. Forty five farmers from the neighboring communities around Tezpur University attended the programme.

Awareness programme against child marriage was organized by students of the department in Kurukani community. The programme was held in Korokani L.P. School. Resource persons from Paanchmile Higher Secondary School, Eight



Brothers Social Welfare Society, Tezpur and KorokaniZamshedChuburi L.P. School interacted with the participants. Various activities in school including sports events, parents-teachers meeting, programme on building leadership quality were organized to reduce the school dropout in Soalmara Panchayat

In active participation of the students of the Napaam MV School, a street playwas organized by the department in the Napaam Centre on 12 November, 2015 to spread awareness about the importance of education.

An awareness programme on "GIRL POWER" was organized by the students of the department at the Gandhi Xuoroni School Napaam on 5 October, 2015. The school teachers along with the Headmaster and the President, School Management Committeewere the resource persons. Around 40 women and 10 men attended the programme.

NUMBER OF STUDENTS WHO PASSED NET (2015-2016)

NET-01

NOTABLE PLACEMENT(2015-2016)

Priyanka Borah, Kaziranga University, Jorhat
Monaspika Das, Assam Institute of Technology, Guwahati
Samikhya Borah, Eight Brothers Social Welfare Society, Tezpur
Dikshita Barman, Specialised Adoption Authority, Students Welfare Mission, Barpeta
SumitaBasumatari, Women Development Centre, Kharghuli, Guwahati

THE FACULTY OF THE DEPARTMENT

Professors

S K Dutta, PhD (Viswa Bharati)
Head (i/c) of the Department
Specialization/Areas of Interest: Folklore Studies, Assamese Language and Culture
E-mail: skd@tezu.ernet.in

Assistant Professors

A Saha, PhD (NIMHANS, Bangalore)

Specialization/Areas of Interest: Social Work & Mental Health, Psychosocial Care in Disaster Management, Street Children, and Application of Social Work Methods.

E-mail: apurbasaha@tezu.ernet.in

Veda Yumnam, MPhil (JNU)

Specialization/Areas of Interest: Social Determinants of Health, Disaster Management, Nutrition, Social Epidemiology of HIV/AIDS.

E-mail: vedamsw@tezu.ernet.in

R Kalarivayil, PhD (JNU)

Specialization/Areas of Interest: Innovation Studies, Science and Technology in Rural Development.

E-mail: rajeshk@tezu.ernet.in

Deepshikha Carpenter, (MLCU, Shillong)

Specialization/Areas of Interest: Social Work Education, Women's Studies, Disability, Crime and Violence

E-mail: deepshikha@tezu.ernet.in

Guest Faculty

Smitha Sasidharan Nair, MPhil (JNU)

Specialization/Areas of Interest: Health, Gender and Social Movements

E-mail: smithas@tezu.ernet.in

THE STAFF OF THE DEPARTMENT

Office Staff

A Bharali

UDC

E-mail: amar@tezu.ernet.in

GBorah

MTS







DEPARTMENT OF SOCIOLOGY

THE DEPARTMENT

The Department of Sociology was established in 2006 with a Master's programme. Subsequently, it launched a PhD programme in 2008. The Department is committed to creating competent and socially sensitive graduates through rigorous teaching/training programmes and extension activities. The curriculum lays emphasis on the teaching and learning of general concerns of sociology as well as the issues of sociological significance in Northeast India. A combination of participatory, experiential and creative pedagogy is used for transacting the curricula with a view to fostering dialogue, mutual learning and critical reflection. The pedagogical practices also utilise an inter-disciplinary framework combining classical approaches in conjunction with emerging areas of research. The students pursuing their Masters in the Department not only learn critical approaches and perspectives in the classroom but they are also encouraged to participate in short field visits during vacations as part of their mandatory research projects. The Department also commits itself to exposing the students to the prevailing social realities through activities such as outreach programmes, regular film screening, seminars and other programmes in collaboration with other social organisations. In 2016, the Department was awarded the UGC Special Assistance Programme for a period of 5 years.

Academic programmes and Student intake:

| Academic programmes | Student Intake |
|---------------------|---|
| MA in Sociology | 35 |
| PhD in Sociology | Intake variable, 03 in the Academic year 2015-16 |

MAJOR FACILITIES AVAILABLE

- Audio-Visual class room cum Seminar hall with projector
- Departmental Library cum reading room

MAJOR RESEARCH FINDINGS/RESEARCH AND DEVELOPMENT ACTIVITIES

Research projects: ongoing and new

| Project Title | Funding Agency | Amount (in INR) | Duration | Principal Investigator |
|--|------------------|-----------------|-----------|------------------------|
| Land Identity and Development in Nagaland; 2013-2017 | ICSSR, New Delhi | 15.00 lakh | 2013-2016 | K Kikhi |
| Attempting at Social Inclusion through Constitutional Amendments: Efficacy of 73rd and 74 th Amendments in the Context of India's Northeast | ICSSR, New Delhi | 38.50 lakh | 2013-2016 | R Deka |

PUBLICATIONS

In International and National Journals

Choudhury, N. and Kikhi, K. Mental Health, Gender and Society: The Social Epidemiological Connect, Social Change and Development. XII, 2016.

Das, S. Changing livelihood practices: A study in Central Assam. Third Concept, 29, 2016.

Deka, R. Reflections on Peasant Consciousness of Conial Assam. The Heritage. VI(2), 2015.



- Goswami, N. Costs, Security and Discipline: Gendering the debate on school choice in India. *Indian Journal of Gender and Society*, 22(2), 2015.
- Kalam, M. A. Meat of the Matter. *Economic and Political Weekly*, 51(3), January 16, 2016.
- Kalam, M. A. Missed Calls? People, Communication and Governance, *Anthropology Today*, 1(2), 2016.
- Kikhi, K. and Choudhury, N. Understanding Schizophrenic Behaviour from a Cultural Perspective. *Man and Society: A Journal of North-East Studies*, XII, 2015.
- Kikhi, K. and Ghosh J. Identity and Tribal Land Alienation in Northeast India: A Sociological Viewpoint on Changing Land Relations with Reference to Nagaland State. *Journal of Northeast Indian Cultures (JNEIC)*. II(2), 2015.
- Kikhi, K. and Husca, A. An Insight into the (Unique) Heritages and Traditions of Sumi Nagas: What can be Preserved? *Anthropos India*, 2(1), 2016.
- Kikhi, K. and Husca, A. Institution of Marriage and Bride-Price amongst the Sumi Nagas: Change and Continuity. *Journal on Frontier Studies*, 4, 2016.
- Pappu, R. and Goswami, N. Introduction to special issue on Contemporary issues on Womens' education in India. *Indian Journal of Gender and Society*, 22 (2), 2015.

Books and Book Chapters

- Deka, R. 2016. Bhakti Movement of Sankardeva: Road to Enlightened Assam. In Neog, M. (ed). *Srijansheel Praibhar Garakee Srimanta Sankardeva (Srimanta Sankardeva as an Innovator)*, Guwahati: Students' Stores.
- Das, A. The Magic called Elections: Polls, Performance and Citizenship. In Pathak, D. et al. (eds). *Performative Communication: Culture and Politics in South Asia*, New Delhi: Routledge. (Forthcoming)
- Ray, S. 2016. Studying Laboratories: A Sociological Inquiry into Research Practices in Genetics. In Hebbar R. and Bandyopadhyay, M. (eds). *Towards a New Sociology of India*. Orient Blackswan: Hyderabad.
- Sharma, C. K. 2016. Immigration, Indigeneity and Identity: The Bangladeshi Immigration Tangle in Assam. In Gogoi D. (ed). *Unheeded Hinterland: Identity and Sovereignty in Northeast India*. London/Delhi: Routledge.
- Sharma, C. K. 2016. Building India's Future Powerhouse: Discourses of Development and Popular Resistance in Northeast India. In Rao, M. (ed). *Reframing the Environment: Resources, Risk & Resistance in Neoliberal India*, Mumbai: University of Mumbai Press.

Other publications

- Kalam, M. A. 2015. Elementary Education and Primary Health Care: Major concerns in the North East Region. In Kazi, S. S. (ed). *Social Innovations for Social Impact in North East*. Guwahati: North East Development Foundation.
- Das, S. 2015 (Book Review) Catherine Bernard and John J. Shea (Eds): *Nurturing families around the world: Building a culture of peace*, in *Sociological Bulletin*, Volume 64.
- Goswami, N. 2015 (Book Review) Das, C R (Eds). *Adventures in education: Vistas and variation*, Daanish Books *Sociological Bulletin* 64 (3), Sept-Dec, pp. 401-403.
- Sharma, C. K. (March, 23, 2016). Assam Assembly Polls: A Complex Election Scenario Faces the State's Voters, *Firstpost.com*, <http://www.firstpost.com/politics/assam-assembly-polls-a-complex-election-scenario-faces-the-states-voters-2689788.html>
- Sharma, C. K. (March 18, 2016). *Jatil Chunavi Daud Mein Asam (Assam in a Complex Electoral Fray)*, *Amar Ujala*, <http://epaper.amarujala.com/dl/20160318/12.html?format=,img>
- Sharma, C. K. (August 11, 2015). *The Naga peace treaty: Why everyone is still keeping fingers crossed*, *Firstpost.com*, <http://www.firstpost.com/india/the-naga-peace-treaty-why-everyone-is-still-keeping-fingers-crossed-2386020.html>
- Sharma, C. K. (August 10, 2015). *Purvottar Mein Sambhavana (Possibilities in the Northeast)*, *Amar Ujala*, <http://www.amarujala.com/news/samachar/reflections/columns/oppurtunity-in-north-east-hindi/>

SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**International and National**

A Das attended and presented a paper, (G)overnance and Development: Myth of Devolution in India, in an International Seminar on Governance, Development and the State in Contemporary Times, organized by Department of Sociology, Tezpur University, 9-12 March, 2016.

A Das attended and presented a paper, Elections as Carnival: Power, People and Politicians in Northeast India, in a National Seminar on Electoral Politics, Peoples' Rights and Regime's Response in Northeast India, organized by the Department of Political Science, Gauhati University, Guwahati, 17-18 March, 2016.

A Das attended and presented a paper, The Myth of Good Governance and Less Government: A Reflection on Democracy in India, at the IUAES 2015 Inter-Congress, Re-imaging Anthropological and Sociologic Boundaries, organized by the International Union of Ethnological and Anthropological Sciences and Faculty of Sociology and Anthropology, Thammasat University at Thammasat University, Bangkok, Thailand, 15-17 July, 2015.

A Das attended and presented a paper, Tragedy of PRIs and Predicament of Rural Governance in Assam, in a National Seminar on State and Representative Institutions in North East India, organized by Department of Political Science, Gauhati University, Guwahati, 17-18 March, 2016.

A Das delivered a talk, Doing Fieldwork, in a Workshop on Research Methodology in Social Sciences organized by the Department of Sociology, Tezpur University and Equal Opportunity Cell, Tezpur University, 21-27 September, 2015.

A Das delivered a talk, Governance and Child Rights, in an Orientation Programme, organized by the Centre for Inclusive Development, Tezpur University and UNICEF, Guwahati, 21-27 December, 2015.

A Das delivered a talk, How to Conduct Group Work, at the Executive Programme on Evaluation Methods, organized by Tezpur University in partnership with UNICEF, Guwahati and Planning and Development Department, Government of Assam, 15-19 December, 2015.

A S Shimreiwu participated in a Workshop on Memory Studies, Sources and Historical Analysis, Department of Sociology, Tezpur University, Tezpur, 12-18 October, 2015.

A S Shimreiwu participated in the Induction cum Orientation Programme on Professional Qualities in Education, Tezpur University, Tezpur, 20-21 April, 2015.





C K Sharma attended and presented a paper, Building "India's Future Powerhouse": Discourses of 'Development' and Popular Resistance in Northeast India, in a National Seminar on Reframing the Environment: Resources, Risk & Resistance in Neoliberal India, organized by Department of Sociology, University of Mumbai, 21-22 January, 2016.

C K Sharma attended and presented a paper, Sankaradev and Sociology of Bhakti in Medieval Assam, in a National Seminar on Approaches to Sankaradeva: Text, Performance, Representation and History, organized by the Centre for Assamese Studies, Tezpur University, 5–6 August, 2015.

K Kikhi attended and presented a paper, Development and Role of the State in Northeast India: A Critical Overview, in an International Seminar on Governance, Development and the State in Contemporary Times, organized by Department of Sociology, Tezpur University, 9-12 March, 2016.

K Kikhi attended and presented a paper, The Question of Naga Identity and Homeland in the Neoliberal Era, in an International Seminar on Migration, Heimat and Homelands, organised by University of Hyderabad in collaboration with Goethe Zentrum (Germany), at University of Hyderabad, 11-12 February, 2016.

MA Kalam attended and presented a paper, Facets of Globalisation and Inequality in India: Caste, Class and Poverty, at an India-Canada Comparison Symposium, Resisting Inequality/Enabling Inclusion, York University, Toronto, Canada, 8-10 June, 2015.

Nirmali Goswami attended a one-day workshop, Working with Modernity and Regional Modernities, organized by Department of English and Foreign Languages, Tezpur University, 18 March, 2016.

Nirmali Goswami attended a workshop, Memory Studies, Sources and Historical Analysis, organised by Department of Sociology, Tezpur University, Tezpur, 12-18 October, 2015.

Nirmali Goswami attended and presented a paper, Discursive Construction of School Hindi, in an International Seminar on Governance, Development and the State in Contemporary Times, organized by Department of Sociology, Tezpur University, 9-12 March, 2016.

Nirmali Goswami attended and presented a paper, Frameworks and debates in Public vs Private Education: A Case study from Assam, in an International Conference of Comparative Education Society of India, organised by Azim Premji University, Bengaluru, 14-16 December, 2015

Nirmali Goswami attended Refresher Course, Human Right and Democracy, organised by the Human Resources Development Centre, Jamia Millia Islamia, Delhi, 30 July – 20 August, 2015.

R Deka attended and presented a paper, Imagination and Scientific Research, in a National Workshop on Research Methodology, organised by Tezpur Medical College, Tezpur, 27 April, 2015.

S Roy acted as a Resource Person and Chaired a session in the 2nd Winter School on Research Methodology, TISS, Guwahati, 4 January, 2016.

S Roy acted as a Resource Person in the 1st Winter School on Research Methodology, TISS, Guwahati, December 17, 2015.

S Roy acted as a Resource Person in Workshop on Research Methodology in Social Sciences organized by Equal Opportunity Cell and Department of Sociology, Tezpur University, Tezpur, September 21-27, 2015.

S Roy attended and presented a paper, Population, Governance and Science: The Making of Genomics in Contemporary India, in an International Seminar on Governance, Development and the State in Contemporary Times, organized by Department of Sociology, Tezpur University, 9-12 March, 2016.

S Roy attended the Orientation Program, in a Workshop on Research Methodology in Social Sciences organised by the Department of Sociology, Tezpur University and Equal Opportunity Cell, Tezpur University, 21-27 September, 2015.

S Roy participated in a one-day workshop, Working with Modernity and Regional Modernities, organized by Department of English and Foreign Languages, Tezpur University, 18 March, 2016

S Roy participated in a Workshop on Memory Studies, Sources and Historical Analysis, organized by Department of Sociology, Tezpur University, Tezpur, 12-18 October, 2015.

S Roy participated in an Induction cum Orientation Programme on Professional Qualities in Education, Tezpur University, Tezpur, 20-21 April, 2015.

Sarmistha Das attended a workshop, Memory Studies, Sources and Historical Analysis, 12 - 14 October, 2015

Sarmistha Das attended and presented a paper, Commanding the Commons: A Study of a Village in Central Assam, in an



International Seminar on Governance, Development and the State in Contemporary Times, organized by Department of Sociology, Tezpur University, 9-12 March, 2016.

Sumesh S S attended a National Seminar on Technical Terminology in Humanities and Social Sciences: Preperation Usage and Problems,organised by Department of Hindi, Tezpur University in association with Commission for Scientific and Technical Terminology, MHRD, Govt. of India. 29-30 August, 2015.

Sumesh S S attended a Workshop on Memory Studies, Sources and Historical Analysis, organized by Department of Sociology, Tezpur University, Tezpur, 12-18 October, 2015.

Sumesh S S attended and presented a paper, Development for Whom? The Politics of Ethnic Identity of Rabha Tribe in Assam, in an International Seminar on Ethnicity and Development in South Asia: Issues and Challenges,organised by IGNOU, New Delhi, 21-22 January, 2016.

Sumesh S S attended and presented a paper, Kerala Modernity: Contested Spaces, in a Workshop on Working with Modernity and Regional Modernities,organised by Department of English and Foreign Languages, Tezpur University. 18 March, 2016.

Sumesh S S attended and presented a paper, Philosophical Issues in Social Science research, and, Designing Interviews in Social Science Research, in a Workshop on Research Methodology,organised by the Teaching Learning Centre, Tezpur University, 15-24 February, 2016.

Sumesh S S attended and presented a paper, Quantitative Methods in Evaluation research, organized by UNICEF in partnership with Planning & Development, Govt. of Assam & in collaboration with Tezpur University, 15-19 December, 2015.

Sumesh S S attended and presented a paper, State and Market in the ARTs of Making Bodies in India, in an International Seminar on Governance, Development and the State in Contemporary Times, Department of Sociology, Tezpur University, 9-12 March, 2016.

Sumesh S S participated in an Orientation Programme, organized by Centre for Inclusive Development, Tezpur University and UNICEF, Assam.

Sumesh S S participated in the Orientation Course on Youth Parliament, organised by the Ministry of Parliamentary Affairs, Government of India, New Delhi. January, 4-5, 2016

TALKS BY THE FACULTY ABROAD AND IN INDIA

A S Shimreiwu acted as a Resource Person in a Workshop on Research Methodology in Social Sciences organized by Equal Opportunity Cell and Department of Sociology, Tezpur University, Tezpur, 21-27 September, 2015.

C K Sharma chaired a session, Alternative Perspectives on Democracy and Development, at an International Seminar on Governance, Development and the State in Contemporary Times, organized by the Department. of Sociology, Tezpur University in Collaboration with Maulana Azad Centre for Research on Northeast India and UNICEF, Guwahati. 9-12 March, 2016.

C K Sharma chaired the Panel Discussion, Peoples of India: Nationality and Citizenship Issues, on Sixty-five years of the Indian Constitution, Tezpur University, 26 November 2015.

K Kikhi delivered a talk, Emerging Research Areas in Northeast India, in a workshop on Research Methodology, organised by the Teaching Learning Centre, Tezpur University, 15-24 February, 2016.

K Kikhi delivered a talk, Participatory Mapping and Focus Group Discussion (FGD), in a workshop on Research Methodology in Social Sciences, organised by the Department of Sociology and Equal Opportunity Cell, Centre for Inclusive Development, Tezpur University, 21-26 September, 2015.

K Kikhi delivered a talk, Qualitative Methods of Data Collection (FGDs & Case Studies), at the Executive Programme on Evaluation Methods, organized by Tezpur University in partnership with UNICEF, Guwahati and Planning and Development Department, Government of Assam, 15-19 December, 2015.

K Kikhi delivered a talk, Quantitative and Qualitative Research, in a Workshop on Research Methodology, organised by the Department of Pharmacology in collaboration with the Department of Community Medicine and the Department of Forensic Science, Tezpur Medical College and Hospital, 27-28 April, 2015.

M AKalam delivered a Keynote address, Madrassas and English Education, in a UGC National Seminar on Importance of English Education in the Madrassas of Assam, HAA College, Dobokka, Assam, 10-11 April, 2015.



M A Kalam delivered a Public Lecture, Pluralism: Towards engagement with Diversity, at the Centre for Research and Education for Social Transformation (CREST), Calicut, January 6, 2016.

M A Kalam participated in a Panel Discussion, Peoples of India: Nationality and Citizenship Issues, on Sixty-five years of the Indian Constitution, Tezpur University, 26 November, 2015.

Nirmali Goswami acted as a Resource Person in a Workshop on Research Methodology in Social Sciences organized by Equal Opportunity Cell and Department of Sociology, Tezpur University, Tezpur, 21-27 September, 2015.

R Deka chaired a session in a National Seminar, Srimanta Sankardevaas an Innovator, organised by A.D. P. College, Nagaon, 21 August, 2015.

R Deka delivered talk, From Nationalism to Modernism in Assam, in the Annual Conference of Tezpur Sahitya Sora, 12 April, 2015.

R Deka delivered talk, Violation of Women and Child Rights in India, in the two day advanced training programme, organised by MSSV in collaboration with NHRC, New Delhi, 3 September, 2015.

S Roy acted as a Resource Person and Chaired a session in the 2nd Winter School on Research Methodology, TISS, Guwahati, 4 January, 2016.

S Roy acted as a Resource Person in the 1st Winter School on Research Methodology, TISS, Guwahati, December 17, 2015.

S Roy acted as a Resource Person in Workshop on Research Methodology in Social Sciences organized by Equal Opportunity Cell and Department of Sociology, Tezpur University, Tezpur, September 21-27, 2015.

Sumesh S S acted as a Resource Person in a Workshop on Research Methodology in Social Sciences, organized by Equal Opportunity Cell and Department of Sociology, Tezpur University, Tezpur, 21-27 September, 2015.



SEMINAR/WORKSHOP/SYMPOSIA/INVITED LECTURES ORGANISED BY THE DEPARTMENT

- International Seminar on Governance, Development and the State in Contemporary Times, 9-12 March 2016.
 Workshop on Executive Programme on Evaluation Methods at Tezpur University in partnership with UNICEF, Guwahati and Planning and Development Department, Government of Assam, 15-19 December, 2015.
 Workshop on Planning, Writing and Publication for Research Scholars, 28 October - 31 October, 2015.
 Workshop on Memory Studies, Sources and Historical Analysis, 12-18 October, 2015.
 ICSSR NERC Workshop on Research Methodology in Social Sciences, 21-26 September, 2015.

DISTINGUISHED VISITORS TO THE DEPARTMENT

- Dr. Abel Polese, Tallinn University, Estonia
 Prof. A C Bhagwati, Former Vice Chancellor, Rajiv Gandhi University, Arunachal Pradesh
 Prof. Bidyut Mohanty, Institute of Social Sciences and Visiting Professor, Orfalea Center, University of California, USA
 Dr. Bodhisattva Kar, University of Cape Town, South Africa
 Dr. Dhiraj Kumar Nite, Ambedkar University, Delhi
 Prof. Manoranjan Mohanty, Fellow, Council for Social Development, New Delhi and Former Professor of University of Delhi
 Prof. Prabhat Patnaik, Emeritus Professor, Jawaharlal Nehru University, Delhi
 Dr. Rabindra Ray, University of Delhi, Delhi

OTHER IMPORTANT ACTIVITIES OF THE DEPARTMENT/ACHIEVEMENTS OF THE FACULTY

The Department has received the UGC Special Assistance Programme to work on the following thrust areas:

- Migration and the Politics of Identity
- Sociology of Northeast India
- Tribal Studies/Studies on Health and Education

NUMBER OF STUDENTS WHO PASSED NET-JRF/GATE [2015-2016]

- JRF : 4
- NET : 10

THE FACULTY OF THE DEPARTMENT

Professors

C K Sharma, PhD (Delhi)

Specialization/Areas of Interest: Sociology of Development; Environmental Sociology; Social Movements; Identity Politics

E-mail: chandan@tezu.ernet.in

MA Kalam, PhD (Madras)

Professor of Eminence

Specialization/Areas of Interest: Migration, Identity Politics, Ethnicity, Environmental Society

E-mail: kalam@tezu.ernet.in

Associate Professors

R Deka, PhD (Dibrugarh)

Specialization/Areas of Interest: Sociological Theories, Sociology of Movement and Agrarian Sociology

E-mail: rdeka@tezu.ernet.in

K Kikhi, PhD (NEHU)

Head of the Department

Specialization/Areas of Interest: Research Methodology, Tribal studies and Sociology of North East India

E-mail: kedi@tezu.ernet.in



Assistant Professors

AK Das, PhD (Tezpur)

Specialization/Areas of Interest: Sociology of Development, Sociology of Governance, Research Methodology in Social Sciences

E-mail: amiyadas@tezu.ernet.in

Sumesh SS, PhD (Kerala)

Specialization/Areas of Interest: Social Theory, Social Stigma and Social Exclusion, Research Method

E-mail: sumesh@tezu.ernet.in

Nirmali Goswami, PhD (IIT Kanpur)

Specialization/Areas of Interest: Sociology of Education, Education Policy of India, Identity Politics, Multiculturalism

E-mail: nirmalig@tezu.ernet.in

Sarmistha Das, MPhil (JNU)

Specialization/Areas of Interest: Gender Studies and Sociology of North East India

E-mail: sarmistha@tezu.ernet.in

S Ray, PhD (Delhi)

Specialization/Areas of Interest: Sociology of Science, Sociology of India, Sociological Theory, Sociology of Literature

E-mail: sray@tezu.ernet.in

AS Shimreiwung, PhD (JNU)

Specialization/Areas of Interest: Sociology of Religion, Culture and Art, Tribal Studies, Orality and Colonial Photography

E-mail: shim@tezu.ernet.in

THE STAFF OF THE DEPARTMENT

Office Staff

Pranita S. Talukdar
Assistant

J Das
MTS





CENTRE FOR ASSAMESE STUDIES

THE CENTRE

The Centre for Assamese Studies of Tezpur University completed four years since its inception on 7 June 2011. The prime aim of the Centre is to undertake and foster intensive and innovative study and research in Assamese Language, Literature and Culture in their varied dimensions adopting a wide perspective and an all-encompassing worldview.

Academic Activities

At present the Centre is offering two Inter-disciplinary (CBCT) courses of 3 credits each: (a) Communicative Assamese and; (b) History of Assamese Literature. Apart from these courses, the Centre is offering two MIL courses (on Assamese) of 2 and 3 credits respectively for students on Integrated MA, BA, BEd programmes.

PUBLICATIONS

Conference proceedings

Dutta, J. Lakshminath Bezbaroar Natakot Swadeshprem aru Jatiya Cetana: Patabhumi aru Pratifalan (Patriotism and National Consciousness in the Plays of Lakshminath Bezbaroar: Background and Reflection). Seminar Proceeding in an edited volume titled Lakshminath Bezbaroa: Adhunik Asomiya Sahityar Agradut Aru Jatiyotabadar Sthapati 2015; Department of Assamese, Nowgong College, Assam.

Books and Book Chapters

Deka, S. 2015. Bhasa Carca 1889-1939. In Dev Goswami R. K. (ed). Asamiya Sahityar Buranji Guwahati: Anundoram Borooah Institute of Language, Art and Culture, Vol. V, Assam.

Deka, S. 2015. Banikanta Kakatir Bhasa Carca. Satsori, November, 2015.

Deka, S. 2015. Aipine Ki Aache?. The Munin Barkatak Award winning (2012) short story collection reprinted. Guwahati: Panchajanya.

Deka, S. 2015. A short story Prayojan' in Uruli. Bangalore: The Assamese Society.

Deka, S. 2015. A short story Kathiceleka. In Chaudhury, B., (ed). Anthology. National Book.

Dev Goswami, R K. 2015. Prabandha: 1973-2015. Guwahati: Lawyer's Book Stall.

Dev Goswami, R K. (Ed). 2015. Asamiya Sahityar Buranji, Vol V, Guwahati: ABILAC.

Dutta, J. 2016. Women in Men's Writing: The Ethnographic Fiction of Lummer Dai and Yeshe Dorjee Thongchi. In Nath, D. P. (ed). Women's Narrative from North East India: Writing Lives from the Margins. Guwahati: Purbanchal Prakash.

Dutta, J. 2015. Eta Naribadi Sapon (A Feminist Story). Satsori, November, 2015.

Dutta, J. 2015. Asomiya Sahityat Anubad: Eti Bihangam Abalokan (Translation in Assamese Literature: A Bird's Eye View). In Jana, J. (ed). Adhunik Asom: Eti Abhas, Nagaon: Principal, Nowgong Girls' College.

Dutta, J. 2015. A Chronology of the Life of Padmashri Chandraprabha Saikiani (Translation). In Goswami, M. (ed). Chandraprabha Saikiani: A Bilingual collection of essays on Assam's First Women's Right Crusader. Guwahati: Olympia Prakashan.

SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIUM ATTENDED

International and National

S Deka attended and presented a paper, Sankaradeva's Language : Folk-Classical Continuum, in the national seminar, Approaches to Sankaradeva: Text, Performance, representation and History, organised by the Centre, 5-6 August, 2015.

S Deka attended and presented a paper, The Assamese used in Facebook, in a national seminar, Globalisation and Its Impact on Regional Languages organized by Department of Languages, Sankardev College, Shillong, 9-10 November, 2015.



S Deka attended and presented a paper, Sankaradeva and The Assamese Vernacular, in the international seminar, Bhagti Movement in India with special reference to Sankaradeva organized by Srimanta Sankaradeva Kalakshetra Society, Guwahati, Assam, 2-8 January, 2016

Juri Dutta attended a workshop, Gendered Teaching: Pedagogical Practices organized by Centre for Women Studies, Tezpur University, 16 March, 2015.

Juri Dutta attended and presented a paper, Re (visiting) the Past: Reading Narratives of Women, in a national seminar, Re-interpretation of the Past: The Discourse of Cultural Identity in South Asia organized by the Department of English, NEHU, Shillong, 17 – 18 March, 2016.

Juri Dutta attended and presented a paper, Theorizing 'Ethnicity', Playing 'Ethnic' and Writing 'Ethnicity': Reading Multiple Meanings of the term 'Ethnicity' in the Light of a few Personal Anecdotes, in an international seminar, Orality: The Quest for Meaning organized by the Department of English, Bodoland University, Kokrajhar, 26 - 27 May, 2016.

TALKS BY THE FACULTY ABROAD AND IN INDIA

R K Dev Goswami delivered a special lecture, Lakshminath Bezbaroa, at the Closing Ceremony of the 150th Birth Anniversary of Sahityarathi Lakshminath Bezbaroa, organized by Assam Association, Delhi, Srimanta Sankaradeva Bhavan, New Delhi, 28 February, 2015.

R K Dev Goswami delivered a keynote lecture, The Influence of Ancient Sanskrit Literature on the Cultures of Northeast India, address at national seminar organized by the Department of Sanskrit, Gauhati University, Phanidhar Datta Seminar Hall, Gauhati University, 24 March 2015.

R K Dev Goswami delivered a talk, The Poetry of Sankaradev, at the Asamiya Club, Tezpur, 26 November, 2015.

SEMINAR/WORKSHOP/SYMPOSIA/INVITED LECTURES ORGANISED BY THE DEPARTMENT

Drama workshop conducted by the well-known Assamese Actor/Director Baharul Islam, 4-6 June, 2015.

National Seminar, Approaches to Srimanta Sankaradeva: Text, Performance, Representation and History, 5 - 6 August, 2015.

Sixth Srimanta Sankaradeva Lecture on Tagore's 'Puja' songs in the background of 'Bhakti' by Professor Amiya Dev, 15 September, 2015.

Special Lecture on Sankaradeva in the Koch Kingdom by the Hon'ble Governor of Arunachal Pradesh Shri Jyoti Prasad Rajkhowa, 23 September, 2015

DISTINGUISHED VISITORS TO THE DEPARTMENT

Professor A Dev, Former Vice-Chancellor of Vidyasagar University.

Shri B Islam, well-known Assamese Actor/Director.

Professor B H Boruah, Department of Humanities and Social Sciences, Indian Institute of Technology, Delhi.

Shri J P Rajkhowa, Hon'ble Governor of Arunachal Pradesh.

Thomas Richard Blurton, Head, South Asian Section, Department of Asia, British Museum.

THE FACULTY & RESEARCH PERSONNEL OF THE CENTRE

Srimanta Sankaradeva Chair Professor

RK Dev Goswami

Head of the Centre

Specialization/Areas of Interest: Sankaradeva Studies, Nineteenth Century Assam, Intellectual History, European Poetry

E-mail: rdg2015@tezu.ernet.in

Research Associates

Juri Dutta, PhD (Rajiv Gandhi University)

Specialization/Areas of Interest: Regional Literatures of India, Translation Studies and Comparative Literature

E-mail: juri@tezu.ernet.in

SP Deka, MA (Gauhati)

Specialization/Areas of Interest: Social History of Assamese Language, Nineteenth century Assam and Creative Writing

E-mail: sanjibd@tezu.ernet.in

Academic Consultant

SC Bhattacharyya

Specialization: Palaeography, Manuscriptology, Historiography

E-mail: satish@tezu.ernet.in

THE STAFF OF THE CENTRE

Office Staff

Kiran Mahalia, BA (Gauhati)

Assistant

E-mail: kiran@tezu.ernet.in

H Das

MTS







CENTRE FOR ENDANGERED LANGUAGES

THE CENTRE

The Centre for Endangered Languages was awarded to the University by the Ministry of Human Resource Development in 2014 with an approved grant in-aid of Rs.6,00,00,000/- (Rupees six crores) under the 12th Plan. It started functioning as a separate body from January 2016. Till March 2016 the Centre appointed 11 staff in total. Among them are 2 research associates, 6 field assistants, 1 technical staff and 2 office staff. This is the Nodal Centre of the consortium of North-East India comprising Tezpur University, Rajiv Gandhi University, and Sikkim University. The Centre is attached to the Department of English and Foreign Languages as it offers linguistic Master's programmes: (i) Linguistics and Language Technology and (ii) Linguistics and Endangered Languages. The Centre also offers two CBCT courses.

Major facilities and equipment available

Facilities

- Setting up of a Phonetics and a Documentation Laboratory is under process.

Equipment

- Equipment required for field work, phonetic analysis, sound fragmentation and documentation are under the process of purchasing.

ONGOING RESEARCH ACTIVITIES

The research associates and field assistants of the Centre are planning to make field trips to various parts of the northeastern States in order to collect data on some of the endangered languages of Assam, Nagaland and Manipur. The field trips will be started in April 2016.

PUBLICATIONS

Conference proceedings

Veikho, S. L. Some Acoustic Properties of Tones in Mao Naga. In Proceedings of the International Conference on Workshop in Tone and Intonation 3, organized by IIT Guwahati, Guwahati, 6-8 January, 2016.

Veikho, S. L. Pronouns in Poula. In Proceedings of the 9th International Conference of the North East Indian Linguistics Society, organized by Tezpur University, Tezpur, 5-7 February, 2016.

SEMINAR/WORKSHOP/SYMPOSIA/INVITED LECTURES ORGANISED BY THE DEPARTMENT

NEILS IX (North East Indian Linguistics Society) Annual Conference, in collaboration with University of Oregon, La Trobe University, Gauhati University, 5-8 February, 2016.

Language Workshop, 18-20 March, 2016.

DISTINGUISHED VISITORS TO THE DEPARTMENT

Prof. Jyotiprakash Tamuli, Gauhati University

Prof. K. V. Subbarao, former faculty, Delhi University

Scott DeLancey, University of Oregon

Dr. Stephen Morey, La Trobe University

Dr. Vanlal Tuonga Bapui, President, Hmar Literature Society (Hmar Sahitya Sabha), Assam

OTHER IMPORTANT ACTIVITIES OF THE DEPARTMENT/ACHIEVEMENTS OF THE FACULTY

The Centre is right now setting up the infrastructure; once the set-up is complete it plans to take up outreach programmes for indigenous communities of North East India.



THE PERSONNEL OF THE CENTRE

Coordinator of the Centre

Madhumita Barbora, PhD (Tezpur)
 Head, Dept. of English and Foreign Languages
 E-mail: mmb@tezu.ernet.in

Members of the Centre from the Dept of English and Foreign Languages

Prof G K Borah, PhD (NTNU, Norway)
 Dr AK Nath, PhD (JNU)
 Bipasha Patgiri, MPhil (JNU)

Research Associates

Bobita Sarangthem, PhD (Manipur)
 E-Mail: bobsara@tezu.ernet.in
 Pushpa Renu Bhattacharyya, PhD (Gauhati)
 E-mail: pushparb@tezu.ernet.in

Field Assistants

Barshapriya Dutta, MA (Tezpur)
 E-mail: barp229@tezu.ernet.in
 Kethosenuo Seyie, MA (Hyderabad)

E-mail: ketho@tezu.ernet.in
 LV Sahiini, MPhil, (NEHU)
 E-mail: sahiilv@tezu.ernet.in
 NZ Helmi, MA (Tezpur)
 E-mail: nawaf@tezu.ernet.in
 R R Boro, MA (Tezpur)
 E-mail: raju246@tezu.ernet.in
 Trisha Borgohain, MA (Tezpur)
 E-mail: trisha7@tezu.ernet.in

Technical Staff

T Narzari, MSc (SHIATS)
 Technical Assistant
 E-mail: trilok@tezu.ernet.in

Office Staff

Dipali Sona Nayak, BCom (Gauhati)
 UDC
 E-mail: dipasn@tezu.ernet.in
 E Upadhyay
 MTS



CHANDRAPRABHA SAIKIANI CENTRE FOR WOMEN'S STUDIES

THE CENTRE

The CSCWS coordinates and promotes studies on women belonging to the diverse socio-cultural milieu of North East India. It works for assimilation of women from marginalised tribal/non-tribal and ethnic groups through outreach activities such as field study, advocacy, workshops. The Centre aims at creating a community of women who can significantly contribute towards gender sensitization and empowerment in this region. The Centre has been trying to promote women studies by offering a CBCS (Choice Based Credit Transfer Course) and a PG Diploma in Women's Studies.

Academic programmes and Student intake

| Academic Programme | Student Intake |
|-------------------------------|----------------|
| PG Diploma in Women's Studies | 7 |

Research projects, ongoing and new

| Project Title | Funding Agency | Amount (in INR) | Duration | Principal Investigator |
|---|----------------|-----------------|-----------|------------------------|
| Women And Trafficking: A study of the Border Areas of Sonitpur District | ICSSR | 15.00 lakh | 2015-2017 | Madhurima Goswami |

PUBLICATIONS

Books and Book Chapters

Goswami, Madhurima (Ed). 2015. Chandraprabha Saikiani. Guwahati: Olympia Publications
 Mahanta, Mousumi. 2015. Understanding Chandraprabha Saikiani: Ideology and its Ramification. In Goswami, Madhurima (ed). Chandraprabha Saikiani. Guwahati: Olympia Prakashan.
 Mahanta, Mousumi. 2016. Globalization, Women and Mental Health: A Case Study of Sonitpur District of Assam. In Nath, D. P. (ed). Women's Narratives from North East India: Lives in the Margins. Guwahati: Purbanchal Prakash.
 Mahanta, Mousumi. 2015. Women, Society and Mental Health: Narratives of Solitudes. New Delhi: Mittal Publications.

TALKS BY THE FACULTY ABROAD AND IN INDIA

Madhurima Goswami delivered a talk, Women in Journalism, at a national seminar, Dhansiri Trust Board, Golaghat, 12 April, 2015

Mousumi Mahanta delivered a talk, Women Activist, at a symposium, Dhansiri Trust Board, Golaghat, 12 April, 2015.

SEMINAR/WORKSHOP/SYMPOSIA/INVITED LECTURES ORGANISED BY THE CENTRE

Workshop, Domestic Violence and Legislation: A workshop to Raise Awareness, 22-23 September, 2015.

Workshop, Status of Women Studies in North East India, in collaboration with Omeo Kumar Das Institute of Social Change and Development Guwahati, 26-27 November, 2015.

DISTINGUISHED VISITORS TO THE CENTRE

Prof Bidyut Mohanty, Head, Women's studies, ISS, New Delhi

Prof Uma Chakravarti, Miranda House, Delhi University.

OTHER IMPORTANT ACTIVITIES OF THE CENTRE/ACHIEVEMENTS OF THE FACULTY

- Awareness camp on Women Trafficking with Gold on 30 January, 2016.
- Sensitization program in Bokagaon Mishing Village on 8 March, 2016.



THE FACULTY & RESEARCH PERSONNEL OF THE CENTRE

Associate Professor

Madhurima Goswami, PhD (Tezpur)

Head of the Centre

Specialization/Areas of Interest: Gender Studies, Critical Theory, Performance Studies and Sanskrit Literature

E-mail: mgs@tezu.ernet.in

Assistant Professor

Mousumi Mahanta, PhD (Tezpur)

Specialization/Areas of Interest: Gender and Mental Health, Women's Studies, Sociology of Health, Mental Illness.

E-mail: mousumi@tezu.ernet.in

THE STAFF OF THE CENTRE

A Baishya

Professional Assistant

E-mail: abhi@tezu.ernet.in

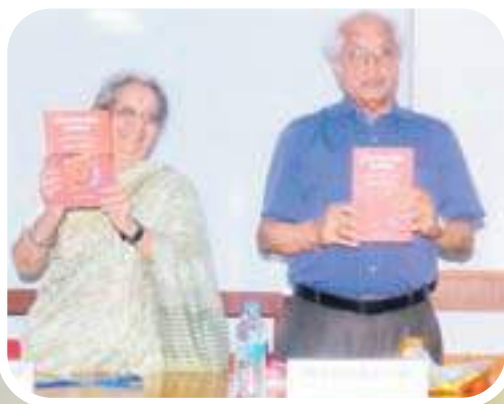
P Sarma

Data Entry Operator

E-mail: pranjal@tezu.ernet.in

Malati Boro

MTS



TEACHING LEARNING CENTRE

The Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT), in accordance with the National Policy on Education (NPE) 1986, focused on the need to ensure quality education and continuous knowledge up-gradation, in-service training, including capacity building and motivation of teachers, in order to meet the challenges arising from exponential growth of new knowledge in the twenty-first century. Among the initiatives of the PMMMNMTT was the setting up of Teaching Learning Centres (TLC) in the Central Universities of the country. The Teaching Learning Centre (TLC) at Tezpur University became functional in November 2015. It was initially run by the Head and faculty members of the Department of Education, Tezpur University.

Among the objectives of the TLC are:

- Organizing Professional Development Programmes
- Organizing Orientation Programs/ Refresher Courses
- Holding Workshops on various themes of Teaching and Learning
- Initiating Research Programmes
- Publishing Handbooks, Proceeding of seminars and Journals on Teaching Learning
- Providing Resource Support

The target groups of TLC, Tezpur University are College and University Level Teachers and Researchers and students (whole of Assam except Assam University's jurisdiction, Arunachal Pradesh, Nagaland, Meghalaya, Mizoram, Manipur and Tripura).

In its first phase the Centre organized the following programmes:

| Programme | No. of Participants | Duration (days) | Dates |
|---|---------------------|-----------------|---------------------|
| Workshop on Instructional Skills | 05 | 03 | January 28-30, 2016 |
| Research Methodology for Researchers and Scholars | 100 | 10 | January 15-24, 2016 |
| National Seminar on Teaching Learning Strategies | 200 | 03 | March 14-16, 2016 |

THE PERSONNEL OF THE CENTRE

Director

P K Das, PhD (Gauhati)

Professor, Department of English and Foreign Languages

E-mail: prsntdas@tezu.ernet.in





SCHOOL OF MANAGEMENT SCIENCES



- ★ ... Dean, School of Management Sciences
- ★ ... Dept. of Business Administration
- ★ ... Dept. of Commerce
- ★ ... Centre for Disaster Management
- ★ ... IPR Cell





School of Management Sciences

The School of Management Sciences comprise Department of Business Administration, Department of Commerce, Centre for Disaster Management and Intellectual Property Rights cell.

As we take pride in the fifth position secured by Tezpur University in the NIRF 2016, the School of Management Sciences takes equal pride in securing the 27th ranking in Management category. The 2015 Business Today rankings of best B-Schools feature only two institutions from North East India: Department of Business Administration, Tezpur University and IIM Shillong. The department has successfully completed UGC-SAP DRS1. Currently, there are two ongoing projects and we have had 25 publications during the year. The department had the privilege of several international visitors. A major development of the department was the decision to upgrade the existing PG Diploma in Tourism Management to Masters in Tourism and Travel Management.

Department of Commerce is the latest addition to the school. We are offering Integrated MCom and we have tried to give the students a competitive edge by aligning the program to professional courses like CA, CS and CMA.

The Centre for Disaster Management offers two CBCS courses, one add-on course and two modules for Post Graduate Diploma in Environmental Management under distance education programme of the University. It organized integrated mock drill on Earthquake Response and Fire Fighting at Tezpur University campus in association with DDMA, Sonitpur on 27 November, 2015, which witnessed a huge audience.

The IPR Cell is one of the prized cells of the university helping researchers to file for patent and also helping the society to obtain GI for local products. It also offers three CBCS courses. Four patents were filed during the year and one software copyright granted.

The School of Management Sciences, began with one department in January 1995 and has come a long way, consistently maintaining its student quality and thus ensuring suitable placement for its students. Employability of our students has always been our concern and the faculty members have focused on skill development along with imparting theoretical and practical knowledge. Activities and events are aimed at holistic development of our students and we hope that they will become contributing citizens of the nation.

Dean, School of Management Sciences

Professor Chandana Goswami [MBA (GU), PhD (GU), FDP (IIMA), British Chevening Scholar]

Email: cg1@tezu.ernet.in

Staff of the Office of the Dean

Brindabon Borah, BCom, COPA from ITI

Email: brind@tezu.ernet.in





DEPARTMENT OF BUSINESS ADMINISTRATION

2015-16

THE DEPARTMENT

The Department of Business Administration was opened in January 1995. The flagship programme of the Department is its 2-year Master's in Business Administration. The other programmes are Post-Graduate Diploma in Tourism Management, which will be upgraded to a Master's in Tourism and Travel Management from the session 2016-17; and a PhD programme. The specialized areas include Human Resource Management, Financial Management, Marketing Management, Operations Management, and Systems.

The Faculty of the Department are actively engaged in research and other academic activities, availing of overseas fellowships, and participating in national and international seminars and conferences. The Department is awarded special assistance under UGC-SAP DRS-1. The Department has also been regularly organizing seminars, conferences, symposiums, and refresher courses. It has also been conducting MDPs/FDPs for the corporate executives and academics. The Department is rated A3 by AIMA in 2012. The students of the Department have been bagging various prizes by participating in extra-curricular activities organized in and outside the University. The Department has also appraised an A category and included among the Top 5 Business Schools in East India by The 7th Chronicle B- School Survey-2016, and 27th in the NIRF ranking 2016 under the Management Category.

Academic programmes and Student intake

| Academic Programme | Student Intake |
|---|---|
| MBA (Full-time) | 50 |
| Post-Graduate Diploma in Tourism Management (PGDTM) | 23 |
| PhD | Intake variable, 01 in the Academic year 2015-16 |

Major facilities and equipment available

The Department has one air-conditioned Boardroom which facilitates for case discussions. Classrooms have audio-visual facilities such as LCD projectors.

The Department has a small library-cum-reading room, a fully air conditioned seminar hall and a training hall. The Office is equipped with a modern office automation system.

MAJOR RESEARCH FINDINGS/RESEARCH AND DEVELOPMENT ACTIVITIES

| Principal Investigator | Salient Research Findings |
|--|---|
| D Das (Coordinator) A Bhuyan (Co-coordinator) A Roy (Deputy Coordinator) | UGC (SAP) DRS – I (2011-2016) has been concluded during the current year. |
| | The project on Micro -Finance and Livelihood under this UGC (SAP) reports that the role of MFIs is significantly positive in augmenting socio-economic structure of a society and also addressed the issues of Status of Women, Socio-cultural Institutions, Poverty Status, Dwelling Pattern, Energy Sourcing, Level of Education, Primary Occupation, Health Status, Financial Status, Household Income and Consumption, Access to Government Services, Non-farm Enterprises, Food Security, Livestock etc. |
| | A 4 credit Course called 'Livelihood and Micro finance' for the Ph.D students was introduced and conducted several seminars and workshops for facilitating discussions among researchers and two edited volumes were published by Mittal Publications viz., (1) Financial Inclusion and Inclusive Development; and (2) Development Strategies for North East India. |

**Research projects, ongoing and new**

| Project Titles | Funding Agency | Amount (in INR) | Duration | Principal Investigator |
|--|----------------|-----------------|-----------|------------------------|
| Entrepreneurship development Incentives | AICTE | 5.90 lakh | 2013-2016 | S S Sarkar |
| Social Media as an Influencer Among Foreign Tourist Visiting India | IITTM | 1.00lakh | 2015-2016 | C Goswami |

PUBLICATIONS**In International and National Journals**

Ahmed, R. and Sarkar, S. S. Constraints of MGNREGA as transformative Social Protection Policy: An Empirical Study in Assam. *International Journal of Research in Commerce, Economics and Management*, 5(7), 2015

Baruah, P. and Das, M. B. A study of Knowledge, Skill and Attitude of ASHA workers in Facilitating Health Care Services in Assam, *Journal of Research, Extension and Development*, 4(4), 2015

Baruah, P. and Baruah, R. R. Growth Development of Telecom Sector: A Comprehensive Study of Assam Telecom Circle, *International Journal of Commerce and Management Studies*, 6 (1), 2015

Baruah, P. and Baruah, R. R. A Comprehensive Study on Performance of Public and Private Telecommunication Sector with Reference to Wireless Services in Assam Circle, *International Journal of Social Sciences and Management*, 2(3), 2015

Baruah, P. and Barthakur, B. J. Relationship Between Organisational Strategy and Orientation: A Study on Select Non-Governmental Organisations of Assam, *The Journal of Indian Management and Strategy*, 20(1), 2015

Baruah, P. and Baruah, R. Working Group Characteristic of Teachers and Its Relation with Organisational Effectiveness in Education Sector, *International Journal of Applied Management Research*, 2(2), 2015

Chutia, L. J. and Sarma, M. K. Commercialisation of Traditional Crafts of South and South East Asia: A Conceptual Model Based on Review of Literature, *IIM Kazhikode Society and Management Review*, 5(2), 2016

Chutia, L. J. and Sarma, M. K. Commercial endeavour in the island of Majuli in Assam: Traditional mishing textiles in transition. *Chitrolekha*, 5(2), 2015

Chutia, L. J. and Sarma, M. K. Crafts and cultural tourism in Assam: A study in Sivasagar. *Quest*, 8(2), 2015

Das, D. and Dutta, P. Determinants of Operating Expense of Microfinance Institutions: A study on Select MFIs in Assam, *The Microfinance Review*, 7(2), 2015

Das, D. and Dutta, P. Cost of Microfinance Borrowing: An Empirical Study on Clients Perspectives, *The Microfinance Review*, 7(1), 2015

Das, D., Tiwari, R. and Debnath, J. Non-core Assets and Disclosure Requirements, *The IUP Journal of Accounting Research and Audit Practices*, 14(3), 2015

Das, R. A Brief Study on increasing Food Productivity in Assam and Neighbouring States, *International Research Journal of Interdisciplinary Studies*, 2(2), 2016

Goswami, C. Perception of SMEs of Assam towards Institutional Credit, *International Journal of Entrepreneurship and Development Studies*, 3(3), 2016

Kumar, P. and Sarkar, S. S. Goods and Service Tax India: Problems and Prospects, *Asian Journal of Management Research*, 6(3), 2015.

Roy, A. A Model of Security Selection and Portfolio Building through Z-scores, *Global Business Review*, 17(2), 2016



- Roy, A. Do Microfinance Loans have any Effect on the Health, Nutrition and Schooling of Children of the Clients of MFIs?, *International Journal of Multi disciplinary Research Centre*, 2(8), 2016
- Roy, A. Impact of Microfinance on Business Level Capital of the Clients of MFIs: A Case Study with Reference to Sonitpur District of Assam, *International Journal of Multi disciplinary Research Centre*, 1(5), 2015
- Sarkar, S. S. Technological Innovations in the Banking Sector: A Trend Analysis, *Journal of Commerce and Management Thought*, 7(1), 2016
- Sarkar, S. S. Indian Union Budget 2016-17: In the Path of Growth, *Global Journal for Research Analysis*, 5(3), 2016
- Sarkar, S. S. Reserve Bank of India and Monetary Policy, *The Management Accountant*, 50(12), 2015
- Sarma, M. K. and Baruah, U. K. Tourists shopping behaviour and trip typology: A study in an emerging destination of India, *International Journal of Tourism and Travel*, 8(2), 2015
- Sarma, T. R. A Multi-Dimensional Characterization Framework for Inventory Management, *Journal of Advances in Business Management*, 1(4), 2015
- Singh, S. and Sarma, M. K. Word of Mouth Indulgence, Incident and Influence: A Review, *Assam University Journal of Management*, 1, 2015
- Thingo, C. and Sarkar, S. S. Nagaland: A Stride towards Development through MMEs, *The IUP Journal of Entrepreneurship Development*, 12(4), 2015

Conference proceedings

- Baruah, P. and Baruah, R. R. Rise with East: Vistas of Indian Cooperation with South East Asia Commerce, Culture, Capacity and Connectivity, organized by USTM, Meghalaya in collaboration with Green School, Bali-Denpasar, Indonesia, 2016.
- Baruah, P. and Baruah, R. R. A comparative study of Teamwork and Team Effectiveness of Public and Private Telecommunication sectors with reference to wireless service in Assam Circle, In Proceedings of the National Seminar on Emerging Issues in Business, Management and Economics, organized by Department of Business Administration, USTM, Meghalaya, 2015
- Das, R. India's Look-East Policy: Achievements and Shortcomings, In Proceedings of the International Seminar on Look East Policy: Perspectives from The South East Asian Architecture, organised by NEHU, Tura Campus, 2015.
- Das, R. Food Security Scenario, in North Eastern Region: Problems and Suggestions, In Proceedings of the National Seminar on Emerging Issues in Business Management and Economics, organised by USTM, Meghalaya, 2015.
- Das, R. Prospects of Tourism, In Proceedings of the College level seminar on Avenues on Employment Generation, Goreswar College, 2015.
- Das, R. Rural Sustainable Livelihood- Issues, Challenges and Policy perspectives: Success Stories of Formal and Informal Agencies enhancing Skill, Development and Livelihood. In Proceedings of the UGC- SAP National Seminar on Achieving Sustainable Rural Livelihood through Financial Interventions and Skilling India with Special Reference to the North Eastern Region, organized by the Department of Business Administration, Tezpur University, 2016.
- Dutta, M. Micro Enterprises of Gandmou Endogenous Project, Sualkuchi, In Proceedings of the National Seminar on Promotion of Rural Microenterprises: Prospects and Challenges, organised by National Institute of Rural Development and Panchayati Raj, NERC, Guwahati, 2015.
- Goswami, C. and Begum, R. Micro-Credit and Informal Entrepreneurship : A Linkage Towards Achieving Sustainable Livelihood. In proceedings of the National Seminar on Achieving Sustainable Rural Livelihood through Financial Interventions and Skilling India with Special Reference to North East Region, organised by Department of Business Administration, Tezpur University, (pp. 243-253), Tezpur: Dept of Business Administration, 2016.

**Books and Book Chapters**

- Barpujary, H. 2015. Knowledge Management System Architecture for Academic Libraries. In Saikia, M., Eqbal, M. and Pratap D. (eds). *Library Management New Trends and Challenges*. Delhi: Academic Publications.
- Barpujary, H. 2015. Promotion of Handicrafts through Website. In Goswami, C., Bhuyan A. and Das N. (eds). *Tourism and Handicrafts: A Sustainable Approach*. New Delhi: Excel India Publishers.
- Baruah, P. and Baruah, R. R. 2015. Exploring Student's Perception about Teacher Student Relationship and their academic achievements-A Study on Postgraduate Programmes in North East Region of India. In Sinha S. (ed). *Health and Development in North East India*. New Delhi: Mittal Publications.
- Baruah, P. and Baruah, R. R. 2015. Exploring Team Characteristics: A study of telecom sector. In Ahmed, J. U. and Bhattacharjee, A. (eds). *A Compendium on Contemporary Issues in Management Thoughts and Practices*, NCBA: Kolkata.
- Baruah, P. and Baruah, R. R. 2016. Teamwork and Connectivity: A Study of North Eastern Region of India in the Light of Act East Policy. In Choudhury, A. (ed). *Turn Mirrors into Windows, Rhetoric of Act East Policy and Beyond*. USTM (India) and Green School (Indonesia).
- Chutia, L. J. and Sarma, M. K. 2015. Vaishavite mask and mishing textiles in Majuli: challenges for touristic marketing. In Goswami, C., Bhuyan, A. and Das, N. (eds). *Tourism and Handicrafts: A Sustainable Approach*. New Delhi: Excel India Publishers.
- Das, D. (2015). Informal Agencies and Rural Financial Inclusion in villages of Assam. In Sangwan, S.S. and Gagan Deep, (eds). *Panchayats' Role in MGNREGA and Financial Inclusion*. Chandigarh : CRRID.
- Das, D. 2016. Financial Inclusion and Inclusive Growth: The Interface. In Das, D. and Bhuyan, A. (eds). *Financial Inclusion and Inclusive Development*. New Delhi: Mittal Publications.
- Das, D. and Bhuyan, A. 2016. *Development Strategies for North East India*, New Delhi: Mittal Publishers.
- Das, D. and Bhuyan, A. 2016. *Financial Inclusion and Inclusive Development*, New Delhi: Mittal Publishers.
- Das, D. and Dutta, H. 2016. Experimental; Cross Boarder Trade in Agricultural and allied Commodities in NER: Prospects and Challenges. In Das, D. and Bhuyan, A. (eds). *Development Strategies for North East India*. New Delhi: Mittal Publications.
- Das, D. and Tiwari, R. K. 2016. Extent and Veracity of Financial Inclusion in Sonitpur and Kamrup District. In Das, D. and Bhuyan, A. (eds). *Financial Inclusion and Inclusive Development*. New Delhi: Mittal Publications.
- Das, D. and Tiwari, R.K. 2016. Reach and Uses of Financial Services among Rural Masses: A Study in Sonitpur of Assam. In Verma, S. and Singh, K.(eds). *Slow Down, Banks and Role of Apex Banking Institutions in the Market Economy of India: The Way Forward*. Chandigarh : CRRID.
- Goswami, C. and Bharali, P. 2015. Product Adaptation: Popularising Assam Silk as a Tourism Product. In Goswami, C., Bhuyan, A. and Das, N. (eds). *Tourism and Handicrafts: A Sustainable Approach*. New Delhi: Excel India Publishers.
- Goswami, C. and Borkotoky, R. 2015. Enhancing Women Empowerment through Involvement in Handicraft Business in Tourism Sector: A Study of Kaziranga National Park, In Goswami, C., Bhuyan, A. and Das, N. (eds). *Tourism and Handicrafts: A Sustainable Approach*. New Delhi: Excel India Publishers.
- Goswami, C. and Begum, R. 2016. Examining the Feasibility of Financial Inclusion of Street Vendor, In Das, D. and Bhuyan, A. (eds). *Financial Inclusion and Inclusive Development*. New Delhi: Mittal Publications.
- Goswami, C. and Gurung, D. J. 2015. Developing Linkages between Wildlife Tourism and handicraft for Local Economic Development: A Case Study of Kaziranga National Park, In Goswami, C., Bhuyan, A. and Das, N. (eds). *Tourism and Handicrafts: A Sustainable Approach*. New Delhi: Excel India Publishers.
- Goswami, C., Bhuyan, A. and Das, N (Eds). 2015. *Tourism and Handicrafts: A Sustainable Approach*, New Delhi: Excel India Publishers.



Sarma, M. K. 2015. Crafts, souvenir and authenticity: An introductory discourse, In Goswami, C., Bhuyan, A. and Das, N. (eds). *Tourism and Handicrafts: A Sustainable Approach*. New Delhi: Excel India Publishers.

Sarma, T. R. 2016. Academic Tourism – Destination North East India. In Choudhury, A. (ed). *Turn Mirrors into Windows – Rhetoric of Act East Policy and Beyond*. USTM (India) and Green School (Indonesia).

Sarma, T. R. and Aienla. 2015. Community's Perception on the Socio-Economic and Environmental Impacts of Tourism in the Tourist Villages of Nagaland, In Goswami, C., Bhuyan, A. and Das, N. (eds). *Tourism and Handicrafts: A Sustainable Approach*. New Delhi: Excel India Publishers.

Other publications

Popular Articles

Campus and corporate: maximizing gain through collaboration, Special Volume, Sampark 2016, Department of Business Administration, Tezpur University.

SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED

International and National

Runumi Das attended International Seminar on Governance, Development and the State in Contemporary Times, at Department of Sociology, Tezpur University, 9-12 March, 2016.

Runumi Das attended Special winter School on Research Methodology-II, at Gauhati University, 29 January -18 February, 2016.

T R Sarma, Invited as one of the four members for a Panel Discussion at USTM, Meghalaya, for the session on Culture and Connectivity, chaired by Ambassador A Sajjanhar, Former Ambassador of India to Kazakhstan, Sweden and Latvia, at the International Conference with the theme, Rise with East – Vistas of Indian Cooperation with South East Asian Commerce, Culture, Capacity and Connectivity, February, 2016.

Papori Baruah acted as a Panelist in the panel discussion on Commerce and connectivity at International Conference on "Rise with East: Vistas of Indian Cooperation with South East Asian Commerce, Culture, Capacity and Connectivity" organized by University of Science and Technology, Meghalaya in collaboration with Green School, Bali- Denpasar, Indonesia, 26-27 February, 2016

SEMINAR/WORKSHOP/SYMPOSIA/INVITED LECTURES ORGANISED BY THE DEPARTMENT

Faculty Development Programme on Case Methodology of Teaching in collaboration with AIMS, 22-23 January, 2016

30-day training programme in collaboration with Indian Institute of Tourism and Travel Management (IITTM), Gwalior on Tourist Facilitator, 1 February–11 March, 2016.

UGC-SAP DRS1 National Seminar, Achieving Sustainable Rural Livelihood through Financial Interventions and Skilling India with Special Reference to the North Eastern Region, 4-5 March, 2016.

A certification program for Six Sigma Green Belt for North-Eastern States in collaboration with Indian Statistical Institute, Bangalore, 18-21 March, 2016.

Prof. M. C. Bora Memorial Oration, The Emerging Issues before Management, by Prof. Sudipti Banerjia, Calcutta University, 16 November, 2015.

i-connect programme with Godrej Consumer Products Limited, 9 November, 2015.

i-connect programme with NTPC, 28 September, 2015.

i-connect programme with Vodafone, 2015.

**DISTINGUISHED VISITORS TO THE DEPARTMENT**

Anirban Majumdar, Regional Head, ICICI Bank
 Apurba Mishra, Zonal In-Charge, GCMMF
 Anabil Goswami, Director, Arohan Foods Pvt. Ltd., Guwahati;
 Amiya Kumar Sharma, Executive Director, RGVN, Guwahati
 Amlan Bora, Avans School of International Studies
 Alfred P Cahuzak, Avans School of International Studies
 Appel Mahmud, Faculty of Business Studies, Begum Rokeya University, Bangladesh
 Mr CS Ghosh, Founder, MD and CEO of Bandhan Bank
 Mr D Sattaiah, Chief Operating Officer, BASIX Social Enterprise Group, Hyderabad
 Elangbam Nixon Singh, Professor, Department of Management, Mizoram University.
 Gautam Dutta from Indian Institute of Foreign Trade, New Delhi
 Hemanta Bayan, Deputy Vice President, HDFC Bank
 Jaimini Bhagwati, Ex-Ambassador, Belgium, Luxembourg, EU and UK
 Jayanta Bhattacharya, AGM (Operations), NTPC Ltd
 Kunal Savarkar, renowned quiz master
 Md. Motiur Rahman, Dean, Faculty of Business Studies, Begum Rokeya University, Bangladesh
 Md. Masud Rana, Faculty of Business Studies, Begum Rokeya University, Bangladesh
 Nasreen Habib, Executive Editor, Eclectic Northeast
 Partha Patowary, Director, Centre for Microfinance and Livelihood, Guwahati,
 Sanjeev Gupta, DGM, (Regional Head), SIDBI
 Sudhangshu Ranjan Banerjee, AGM, SBI
 Shambhu Chakraborty, Chief HR Manager, IOCL
 Sheikh Majedul Huq, Faculty of Business Studies, Begum Rokeya University, Bangladesh
 Sudipti Banerjia, Calcutta University
 Sujit Verkey, AGM (HR), NTPC Ltd
 V. K. Verma, ED (HR and A), Oil India Ltd.
 Vijay Mahajan, Social Entrepreneur, CEO, BASIX Social Enterprise Group

OTHER IMPORTANT ACTIVITIES OF THE DEPARTMENT/ACHIEVEMENTS OF THE FACULTY

Department organized the annual Industry Academia interaction, Sampark-the Interface, at Department of Business Administration, Tezpur University, Tezpur, Assam, 5-6 February, 2016. With Sampark, the Department in particular and Tezpur University in general aims to stand high on a pedestal where our illustrious legacy comes together with the corporate world to script a golden future. Mr. Sanjeev Gupta, DGM (Regional Head, SIDBI) was the Chief Guest while many other senior corporate executives attended the two day event.

NUMBER OF STUDENTS WHO PASSED NET-JRF/GATE [2015-2016]

UGC-NET: 05

| NOTABLE PLACEMENT | Number of Students placed |
|--------------------------|---------------------------|
| Oil India Limited | 1 |
| DHL | 2 |
| Dabur India | 1 |
| Vodafone | 11 |
| ICICI Bank | 10 |
| Colgate- Palmolive India | 2 |
| Mahindra Finance | 3 |
| Axis Bank | 2 |
| Pantaloons | 3 |
| Airtel | 4 |
| Dalmiya Cement | 2 |
| Amul | 3 |



THE FACULTY OF THE DEPARTMENT

Professors

Chandana Goswami, PhD(Gauhati) FDP (IIMA)

Specializations/Areas of interest: Financial Management, General Management

E-mail: cg1@tezu.ernet.in

M K Sarma, PhD (Tezpur)

Specializations/Areas of interest: Marketing, Tourism Management

E-mail: mrimoy@tezu.ernet.in

S S Sarkar, PhD (Tezpur)

Dean, School of Management Sciences

Specializations/Areas of interest: Financial Management, Accounting and Taxation

E-mail: subh@tezu.ernet.in

D Das, PhD (RGU), AIII (Mumbai)

Head of the Department

Specializations/Areas of interest: Financial Management

E-mail: ddas09@tezu.ernet.in

Papori Baruah, PhD (Tezpur)

Specialization/Areas of interest: Human Resource Management

E-mail: papori@tezu.ernet.in

CGoswami, PhD (Tezpur)

Specialization/Areas of interest: Marketing Management

E-mail: chand@tezu.ernet.in

Associate Professors

T RSarma, PhD (Tezpur)

Specialization/Areas of interest: System Management and Operation Management

E-mail: tridib@tezu.ernet.in

ABhuyan, PhD (Tezpur)

Specialization/Areas of interest: Managerial Economics, Entrepreneurship Development

E-mail: anjanb@tezu.ernet.in

ARoy, PhD (Tezpur)

Specialization/Areas of interest: Financial Management

E-mail: arup@tezu.ernet.in

Assistant Professors

Heera Barpujary, PhD (Tezpur)

Specialization/Areas of interest: System Management and Knowledge Management

E-mail: heera@tezu.ernet.in

Kakali Mahanta, PhD (Dibrugarh)

Specialization/Areas of interest: Marketing, Human Resource Management

E-mail: kakali@tezu.ernet.in

Runumi Das, PhD (Gauhati)

Specialization/Areas of interest: Marketing Management

E-mail: runumi@tezu.ernet.in





M Dutta, PhD (Gauhati),
Specialization/Areas of interest: Tourism
E-mail: mridul@tezu.ernet.in

Visiting Fellow

B P Rath, PhD
Specialization/Areas of interest: Human Resource

THE STAFF OF THE DEPARTMENT

Technical Staff

T J Borah, MPhil (NOU)
Senior Technical Assistant
E-mail: taruntu@tezu.ernet.in

K Roy, DETC (AEI)
Technical Assistant
E-mail: kushal@tezu.ernet.in

Office Staff

B Borah, BCom (Gauhati)
LDC
E-mail: brind@tezu.ernet.in

S Borah
MTS
E-mail: [surenb@tezu.ernet.in](mailto:suren@tezu.ernet.in)





DEPARTMENT OF COMMERCE

2015-16

THE DEPARTMENT

The Department of Commerce is the second department established under the School of Management Sciences. With a vision to emerge as a Centre of excellence by exploring new frontiers in knowledge, research and innovation in commerce education, it came into existence in the year 2014 with a 5-year Integrated MCom Programme. The curricula for the Integrated MCom Programme is aligned to professional courses like CA, CS and CMA. The courses are designed in a way to make the students capable of pursuing their career in manifold directions including teaching and research. The Department is receiving assistance in teaching from the faculty members of Department of Business Administration, Department of English & Foreign languages, and other University Department as and when necessary.

Academic programmes and Student intake

| Academic programmes | Student Intake |
|---------------------|----------------|
| Integrated MCom | 30 |

PUBLICATIONS

In International and National Journals

Das, D., Debnath, J., and Tiwari, R.K., Non-Core Assets and Disclosure Requirements, The IUP Journal of Accounting Research & Audit Practices, 14(3), 2015.

Conference proceedings

Tiwari, R.K. Make in India and Act East Policy: A relook at Look East. In Proceedings of the International Seminar on Look East Policy: Perspectives From The South East Asian Architecture, Department of Management, North-Eastern Hill University, Tura Campus, 26-27 June, 2015.

DISTINGUISHED VISITORS TO THE DEPARTMENT

Mr Biman Debnath, Chairman, NE Chapter, ICSI, Guwahati
 Dr Buddhadeb Ghosh, Indian Statistical Institute, Kolkata
 Mr Dimbeswar Kakati, General Manager, Assam Petro-chemicals Ltd., Namrup
 Prof S S Khanka, National Institute of Financial Management, Faridabad
 Mr Sudhir Sharma, Chairman, Master School of Management, Meerut
 Prof Sudipti Banerjea, University of Calcutta

OTHER IMPORTANT ACTIVITIES OF THE DEPARTMENT/ACHIEVEMENTS OF THE FACULTY

Students E-Magazine

The students of the Department successfully launched two issues of "Adwitya" - the matchless. The launch of its first ever issue was on the occasion of 69th Independence Day i.e. 15 August, 2015 and the second issue on 22 March, 2016.

Industrial Visits

The Department organizes Industrial visits for the students of Integrated MCom programme; students of the 2014 batch visited The Assam Co-operative Jute Mills Ltd., Silghat on 12 March, 2016 and 2015 batch visited Tocklai Tea Research Institute on 28 March, 2016.

**Student Exposure Programme**

The students of Integrated MCom (Batch 2014), of the department visited Master School of Management (MSM), Meerut and attended an exclusively designed exposure programme during 30-31 December, 2015

Career Awareness Programme

The Department in association with NE Chapter of Institute of Companies Secretaries of India (ICSI) organized a Career Awareness programme for the students of Integrated MCom on 16 March, 2016.

Excursion

The Department organized an excursion for the students from the Batch 2014. The students visited several tourist places in Delhi (Jama Masjid, Red Fort, India Gate, Akshardham etc.) and Amritsar (Golden Temple, Jallianwala Bagh, Wagha Border) during 29 December, 2015 to 5 January 2016.

THE FACULTY OF THE DEPARTMENT**Professor**

S S Sarkar, PhD (Tezpur)
Head (i/c) of the Department
Specialization/Areas of interest: Accounting and Taxation
E-mail: subh@tezu.ernet.in

Assistant Professors

Reshma Tiwari, PhD (Gauhati)
Specialization/Areas of interest: Accounting and Finance
E-mail: reshma@tezu.ernet.in
R Goswami, MCom (Gauhati)
Specialization/Areas of interest: Accounting and Finance
E-mail: rishabh@tezu.ernet.in

Visiting Faculty

Pushpa Renu Bhattacharyya, PhD (Gauhati)
Specialization/Areas of interest: Descriptive and Socio-linguistic
E-mail: pushparb@tezu.ernet.in
Shwetha Shetty, FCA (ICAI)
Specialization/Areas of interest: Accounting
S Dugar, FCA (ICAI)
Specialization/Areas of interest: Taxation
Mitali Tandon, MSc (DCRUST, Murthal)
Specialization/Areas of interest: Mathematics & Statistics

Office Staff

B Das, BA (Gauhati)
Upper Division Clerk
E-mail: bhrigu@tezu.ernet.in





CENTRE FOR DISASTER MANAGEMENT

THE CENTRE

The Centre for Disaster Management was established in 1997 under the Central Sector Scheme of NDM Division, Ministry of Agriculture and Cooperation, Government of India. The scheme has subsequently been transferred to the Ministry of Home Affairs, Government of India during 2002. At present the Centre is functioning under Tezpur University. The main objectives of the Centre are to:

- Organise and conduct training programmes, conferences, and workshops on disaster management
- Extend academic support to other organisations
- Conduct regular/optional courses and research work on Disaster Management

COURSES CONDUCTED

The Centre offered two CBCT courses, Disaster Management (DM 301) and Disaster Management (DM 101) to the students of PG programmes of Tezpur University.

Conducted an add-on course, Risk and Disaster Management in Healthcare (HIM 302) for the Diploma programme in Healthcare Informatics and Management under Department of Electronics and Communication Engineering.

PUBLICATIONS

Debnath, R. and Nath, D. Comprehensive Model for Health Risk Assessment with A case Study on Three Rural Communities of Cachar District, Assam, India, Journal of International Academic Research For Multidisciplinary, 4 (2), 2016.

SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED

Dipak Nath, attended ToT/Professional Development Programme on Post Disaster Needs Assessment Tools for India, NIDM, New Delhi, 14-18 September, 2015.

OTHER IMPORTANT ACTIVITIES OF THE DEPARTMENT/ACHIEVEMENTS OF THE FACULTY

The Centre organized integrated mock drill on Earthquake Response and Fire Fighting at Tezpur University campus in association with DDMA, Sonitpur, 27 November, 2015.

The Centre conducted a course on Disaster Management for the students of BN College of Agriculture, Biswanath Chariali, Assam during the Autumn Semester, 2015.

THE FACULTY OF THE CENTRE

Assistant Professor

D Nath, PhD (Gauhati)

Head of the Centre

Specialization/Areas of Interest: Nuclear Physics & Cosmic Radiation, Disaster Risk Assessment

E-mail: dipak@tezu.ernet.in

THE STAFF OF THE CENTRE

Office Staff

B Das, BA (Gauhati)

Upper Division Clerk

E-mail: bhrigu@tezu.ernet.in





TEZPUR UNIVERSITY INTELLECTUAL PROPERTY RIGHTS CELL

2015-16

THE CELL

Tezpur University Intellectual Property Rights Cell (TUIPR Cell) was created in 2009 with a vision to develop human resource in the management of Intellectual Property Rights. The Ministry of Human Resource Development (MHRD), Government of India awarded prestigious MHRD IPR Chair has been set up in 2010 to initiate and execute IPR capability development in the Northeast India through IP workshops and training programmes. The key objectives and achievements of the Cell are:

- to integrate IPR with the education process by means of academic programmes to expose the students to new branches of knowledge. The Cell has been successfully implementing Choice Based Credit Courses on IPR in UG, PG and PhD level since 2012.
- to ensure speedy and accurate identification and protection of innovations carried out in the University and enhances the scope of their commercialization.
- to offer assistance to grassroots innovators in Northeast India to realize the commercial benefits of their innovations.
- to act as a think tank on policy matters related to IPR in India with special emphasis on issues relevant to the Northeast India.
- to disseminate the knowledge of IPR in and around the State of Assam by means of awareness programmes/workshops etc. So far the Cell has organized around twenty workshops/trainings and outreach programmes in Assam and its nearby States. The Cell organises need based programmes for the faculty and researchers of Tezpur University.

Current Teaching Activities

Choice Based Credit Course in Intellectual Property Rights (IPRs)

- CBCT IPR (3 credit) in Under Graduate (Spring Semester)
- CBCT IPR (3 credit) in Post Graduate (Autumn Semester)
- CBCT IPR (4 credit) in PhD (both Spring and Autumn Semesters)

Major facilities and equipment available

The Cell has a good collection of books by Indian and foreign authors. These expensive and not very easily available books in the field of IPR are made available for the students through the Central Library of Tezpur University.

Well structured course materials used for class lectures are provided to the students both in soft and hard form.

Remote lecturing mode through National Knowledge Network using Video-Conferencing facility of the University. This facility exposes the students to the IP experts from different parts of the country.

Technical support to the invention/innovation created by faculty and researchers of the University including filing in IP offices.

Special technical support for grassroots innovators of nearby areas.

MAJOR RESEARCH FINDINGS/RESEARCH AND DEVELOPMENT ACTIVITIES

| Principal Investigator | Salient Research Findings |
|------------------------|--|
| P Ganguli | The project has been initiated to identify the key reasons for the low usage of the GI - <i>Muga Silk of Assam</i> . The project identified select areas in which "Sericulture to Production of MUGA Products" is active, to understand the dynamics of the MUGA Silk value chain. The ongoing project aims to realize the economic benefits through proper utilization of GI certificate and GI logo for <i>Muga Silk of Assam</i> . Currently, the project is exploring the reasons for the low number of Authorized users of this first GI from the state and finds means to enhance the registration of Authorized Users. Awareness camps are organized in different places of the state for this purpose. |

**Research project: Ongoing and new**

| Project Title | Funding Agency | Amount (in INR) | Duration | Principal Investigator |
|--------------------|----------------|-----------------|----------|------------------------|
| MUGA -GI (ongoing) | MHRD | 0.37lakh | 2 years | P Ganguli |

Popular Article

Goswami, S. Bouddhik Sampadar Adhikar, cover story in Purbachal, the Sunday special issue of Amar Asom. 24 April, 2016.

SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**International and National**

P Ganguli chaired a session on IPR and Competition Law at the 4th Annual IPR Conclave organised by "Legal Era" in Mumbai, 10-11 September, 2015.

P Ganguli invited as an expert to Workshop cum Training on Patent Search and Analysis. Dibrugarh University, 23 November, 2015.

P Ganguli conducted a training session on "Patents Search" in Dibrugarh University in collaboration with TIFAC, 23 November, 2015.

P Ganguli was invited by the Alexander von Humboldt Foundation, Germany to the Institute for Innovation and Competition in Munich to conduct his research on Interface of IPR and Competition Law from June to August 2015. During this period he also delivered lectures at Asia Roundtable in the Institute on Recent Trends in IPR Related Decisions by the Competition Commission of India and Indian Courts", 10 August, 2015.

P Ganguli chaired sessions, The turbulent Interface between IP and Competition law, and, Global Patent Information – Access, Analysis and Applications, at the 8th Global Intellectual Property Convention, Delhi, 7-8 January 2016

Juri Borbora Saikia and P Deb attended and presented a paper, Blending New Generation Technologies to Empower Teaching and Learning in IPRs, in the National Seminar on Innovative Pedagogy and Effective Teaching Learning, organized by Teaching Learning Centre, Department of Education, Tezpur University, 14-16 March, 2016.

Suchibrata Goswami and Juri Borbora Saikia attended a national workshop on Instructional Skill organized by Teaching Learning Centre, Dept of Education, Tezpur University, 28-30 January, 2016.

Suchibrata Goswami attended and presented a paper, Is What is Mine, Automatically yours?: Ethical Teaching-Learning with A Knowledge of Copyright, in the National Seminar on Innovative Pedagogy and Effective Teaching Learning, organized by Teaching Learning Centre, Department of Education, Tezpur University, 14-16 March, 2016.

TALKS BY THE FACULTY ABROAD AND IN INDIA

P Deb delivered a talk, Patent and Patenting system in a workshop on Innovation the way forward for India in 21st century: Problems and Challenges in IPR, at the University of Science and Technology, Meghalaya, 11 April, 2015.

P Deb delivered a talk, Creating an IPR Roadmap for the university.....the way ahead, in Facilitation of Innovation and Commercialisation by Intellectual Property Rights, at the North Eastern Hill University, 29 February, 2016.

P Ganguli delivered a talk, Embedding Intellectual Property Rights in Knowledge Creation, Innovation and Commercialisation in the Association of Indian Universities East Zone Vice Chancellors' Meet, at Dibrugarh University, Dibrugarh, 4 December, 2015.

P Ganguli delivered talk, Evolving Contours of International law at the at the National Conference, KIIT, Bhubaneswar, 15-17 January, 2016.

P Ganguli delivered lectures on IPR Management and Commercialization at the IPR training programme, Train the trainers, TIFAC, DRDO and ICAR in Delhi, 16 November, 2015.

Suchibrata Goswami delivered talk, Copyright and Issues in Academics in workshop on Innovation the way forward for India in 21st century: Problems and Challenges in IPR, University of Science and Technology, Meghalaya, 11 April, 2015.



Suchibrata Goswami delivered talk, How to Protect Your Creations, in the National IPR Workshop, Rajiv Gandhi University, Itanagar, 22 February, 2016.

INTERNATIONAL VISITS BY FACULTY MEMBERS

P Ganguli was invited as an expert by the Fraser Institute in Vancouver, Canada to the seminar on Consultation on IPR and Healthcare, 15-25 September, 2015.

P Ganguli was invited by the World Intellectual Property Organisation (WIPO) as an International Expert in Intellectual Property Strategy Development, Geneva, 3-4 February, 2016.

SEMINAR/WORKSHOP/SYMPOSIA/INVITED LECTURES ORGANISED BY THE CELL

National workshop, Facilitation of Innovation and Commercialisation by Intellectual Property Rights, NEHU, 29 February, 2016.

World Intellectual Property Day, Tezpur University, 26 April, 2015.

Workshops on Patent Search and Analysis, Tezpur University, 21 November, 2015.

DISTINGUISHED VISITORS TO THE CELL

C G Naidu, Asstt. Registrar of Trade Mark, Office of Geographical Indications, Chennai

Denis Dambois, First Counselor and the Head of Research & Innovation, Delegation of the European Union to India.

OTHER IMPORTANT ACTIVITIES OF THE CELL

(i) Innovation

1. Four patent applications have been filed
2. One software copyright has been granted

(ii) Contribution of the Cell to the Society

During the years, TUIPR Cell, has been constantly working for the cause of the people of Assam under its ongoing project Muga GI considering the low economic benefit obtained in bygone years. Not having sufficient amount of authorized users was one of the reasons of slow progress of the GI within the state, as identified during the project, as only authorized users can use the GI logo and the logo specially approved for Muga silk. In 2014 the Cell registered 94 (ninety four) applications of Authorized Users in the GI Office, Chennai. This progress was a significant hike to the 19 applications processed between 2007 to 2014 under the supervision of the Registered Proprietor of GI-Muga Silk of Assam, ASTEC, Guwahati. In the year 2015-16, One hundred forty nine applications have been processed to the GI Office. Soon these applicants will get the status of Authorised User. The third phase for more application process will be held in the month of December, 2016.

THE FACULTY & RESEARCH PERSONNEL OF THE CENTRE

MHRD IPR Chair Professor

P Ganguli, PhD (TIFR Mumbai)

Specialization/Areas of Interest: Chemistry, All areas of IPR, including Patent.

E-mail: prabuddha.ganguli@gmail.com

Coordinator

P Deb, PhD (Jadavpur)

Associate Professor, Department of Physics

E-mail: coordinator_tuipr@tezu.ernet.in



Research Officers

Suchibrata Goswami, PhD (Dibrugarh)
Specialization/Areas of Interest: Copyright, Trademark and Traditional Knowledge and IPR
E-mail: suchitu@tezu.ernet.in

Juri Borbora Saikia, PhD (Tezpur)
Specialization/Areas of Interest: Industrial Design, Geographical Indications
E-mail: juriipr@tezu.ernet.in

THE STAFF OF THE CENTRE

Project Fellow

Dipali Dutta, MA (JNU)
E-mail: dipali@tezu.ernet.in

Office Staff

M Das
MTS
E-mail: mohen31@tezu.ernet.in



PATENT SEARCH AND ANALYSIS

...An initiative of the Tezpur University
IPR Cell
for Researchers in Tezpur University

Organised by

Tezpur University

Intellectual Property Rights C

In collaboration with

TIFAC, DST, N

Date:

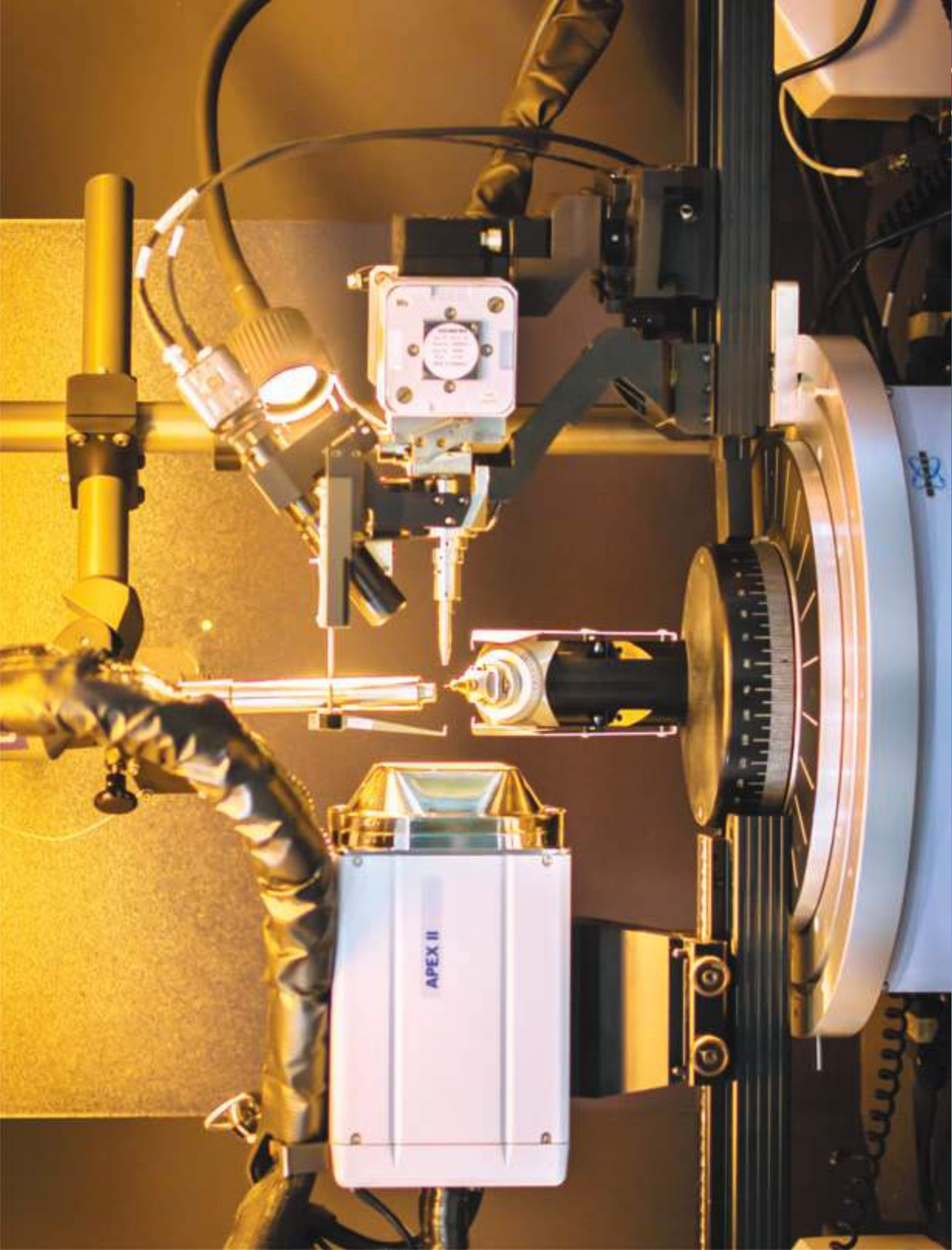
21st November, 2016



SCHOOL OF SCIENCES



- ★ ... Dean, School of Sciences
- ★ ... Dept. of Chemical Sciences
- ★ ... Dept. of Environmental Sciences
- ★ ... Dept. of Mathematical Sciences
- ★ ... Dept. of Molecular Biology & Biotechnology
- ★ ... Dept. of Physics
- ★ ... Centre for Petroleum Biotechnology
- ★ ... DBT Nodal Centre





School of Sciences

2015-16

School of Sciences consists of five departments, viz., Departments of Chemical Sciences, Environmental Sciences, Mathematical Sciences, Molecular Biology and Biotechnology (MBBT) and Physics. The five departments under the school offer 14 different MTech, MSc, Integrated MSc and Integrated BSc Bed programmes in addition to the PhD programme in each department. All departments offer Msc and PhD programmes in their respective disciplines. Four departments of Chemical Sciences, Mathematical Sciences, MBBT and Physics offer Integrated MSc programmes with intake of 20 each. Three departments, namely, Chemical Sciences, Mathematical Sciences and Physics also offer Integrated BScBED programmes with intake of 10 each. The Department of Chemical Sciences offers Mtech programme in Polymer Science and Technology. The Department of Physics also offers Msc programme in Nanoscience and Technology. The departments in the School also support teaching and laboratory courses in the first two semesters of BTech programmes in seven disciplines offered by the School of Engineering. Total intake of students in all 14 non-PhD programmes running in the School is 290 besides an intake of 13 in Self Supporting Scheme.

There are a total of 83 faculty members, which include 23 Professors, 16 Associate Professors and 35 Assistant Professors, 7 Assistant Professor (Ad hoc) and 2 DST Inspire faculty members working in the five departments in the School of Sciences. In addition the Bharat Ratna Gopinath Bordoloi Chair is also presently with the School and is occupied by former IIT Delhi director Padma Shri Prof. R.S. Sirohi.

The faculty members of the School are engaged in cutting-edge research in their respective areas. They made several significant contributions in academic and research activities during 2015-2016. Prof. S. K. Dolui received the National Technology Innovation Award-2015, from the Ministry of Chemicals and Fertilizers, New Delhi. Prof. N. Karak was awarded Bronze medal, Chemical Research Society of India (CRSI), 2016. Prof. K K Baruah, Dept. of Env. Sci. was awarded the prestigious JC Bose gold medal-2015 by the Indian Society for Plant Physiology for his outstanding contribution in the field of environmental plant physiology. Dr. Pritam Deb, Associate Prof. Department of Physics received APS-IUSSTF Professorship Award in Physics 2015-16 from American Physical Society and the Indo-U.S. Science & Technology Forum. Two faculty members from the Dept. of MBBT Dr. E. Kalita and Dr. S. P. G. Ponnam have been selected for the DBT Overseas Associateship abroad. Dr Shuvan Sen from the Dept. of Mathematical Sciences received INSA visiting fellow award-2015 to visit Germany for three months.

Faculty members of the School brought projects funded by different funding agencies such as DST, DBT, Deity, DRDO, BRNS, SERB CSIR and UGC for a total grant to the tune of Rs. 450 lakhs. Prof. Nidhi S. Bhattacharyya from the Dept. of Physics received a DeitY project with a grant of 216.04 lakhs. All five departments in the School are DST-FIST and UGC-SAP supported. The faculty members of five departments in the School have published 346 research papers in peer-reviewed international and national journals during 2015-2016. Department of Chemical Sciences taking the lead with 121 publications followed by Physics with 79, MBBT with 59, Environment Sciences 61 and Mathematics 26 research publications.

Mr. Abhijit Saikia from the Dept. of Math. Sci. was selected for Ph. D. Programme - 2016 at University of Delaware, USA. Mr. Raiv Borah a PhD student from the Department of Physics secured Newton-Bhabha fellowship for six months at the University of Brighton, UK. Dr Leena Borah from the Department of Environmental Sciences joined as Assistant Professor, Cotton College State University, Guwahati. This year from the School of Sciences a total of 57 students qualified NET, 67 students qualified GATE and 44 students qualified SLET competitive examinations. In addition 14 students qualified DBT JRF examination.

Departments under the School of Sciences regularly keep organizing conferences/workshops. During the period department of MBBT in the School organized 8 national/international conferences/workshops, Physics 04, Chemical Sciences, Environmental Sciences and Mathematical Sciences organized 01 each. The Departments of Environmental Sciences, Physics and Mathematical Sciences organized Global Initiative of Academic Network (GIAN) courses this year.

Prof. A. Kumar
Dean, School of Sciences
Tezpur University



UGC-SAPIDST-FIST FUNDED
DEPT. OF CHEMICAL SCIENCES
ESTD.-1997



DEPARTMENT OF CHEMICAL SCIENCES

2015-16

THE DEPARTMENT

The Department of Chemical Sciences was established in the year 1997 with the prime objective of creating manpower in different areas of Chemical Sciences. Initially, the Department offered an MSc programme in Polymer Science. The Department started Integrated MSc in Chemistry programme in 2009 and MSc in Chemistry in 2012. Since autumn 2011, the Department has been offering MTech in Polymer Science & Technology and Integrated BSc-BEd in Chemistry. The Department has also been running a PhD programme covering several important areas of research in Chemical Sciences. The Department has eighteen well-experienced (both in academia and industry) and highly qualified faculty members (including one inspire faculty), who are actively engaged in research in various fields of Chemical Sciences. During the last five years, the members of faculty of the Department have published more than 400 high quality publications in peer reviewed international journals and successfully completed more than 20 major research projects. The Department is well equipped with several sophisticated equipment. The alumni of the Department are well placed in different industries, R&D organizations and other prestigious institutes in India and abroad.

Academic programmes and Student intake

| Academic programmes | Student Intake |
|---------------------------------------|--|
| MSc in Chemistry | 20 |
| Integrated MSc in Chemistry | 20 |
| MTech in Polymer Science & Technology | 10 |
| Integrated BSc-BEd in Chemistry | 10 |
| PhD in Chemical Sciences | Intake variable 21 in the Academic year 2015-16 |

Major facilities and equipment available

- 400 MHz NMR spectrophotometer, Jeol
- GCMS, PerkinElmer
- Thermal Analyzer, Shimadzu, (FIST Funded)
- CHN Analyzer, Perkin Elmer (FIST Funded)
- FTIR spectrophotometer, Nicolet
- FTIR spectrophotometer, PerkinElmer
- Automated Compression Press, S5 Type, Santac
- Polarizing Microscope, Olympus
- UV-Visible Spectrophotometer, Shimadzu
- Universal Testing Machine, 10 KN Zwick
- Rheometer, Bohlin Instruments
- Microwave reactor
- High performance computational facilities
- Digital Polarimeter
- Millipore Water Purification System
- Table Top Magnetometer
- Single Screw Laboratory Extruder
- Cyclic Voltmeter



MAJOR RESEARCH FINDINGS/RESEARCH AND DEVELOPMENT ACTIVITIES

| Principal Investigator | Salient Research Findings |
|------------------------|---|
| K K Bania | <p>Development of some heterogeneous chiral catalyst for asymmetric synthesis</p> <ul style="list-style-type: none"> Some chiral Ni-Schiff base complexes were developed to facilitate such reaction under microwave irradiation. Besides these, we have also developed a very cheap catalyst which could directly convert aromatic acids to aldehyde. |
| N Karak | <ul style="list-style-type: none"> Development of aqueous silver nanoparticles as a nano-fertilizer for enhancing soil fertility Fabrication of bio-compatible nanocomposites using peptide functionalized carbon dot as injectable scaffold for <i>in vivo</i> bone tissue engineering Development of biodegradable tough waterborne hyperbranched polyester/carbon dot nanocomposites and its photocatalytic activity |
| P Bharali | <ul style="list-style-type: none"> Various mono-metallic and bimetallic nanocrystals of Pd, Cu, Ni, and Co were employed for synergistic catalysis for the reduction of various dyes and nitroaromatics at room temperature. Copper oxide and cobalt-copper oxides with different composition and morphologies have been synthesized, characterized and evaluated for oxidative degradation and adsorption of various organic water pollutants. Cerium oxide and mixed oxides based on cerium oxide supported Ni catalysts were synthesized, characterized and have been evaluating for auto-thermal reforming of ethanol. |
| R C Deka | <p>Computational Studies of Bare and Zeolite-Supported Metal Nanoclusters and their Application in Catalysis.</p> <ul style="list-style-type: none"> Various isomers of Au_n and $Au_{n-1}Be$ ($n=2-7$) clusters were determined using density functional theory. The lowest energy structures of Au_n and $Au_{n-1}Be$ ($n=2-7$) clusters are obtained. In case of Au_nBe clusters, odd numbered gold atom clusters are more stable in charged ones but for neutral clusters this is reversed. In case of bare Au clusters, Au_3 is found to be stable for charged clusters but for neutral, Au_6 is found to be stable. <p>Hybrid Quantum Mechanics/Molecular Mechanics Calculation on Palladium Supported TiO_2 for CO Oxidation</p> <ul style="list-style-type: none"> Determination of the global minimum structures of the higher size clusters has become one of the forefronts of the current day research. We have implemented KLMC code within the GULP interface to generate various starting geometries for gold clusters such as Au_{16} and Au_{25}. Our calculations generated 20 different isomers which will be further optimized without symmetry constraint using density functional theory. |
| Ruli Borah | <p>One pot synthesis of acridine derivatives using greener approach</p> <ul style="list-style-type: none"> Multicomponent synthesis of novel trisubstituted naphthoxazine, benzoacridine, tetrahydrobenzoacridine and xanthenes derivatives was studied in presence of Brønsted-Lewis acidic ionic liquid catalysts. Several Brønsted-Lewis acidic ionic liquids were developed and characterized with various analytical techniques. |
| S P Mahanta | <p>Molecular engineering and molecular recognition</p> <ul style="list-style-type: none"> The focus of research is on the synthesis of structurally and functionally encoded pyrrole based molecular building blocks, molecular recognition and self-assembly to assemble these building blocks into functional materials such as receptors or sensors. |



| | |
|----------|---|
| T K Maji | <p>Polymer Nanocomposites</p> <ul style="list-style-type: none"> Wood polymer nanocomposites prepared by methacrylic anhydride modified oil showed an overall improvement in properties compared to either acrylic or methacrylic anhydride modified soyabean oil. Green wood nanocomposites were made by using starch in combination with different nanofillers and their properties were evaluated. Polymer coated nanoparticles/nanocomposites were found effective for removal of contaminants in water specially arsenic. <p>Controlled release polymers for drug delivery</p> <ul style="list-style-type: none"> Magnetic nanoparticles tagged with folic acid and fluorescence isothiocyanate were synthesized successfully for controlled and targeted delivery of an anticancer drug. Polymeric nanoparticles for controlled delivery applications were prepared by using soya flour, silybinin and ZnO as polymer, anticancer drug and filler respectively. The prepared drug encapsulated nanoparticles were evaluated and in vitro study showed that this system could be used for promising drug delivery applications. |
|----------|---|

Research projects, ongoing and new

| Project Title | Funding Agency | Amount (in INR) | Duration | Principal Investigator |
|--|------------------------|-----------------|-----------|------------------------|
| Homocoupling, heterocoupling and liberation of borylene ligands | DST | 10.15 lakh | 2016-2018 | A K Phukan |
| Control polymorph nucleation of drugs on functionalized surfaces | DST-SERB | 27.00 lakh | 2015-2018 | B Sarma |
| Metal complexes of new chiral Schiff bases: Design, structure elucidation, reactivity and synthetic applications | DST-SERB | 36.00 lakh | 2015-2019 | B Sarma |
| Designing of reusable chiral catalyst for asymmetric synthesis | DST-SERB | 39.00 lakh | 2015-2019 | K K Bania |
| Rational strategies to build nano-magnets | DST-SERB | 24.50 lakh | 2013-2016 | N Gogoi |
| Development of exchange biased {3d -4d/5d} assemblies: A rational route towards high T _b nanomagnets | CSIR | 12.40 lakh | 2014-2017 | N Gogoi |
| Development of multifunctional dendritic polymers for injectable bone tissue engineering | DBT | 64.22 lakh | 2012-2015 | N Karak |
| Hyperbranched epoxy nanohybrids immobilized natural biocide for advanced marine coating | NRB | 38.31 lakh | 2012-2015 | N Karak |
| Polymer supported green silver nanoparticles: Using plants of North-East India; Studies on toxicity and anti-cancer property | DBT | 38.46 lakh | 2014-2017 | N Karak |
| Principles of formation of nanostructured oxide materials and nanosized catalysts on their basis for hydrogen power production applications | DST, under Indo-Russia | 24.61 lakh | 2015-2017 | P Bharali |
| Design of non-precious cobalt oxide based electrocatalysts | CSIR | 6.00 lakh | 2015-2018 | P Bharali |
| Development of hybrid catalysts for oxygen reduction reaction | DST-SERB | 29.49 lakh | 2015-2018 | P Bharali |
| Identification of efficient semiconductor dopant combination for selective chemi-adsorption of tea pesticides on metal oxide semiconductor (MOS) sensor | NTRF | 34.01 lakh | 2016-2020 | P Puzari |
| Development of a process for effective use of acetylcholinesterase biosensors for quantification of organophosphate and organocarbamate pesticide residue in produce | MOFPI | 11.38 Lakh | 2014-2016 | P Puzari |
| Hybrid quantum mechanics/molecular mechanics calculation on palladium supported TiO ₂ for CO oxidation | DST-UKIERI | 31.25 lakh | 2014-2016 | R C Deka |
| Computational studies of bare and zeolite-supported metal nanoclusters and their application in catalysis | DST | 53.00 lakh | 2013-2016 | R C Deka |



| | | | | |
|---|----------|------------|-----------|-------------|
| Popularization of an integrated Arsenic and Iron removal method, 'Arsiron Nilogon', at the Arsenic affected rural areas of Assam | DST | 9.40 lakh | 2014-2016 | R K Dutta |
| Asymmetric synthesis of benzo -annulated oxa -heterocycles via Lewis acid and transition metal -catalyst-free intramolecular aziridine ring-opening | UGC | 6.00 lakh | 2014-2016 | S K Das |
| Asymmetric syntheses of new classes of α -amino acid derivatives | DST-SERB | 27.00 lakh | 2014-2017 | S K Das |
| Development of polymer nano composite based photovoltaic device | DIT | 92.00 lakh | 2013-2016 | S K Dolui |
| Design, syntheses and anion binding studies of pyrrole based cyclic pseudo-peptides | DST-SERB | 27.39 lakh | 2015-2018 | S P Mahanta |
| Chelation assisted benzylic C -H activation through transition metal and their potential application as catalyst | DST | 35.00 lakh | 2012-2017 | S Pratihar |

PUBLICATIONS

In International and National Journals

Assanvo, E. F., Gogoi, P., Dolui, S. K., and Baruah, S. D. Synthesis, characterization, and performance characteristics of alkyd resins based on Ricinodendron heudelotii oil and their blending with epoxy resins, *Industrial Crops and Products*, 65, 2015.

Baishya, P., and Maji, T. K. Studies on the physicochemical properties of modified starch based wood nanocomposites, *Satrch-starke*, 68(3-4), 2016.

Baishya, P., and Maji, T. K. Functionalization of MWCNT and their application in properties development of green wood nanocomposite, *Carbohydrate Polymers*, 2016[In press].

Baishya, S., and Deka, R. C. Activity of faujasite supported gold monomer towards water gas shift reaction: hybrid density functional theory/molecular mechanics approach, *RSC Advances*, 5, 2015.

Banik, N., Hussain, A., Ramteke, A., and Maji, T. K. Synthesis and Evaluation of the Properties of Chitosan-Cellulose Whisker Microparticles for Controlled Release of Isoniazid, *AJPSE*, 3(1), 2015.

Barua, S., Banerjee, P. P., Sadhu, A., Sengupta, A., Chatterjee, S., Sarkar, S., Barman, S., Chattopadhyay, A., Bhattacharya, S., Mondal, N. C., Karak, N. Silver nanoparticles as antibacterial and anticancer materials against human breast, cervical and oral cancer cells, *Journal of Nanoscience and Nanotechnology*, 2016 [In press].

Barua, S., Chattopadhyay, P., Aidew, L., Buragohain, A. K., and Karak, N. Infection resistant hyperbranched epoxy nanocomposite as a scaffold for skin tissue regeneration, *Polymer International*, 64, 2015.

Barua, S., Chattopadhyay, P., and Karak, N. S-triazine based biocompatible hyperbranched epoxy adhesive with antibacterial attribute for suture less surgical sealing, *Journal of Material Chemistry: B*, 3, 2015.

Barua, S., Gogoi, B., Aidew, L., Buragohain, A. K., Chattopadhyay, P., and Karak, N. Sustainable resource based hyperbranched epoxy nanocomposite as an infection resistant, biodegradable, implantable muscle scaffold, *ACS Sustainable Chemistry and Engineering*, 3, 2015.

Baruah, P., and Karak, N. Bio-based tough hyperbranched epoxy/ graphene oxide nanocomposite with enhanced biodegradability attribute, *Polymer Degradation and Stability*, 129, 2016.

Begum, P., Gogoi, P., Mishra, B. K., and Deka, R. C. Theoretical insight of nitric oxide adsorption on neutral and charged Pd_n (n=1-5) clusters, *International Journal of Quantum Chemistry*, 115, 2015.

Bertermann, R., Braunschweig, H., Constantinidis, P., Dellermann, T., Dewhurst, R. D., Ewing, W. C., Fischer, I., Kramer, T., Mies, J., Phukan, A. K., and Vargas, A. Exclusive π Encapsulation of Light Alkali Metal Cations by a Neutral Molecule, *Angewandte Chemie International Edition*, 54(44), 2015.

Bhagawati, D., Thakur, S., and Karak, N. Castor oil based hyperbranched polyester/ bitumen modified fly ash nanocomposite, *Advances in Nano Research*, 4, 2016.



- Bharadwaz, P., Borthakur, B., and Phukan, A. K. Annulated boron substituted N-heterocyclic carbenes: theoretical prediction of highly electrophilic carbenes, *Dalton Transactions*, 44(42), 2015.
- Bharali, D., Devi, R., Bharali, P., and Deka, R. C. Synthesis of high surface area mixed metal oxide from the NiMgAl LDH precursor for nitro-aldol condensation reaction, *New Journal of Chemistry*, 39, 2015.
- Bhattacharjee, D., Mishra B. K., and Deka, R. C. Theoretical insight on atmospheric chemistry of HFE-365mcf3: reactions with OH radicals, atmospheric lifetime, and fate of alkoxy radicals ($\text{CF}_3\text{CF}_2\text{CH}(\text{O})\text{OCH}_3/\text{CF}_3\text{CF}_2\text{CH}_2\text{OCH}_2\text{O}$), *Journal of Molecular Modeling*, 21, 2015.
- Bhattacharjee, D., Mishra, B. K., and Deka, R. C. Effect of double aluminium doping on the structure, stability and electronic properties of small gold clusters, *Journal of Materials Science*, 50, 2015.
- Bhattacharjee, D., Mishra, B. K., Chakrabartty, A. K., and Deka, R. C. Catalytic Activity of Anionic Au-Ag Dimer for Nitric Oxide Oxidation: ADFT Study, *New Journal of Chemistry*, 39, 2015.
- Bhattacharjee, D., Tiwari, L., Singh, H. J., Mishra, B. K., and Deka, R. C. Theoretical investigation on mechanism, kinetics and thermochemistry of gas-phase reactions of ethyl trifluoroacetate with OH radicals, *Journal of Fluorine Chemistry*, 178, 2015.
- Bora, C., Sarkar, C., Mohan, K. J., and Dolui, S. K. Polythiophene/graphene composite as a highly efficient platinum-free counter electrode in dye-sensitized solar cells, *Electrochimica Acta*, 157, 2015.
- Borah, H., Dutta, R. R., Gogoi, S., and Puzari, P. Influence of methanol, ethanol and cypermethrin on the Glutathion -S-transferase catalyzed reaction of Glutathion with 1-chloro-2,4-dinitrobenzene: A method for detection and quantification of cypermethrin, *Electrochimica Acta*, 205, 2016.
- Borah, R. K., Saikia, H. J., Mahanta, A., Das, V. K., Bora, U., and Thakur, A. J. Biosynthesis of poly(ethylene glycol)-supported palladium nanoparticles using *Colocasia esculenta* leaf extract and their catalytic activity for Suzuki-Miyaura cross-coupling reaction, *RSC Advances*, 5, 2015.
- Borah, S., Das, B. P., Konwar, G., Mahanta, S. P., and Gogoi, N. Phenolic oxime based receptors for selective detection of fluoride, *RSC Advances*, 5(92), 2015.
- Borah, S., Konwar, G., Borborah, A., and Gogoi, N. Auto-reusable receptors for selective colorimetric recognition of fluoride, *RSC Advances*, 5(123), 2015.
- Borthakur, B., and Phukan, A. K. Moving Toward Ylide Stabilized Carbenes, *Chemistry - An European Journal*, 21 (32), 2015.
- Borthakur, B., Silvi, B., Dewhurst, R. D., and Phukan, A. K. Theoretical strategies toward stabilization of singlet remote N-heterocyclic carbenes, *Journal of Computational Chemistry* 37(16), 2016.
- Boruah, J. J., and Islam, N. S. Macromolecular peroxo complexes of Vanadium(V) and Molybdenum(VI): Catalytic activities and biochemical relevance, *Journal of Chemical Sciences*, 127, 2015.
- Bose, R. S., Bora, P. P., and Deka, R. C., Sarma, K. P. Removal of Cd(II) ion from aqueous solution by powdered leaf biomass of *Boehmeria listeri*: equilibrium and kinetic studies, *Desalination and Water Treatment*, 2015.
- Chopade, P., Sarma, B., Santiso, E., Simpson, J., Fry, J., Yurttas, N., Biermann, K., Chen, J., Trout, B. and Myerson, A. S. On the connection between nonmonotonic taste behavior and molecular conformation in solution: The case of Rebaudioside-A, *Journal of Chemical Physics*, 143(24), 2015.
- Das, B., Chattapadhyaya, P., Maji, S., Upadhyay, A., Purkayastha, M., Mohanta, C., Maity, T., and Karak, N. Bio-functionalized MWCNT/hyperbranched polyurethane bio-nanocomposite for bone regeneration, *Biomedical Materials*, 10, 2015.
- Das, D., Choudhury, P., Borthakur, L., Gogoi, B., Buragohain, A. K., and Dolui, S. K. Synthesis and characterization of SiO_2 /polyaniline/Ag core-shell particles and studies of their electrical and hemolytic properties: multifunctional core-shell particles, *RSC Advances*, 5(3), 2015.
- Das, V. K., Bharali, P., Konwar, B. K., Mikkola, J-P., Shchukarev, A., and Thakur, A. J. A convenient 'NOSE' approach for the synthesis of 6-Amino-1,3-dimethyl-5-indolyl-1H-pyrimidine-2,4-dione derivatives catalyzed by nano-Ag, *New Journal of Chemistry*, 40, 2016.
- Das, V. K., Harsha, S. N., and Karak, N. Highly efficient and active silver nanoparticles catalyzed conversion of aldehydes into nitriles: A greener, convenient and versatile "NOSE" approach, *Tetrahedron Lett.*, 57, 2016.
- De, B. and Karak, N. Ultra low dielectric, high performing hyperbranched epoxy thermosets: Synthesis, characterization and property evaluation, *RSC Advances*, 5, 2015.



- De, B., Gupta, K., Mandal, M., and Karak, N. Biocide immobilized OMMT-carbon dot reduced Cu₂O nanohybrid/hyperbranched epoxy nanocomposites: Mechanical, thermal, antimicrobial and optical properties, *Material Science and Engineering: C*, 56, 2015.
- De, B., Kumar, M., Mandal, B., and Karak, N. An in situ prepared photo-luminescent transparent biocompatible hyperbranched epoxy/carbon dot nanocomposite, *RSC Advances*, 5, 2015.
- De, B., Voit, B., and Karak, N. Tough hyperbranched epoxy/neem-oil modified OMMT thermosetting nanocomposite with antimicrobial attribute, *New Journal of Chemistry*, 39, 2015.
- Deka, J., Satyanarayana, L., Karunakar, G. V., Bhattacharyya, P. K., and Bania, K. K. Chiral modification of copper exchanged zeolite-Y with cinchonidine and its application in the asymmetric Henry reaction, *Dalton Transactions*, 44 (48), 2015.
- Deka, P., Deka, R. C., and Bharali, P. Porous CuO nanostructure as a reusable catalyst for oxidative degradation of organic water pollutants, *New Journal of Chemistry*, 40(1), 2016.
- Deka, P., Choudhury, R., Deka, R. C. and Bharali, P. Influence of Ni on enhanced catalytic activity of Cu/Co₃O₄ towards reduction of nitroaromatic compounds: studies on the reduction kinetics, *RSC Advances*, 6(75) 2016.
- Devi, R., Gogoi, D., Bora, P., and Das, S. K. Synthesis of diverse catechin congeners via diastereoselective intramolecular epoxy-arene cyclization, *Tetrahedron*, 62, 2016.
- Dewan, A., Bharali, P., Thakur, A. J. and Bora, U. Starch assisted Palladium(0) nanoparticles as in situ generated catalysts for room temperature Suzuki-Miyaura reaction in water, *RSC Advances*, 6(14), 2016.
- Dewan, A., Sarmah, M., Bora, U., and Thakur, A. J. A green protocol for ligand, copper and base free Sonogashira cross-coupling reaction, *Tetrahedron Letters*, 57(8), 2016.
- Dey, M., Dutta, S., Sarma B., Deka R. C., and Gogoi N. A convenient approach to tailor magnetic anisotropy in seven coordinate Co(II) complexes, *Chemical Communications*, 52, 2016.
- Dey, M., Dutta, S., Sarma, B., Deka, R. C., and Gogoi, N. Modulation of the coordination environment: a convenient approach to tailor magnetic anisotropy in seven coordinate Co(II) complexes, *Chemical Communications*, 52(4), 2016.
- Dey, M., Goswami, A., and Gogoi, N., Surprises from an old reaction: A new 1-D heterometallic tris(pyridine-2-aldoximato)nickel(II)-sodium complex, *Transition Metal Chemistry*, 41(5), 2016.
- Dolui, S. K., Nath, B. C., Das, D., Kamrupi, I. R., Mohan, K., and Ahmed, G. A. Efficient quasi solid state dye sensitized solar cell based on polyethylene glycol/graphene nanosheet gel electrolytes, *RSC Advances*, 5, 2015.
- Duarah, R., and Karak, N. Starch based sustainable tough hyperbranched epoxy thermoset, *RSC Advances*, 5, 2015.
- Duarah, R., Singh, Y. P., Mandal, B., and Karak, N. Sustainable Starch Modified Polyol Based Tough Biocompatible Hyperbranched Polyurethane with Shape Memory Attribute, *New Journal of Chemistry*, 40, 2016.
- Dutta, A. K., Gogoi, P., Saikia, M. P., and Borah, R. Development of environmentally benign methods towards the synthesis of anti-2,3-dihydro-1,2,3-trisubstituted-1H-naphth[1,2-e][1,3]oxazines using Brønsted acidic catalysts, *Catalysis Letters*, 146, 2016.
- Dutta, S., and Deka, R. C. Zero field splitting in Mn (III) complexes: A comparative study of DFT base Coupled-Perturbed and Pederson-Khanna approaches, *Computational and Theoretical Chemistry*, 1072, 2015.
- Ghosh, B., Gogoi, S., Thakur, S., and Karak, N. Bio-based waterborne polyurethane/carbon dot nanocomposite as a surface coating material, *Progress in Organic Coatings*, 90, 2016.
- Gogoi, S., Borah, H., Dutta, R. R., and Puzari, P. Evaluation of Diffusion coefficient of Thiocholine in Enzyme loaded polypyrrole composite film through different methods and electrode polarization, *Journal of Physical Chemistry B*, 119, 2015.
- Gogoi, N., Gogoi, P. K., Borah, G., and Bora, U. Grafting of Ru(III) complex onto nanosilica and its implication as heterogeneous catalyst for aerobic oxidative hydroxylation of arylboronic acids, *Tetrahedron Letters*, 2016 [In press].
- Gogoi, P., Boruah, M., Sharma, S., and Dolui, S. K. Blends of epoxidized alkyd resins based on jatropha oil and the epoxidized oil cured with aqueous citric acid solution: A green technology approach, *ACS Sustainable Chemistry & Engineering*, 3(2), 2015.



- Gogoi, P., Boruah, R., and Dolui, S. K. Jatropha curcas oil based alkyd/epoxy/graphene oxide (GO) bionanocomposites: Effect of GO on curing, mechanical and thermal properties, *Progress in Organic Coatings*, 84, 2015.
- Gogoi, P., Dutta, A. K., Sarma, P., and Borah, R. Development of Bronsted-Lewis acidic solid catalytic system of 3-methyl-1-sulfonic imidazolium transition metal chlorides for the preparation of bis(indolyl)methanes, *Applied Catalysis A: General*, 492, 2015.
- Gogoi, P., Horo, H., Khannam, M., and Dolui, S. K. In situ synthesis of green bionanocomposites based on aqueous citric acid cured epoxidized soybean oil-carboxylic acid functionalized multiwalled carbon nanotubes, *Industrial Crops and Products* 76, 2015.
- Gogoi, P., Saikia, B. J., and Dolui, S. K. Effects of Nickel Oxide (NiO) nanoparticles on the performance characteristics of the jatropha oil based alkyd and epoxy blends, *Journal of Applied Polymer Science*, 132(8) 2015.
- Gogoi, S. R., Baruah, J. J., Sengupta, G., Saikia, G., Ahmed, K., Bania, K. K. and Islam, N. S. Peroxonioibium(V)-catalyzed selective oxidation of sulfides with hydrogen peroxide in water: a sustainable approach, *Catalysis Science and Technology*, 5, 2015.
- Gogoi, S., and Dutta, R. K. Fluoride removal by hydrothermally modified limestone powder using phosphoric acid, *Journal of Environmental Chemical Engineering*, 4, 2016.
- Gogoi, S., and Dutta, R. K. Mechanism of fluoride removal by phosphoric acid enhanced limestone: Equilibrium and kinetics of fluoride sorption, *Desalination and Water Treatment*, 57, 2016.
- Gogoi, S., and Karak, N. Biobased high performance waterborne hyperbranched polyurethane thermoset, *Polymers for Advanced Technologies*, 26, 2015.
- Gogoi, S., Barua, S., and Karak, N. Cross-linking kinetics of hyperbranched epoxy cured hyperbranched polyurethane and optimization of reaction conversion by central composite design, *Chemical Engineering Science*, 127, 2015.
- Gogoi, S., Kumar, M., Mandal, B., and Karak, N. High performance luminescent thermosetting waterborne hyperbranched polyurethane/carbon quantum dot nanocomposite with in vitro cytocompatibility, *Composites Science and Technology*, 118, 2015.
- Gogoi, S., Kumar, M., Mandal, B., and Karak, N. Renewable resource based carbon dot decorated hydroxyapatite nanohybrid and its fabrication with waterborne hyperbranched polyurethane for bone tissue engineering, *RSC Advances*, 6, 2016.
- Gogoi, S., Nath, S. K., Bordoloi, S., and Dutta, R. K. Fluoride removal from groundwater by limestone treatment in presence of phosphoric acid, *Journal of Environmental Management*, 152, 2015.
- Gour, N. K., Mishra, B. K., Hussain, I., and Deka, R. C. Theoretical Investigation on the Kinetics and thermochemistry of H-atom abstraction reactions of 2-chloroethyl methyl ether ($\text{CH}_3\text{OCH}_2\text{CH}_2\text{Cl}$) with OH radical at 298 K, *Structural Chemistry*, 2016 [In press].
- Guha, A. K., Borthakur, B., and Phukan, A. K. Spectroscopic Distinction of Different Carbon Bases: An Insight from Theory, *Journal of Organic Chemistry* 80(14), 2015.
- Harazika, D., and Karak, N. Biodegradable tough waterborne hyperbranched polyester/carbon dot nanocomposite: approach towards an eco-friendly material, *Green Chemistry*, 2016 [In press].
- Hazarika, A., and Maji, T. K. Ultraviolet resistance and other physical properties of softwood polymer nanocomposites reinforced with ZnO nanoparticles and nanoclay, *Wood Material Science and Engineering*, 10(1), 2015.
- Hazarika, A., and Maji, T. K. Ultraviolet resistance and other physical properties of softwood polymer nanocomposites reinforced with ZnO nanoparticles and nanoclay, *Wood Material Science and Engineering*, 1-16, 2015.
- Hazarika, A., Deka, B. K., and Maji, T. K. Melamine-formaldehyde acrylamide and gum polymer impregnated wood polymer nanocomposite, *Journal of Bionic Engineering*, 12(2), 2015.
- Hazarika, A., Deka, B. K., and Maji, T. K. Melamine-formaldehyde acrylamide and gum polymer impregnated wood polymer nanocomposite, *Journal of Bionic Engineering*, 12(2), 2015.
- Hazarika, D., and Karak, N. Photocatalytic degradation of organic contaminants under solar light using carbon dot/titanium dioxide nanohybrid, obtained through a facile approach, *Applied Surface Science*, 376, 2016.



- Hazarika, D., and Karak, N. Waterborne sustainable tough hyperbranched aliphatic polyester thermosets, *ACS Sustainable Chemistry and Engineering*, 3, 2015.
- Hazarika, S. B., Choudhury, S. U., Panja, S. S., Dolui, S. K., and Ray, B. C. Natural fiber reinforced polyester based biocomposite: agro waste utilization, *Journal of Scientific & Industrial Research*, 74(10), 2015.
- Hussain, I., Gour, N. K., and Deka, R. C. Kinetics and thermochemistry of hydrolysis mechanism of a novel anticancer agent $\text{trans-[PtCl}_2(\text{dimethylamine})(\text{isopropylamine})]$: A DFT study, *Chemical Physics Letters*, 651, 2016.
- Iman, M., Mandal, M., and Maji, T. K. Journal of Composite Materials. Effect of zinc oxide and nanoclay on crosslinked jute-reinforced soy flour green nanocomposites, *Journal of Composite Materials*, 50(6), 2015.
- Kalita, M., Tamuli, K. J., Barman, P., Sarma, B., Baruah, R. & Boruah, H. P. D. Synthesis, crystal structure, bioactivities of Ni(II), Cu(II), Co(II) and Pd(II) complexes with unsymmetrical thioether donor Schiff base: Phosphine free Pd(II) complex catalyzed Suzuki reaction, *Polyhedron*, 97, 2015.
- Konwar, L. J., Das, R., Thakur, A. J., Salimen, E., Mäki-Arvela, P., Kumar, N., Mikkola, J-P., and Deka, D. Towards carbon efficient biorefining: Biomass conversion using multifunctional mesoporous solid acids obtained from biodiesel wastes, *Applied Catalysis B: Environmental*, 176, 2015.
- Konwar, L. J., Mäki-Arvela, P., Begum, P., Kumar, N., Thakur, A. J., Mikkola, J-P., Deka, R. C., and Deka, D. Shape selectivity and acidity effects in glycerol acetylation with acetic anhydride: Selective synthesis of triacetin over γ -Zeolite and sulfonated mesoporous carbons, *Journal of Catalysis*, 329, 2015.
- Mahanta S. P., Dutta, B., Bhattacharyya, P. K., and Bania, K. K. Cation- π interaction in cofacial molecular dyads: a DFT and TDDFT study, *RSC Advances*, 6, 2016.
- Mahanta, A., Adhikari, P., Bora, U., and Thakur, A. J. Biosilica as an efficient heterogeneous catalyst for ipso-hydroxylation of arylboronic acids, *Tetrahedron Letters*, 56, 2015.
- Mahanta, A., Mandal, M., Thakur, A. J., and Bora, U. An improved Suzuki-Miyaura cross-coupling reaction with the aid of in-situ generated PdNPs: Evidence for enhancing effect with biphasic system, *Tetrahedron Letters*, 57(29), 2016.
- Mandal, M., Nagaraju, V., Karunakar, G. V., Sarma, B., Borah, B. J. and Bania, K. K., Electronic, conjugation and confinement effect on structure, redox and catalytic behavior of oxido-vanadium (IV) and (V) chiral Schiff base complexes, *Journal of Physical Chemistry C*, 119(52), 2015.
- Mishra, B. K., Gour, N. K., Bhattacharjee D., and Deka, R. C. Atmospheric chemistry of HFE-7000 ($i\text{-C}_3\text{F}_7\text{OCH}_3$) and isofluoropropyl formate ($i\text{-C}_3\text{F}_7\text{OC(O)H}$): reactions with OH radicals, atmospheric lifetime and fate of alkoxy radical ($i\text{-C}_3\text{F}_7\text{OCH}_2\text{O}$) – A DFT study, *Molecular Physics*, 114, 2015.
- Mishra, B. K., Lily M., Deka, R. C., and Chandra A. K. A Theoretical insight on atmospheric chemistry of HFE-7100 and perfluoro-butyl formate: Reactions with OH radicals and Cl atoms and fate of alkoxy radical, *New Journal of Chemistry*, 2016 [In press].
- Mondal, M., and Bora, U. Eco-friendly Suzuki-Miyaura coupling of arylboronic acids to aromatic ketones catalyzed by oxime-palladacycle in biosolvent 2-MeTHF, *New Journal of Chemistry*, 40(4), 2016.
- Mondal, M., Dewan, A., Begum, T., Gogoi, P. K., Thakur, A. J., and Bora, U. Suzuki-Miyaura cross-coupling in aqueous medium using recyclable palladium/amide-silica catalyst, *Catalysis Letters*, 2016 [In press].
- Pegu, R.; Mandal, R., Guha, A. K., and Pratihari, S. A selective ratiometric fluoride ion sensor with (2,4-dinitro phenyl)hydrazine derivative of bis(indolyl)methane and its mode of interaction, *New Journal of Chemistry* 39(8), 2015.
- Pramanik, S., Gopalakrishnan, R., Barua, N., Buragohain, A. K. and Karak, N. Montmorillonite immobilized Curcuma aromatic/Zanthoxylum limonella oil nanoconjugate as a green antibacterial and biocompatible material with mosquito repellent attributes, *Applied Clay Science*, 109–110, 2015.
- Pratihari, S. Triggering the approach of an arene or heteroarene towards an aldehyde via Lewis acid-aldehyde communication, *Organic and Biomolecular Chemistry*, 14(10), 2016.
- Pratihari, S., Kakoty, A., and Sarmah, K. Waste management in Zinc promoted allylation of aldehyde, *New Journal of Chemistry*, 40(6), 2016.



- Rajkhowa, S., Jha, A. N., and Deka, R. C. Anti-tubercular drug development: Computational strategies to identify potential compounds, *Journal of Molecular Graphics and Modelling*, 62, 2015.
- Ramalakshmi, R., Saha, K., Roy, D. K., Varghese, B., Phukan, A. K., and Ghosh, S. Novel Routes to σ -Borane/Borate Complexes of Molybdenum and Ruthenium: A Continuum, *Chemistry - An European Journal*, 21(48), 2015.
- Raul, P. K., Mahanta, A., Bora, U., Thakur, A. J., and Veer, V. In water homocoupling of arylboronic acid using nano-rod shaped and reusable copper oxide(II) catalyst at room temperature, *Tetrahedron Letters*, 56, 2015.
- Saikia, B. J., Gogoi, P., Sharma, S., and Dolui, S. K. Synthesis of pH and solvent responsive smart core crosslinked star polymer by atom transfer radical polymerization, *Polymer International*, 64(3), 2015.
- Saikia, A., and Karak, N. Castor oil based hyperbranched epoxy/clay nanocomposites for thin film applications, *American Journal of Engineering and Applied Sciences*, 9, 2016.
- Saikia, B. J., and Dolui, S. K. Preparation and characterization of an azide-alkyne cycloaddition based self-healing system via a semi encapsulation method, *RSC Advances*, 5(112), 2015.
- Saikia, B. J., Nath, B. C., Borah, C., and Dolui, S. K. Mn^{2+} anchored CdS polymer nanocomposites: An efficient alternative for Mn^{2+} doped CdS nanoparticles, *Journal of Luminescence* 168, 2015.
- Saikia, B., Bora, P., Kharioda, R. and Sarma, B. Hydrogen bond synthons in the interplay of solubility and membrane permeability/diffusion in variable stoichiometry drug cocrystals, *Crystal Growth and Design*, 15(11), 2015.
- Saikia, C., Gogoi, P., and Maji, T. K. Chitosan: A promising biopolymer in drug delivery applications, *Journal of Molecular and Genetic Medicine*, 2015 [In press].
- Saikia, C., Hussain, A., Ramteke, A., Sharma, H. K., and Maji, T. K. Carboxymethyl starch-chitosan-coated iron oxide magnetic nanoparticles for controlled delivery of isoniazid. *Journal of Microencapsulation*, 32(1), 2015.
- Saikia, C., Hussain, A., Ramteke, A., Sharma, H. K., Deb, P., and Maji, T. K. Carboxymethyl starch-coated iron oxide magnetic nanoparticles: a potential drug delivery system for isoniazid, *Iranian Polymer Journal*, 24(10), 2015.
- Saikia, L., Roudragouda, P., and Thakur, A. J. A one pot, two-step synthesis of 5-arylpyrrolo[2,3-d]pyrimidines and screening of their preliminary antibacterial properties, *Bioorganic and Medicinal Chemistry Letters*, 16, 2016.
- Saikia, S., Gogoi, P., Dutta, A. K., Sarma, P., and Borah, R. Design of multifaceted acidic 1,3-disulfoimidazolium chlorometallate ionic systems as heterogeneous catalysts for the preparation of β -amino carbonyl compounds, *Journal of Molecular Catalysis A: Chemical*, 416, 2016.
- Sar, D., Bag, R., Bhattacharjee, D., Deka R. C., and Punniyamurthy, T. Iron(III)-mediated radical nitration of bisarylsulfonyl hydrazones: Synthesis of bisarylnitromethyl sulfones, *Journal of Organic Chemistry*, 80, 2015.
- Sarkar, C., and Dolui, S. K. Synthesis of copper oxide/reduced graphene oxide nanocomposite and its enhanced catalytic activity towards reduction of 4-nitrophenol, *RSC Advances*, 5(75), 2015.
- Sarma, K., Devi, N., Kalita, M., Sarma, B. and Barman, P. Nickel (II), copper (II), cobalt (II), and palladium (II) complexes with a Schiff base: crystal structure, DFT study and copper complex catalyzed aerobic oxidation of alcohol to aldehyde, *Journal of Coordination Chemistry*, 68(20), 2015.
- Sarma, P., Saikia, S., and Borah, R. Designing of supported organocatalysts from carboxylic acids for the Mannich-type synthesis of β -amino carbonyl compounds, *Synthetic Communications*, 45, 2015.
- Sarmah, M., Banik, N., Hussain A., Ramteke, A., Sharma, H. K., and Maji, T. K. Study on crosslinked gelatin-montmorillonite nanoparticles for controlled drug delivery applications, *Journal of Material Science*, 50(22), 2015.
- Sarmah, M., Dewan, A., Mondal, M., Thakur, A. J., and Bora, U. Analysis of the water extract of waste papaya bark ash and its implications as an in situ base in the ligand-free recyclable Suzuki-Miyaura coupling reaction, *RSC Advances*, 6(34), 2016.
- Sarmah, M., Dewan, A., Thakur, A. J., and Bora, U. Urea as mild and efficient additive for palladium catalyzed Sonogashira cross coupling reaction, *Tetrahedron Letters*, 57(8), 2016.
- Sharma, M., Das, B., Karunakar, G. V., Satyanarayana, L., and Bania, K. K. Chiral Ni-Schiff base complexes inside zeolite-Y and their application in asymmetric Henry reaction: Effect of initial activation with microwave irradiation, *Journal of Physical Chemistry C*, 120(25), 2016.



Sharma, P., Dutta, A. K., Gogoi, P., Sarma, B. and Bora, R. 3-Methyl-1-sulfoimidazolium ionic liquids as recyclable medium for efficient synthesis of quinoline derivatives by Friedlauder annulations, *Monatshefte für Chemie*, 146(1), 2015.

Sharma, S., Bora, P. J., Boruah, M., and Dolui, S. K. Gelatin-immobilized high aspect ratio gold nanocrystals: An efficient catalyst for 4-nitrophenol reduction, *Advances in Polymer Technology*, 2015.

Sharma, S., Gogoi, P., Bhargav, R., Dolui, S. K. and Patra, A. Hybrid bulk heterojunction solar cells based on poly(9-vinylcarbazole)/zinc oxide nanocomposites: Effect of aspect ratio of zinc oxide nanorod, *Journal of Polymer Materials*, 32(2), 2015.

Talukdar, D., Das, G., Thakur, S., Karak, N., and Thakur, A. J. Copper nanoparticles decorated Organically Modified Montmorillonite (OMMT): An efficient catalyst for the N-arylation of indoles and similar heterocycles, *Catalysis Communications*, 59, 2015.

Thakur, S., and Karak, N. A tough smart elastomeric bio-based hyperbranched polyurethane nanocomposite, *New Journal of Chemistry*, 39, 2015.

Thakur, S., and Karak, N. Alternative methods and nature-based reagents for the reduction of graphene oxide - a review, *Carbon*, 94, 2015.

Thakur, S., and Karak, N. Tuning of sunlight-induced self-cleaning and self-healing attributes of an elastomeric nanocomposite by judicious compositional variation of TiO₂-reduced graphene oxide nanohybrid, *Journal of Material Chemistry A*, 3, 2015.

Thakur, S., Barua, S., and Karak, N. Reduced graphene oxide-metal oxide nanohybrid for efficient adsorption, photodegradation and photoinactivation of chemical and microbial contaminants, *Journal of Nanotechnology in Diagnosis and Treatment*, 3, 2015.

Thakur, S., Barua, S., and Karak, N. Self-healable castor oil based tough smart hyperbranched polyurethane nanocomposite with antimicrobial attribute, *RSC Advances*, 5, 2015.

Conference proceedings

Baishya, P. and Maji, T. K. Dynamic mechanical analysis and thermal properties of citric acid cross-linked wood starch nanocomposites. In proceedings of the National Seminar on Contemporary Developments in Chemical Sciences (CDCS-2015), Tezpur University, Tezpur, 23-24 November, 2015.

Mandal, M. and Maji, T. K. Development of wood polymer composites based on vegetable oil. In proceedings of the National Seminar on Contemporary Developments in Chemical Sciences (CDCS-2015), Tezpur University, Tezpur, 23-24 November, 2015.

Books and Book Chapters

Baishya, P., Mandal, M., Gogoi, P., and Maji, T. K. 2016. Natural polymer based nanocomposites: A greener approach for future. In Thakur, V. K. (ed). *Nanocomposites: Science and Fundamentals*, Wiley-Scrivener.

Bordoloi, S., Gogoi, S., and Dutta, R. K. 2015. A low-cost arsenic removal method for application in the Brahmaputra-Ganga plains: Arsiro Nilogon. In Ramanathan, A. L., Johnston, S., Mukherjee, A., and Nath, B. (eds). *Safe and sustainable use of arsenic contaminated aquifers in the Gangetic plain*, Springer, Cham, Switzerland.

Deka, P., Bhattacharjee, D., Sarmah, P., Deka, R. C., and Bharali, P. 2015. Catalytic reduction of water contaminant '4-nitrophenol' over manganese oxide supported Ni nanoparticles. In Kurisu, F., Ramanathan, A., Kazmi, A. A. and Kumar, M. (eds). *Trends in Asian Water Environmental Science and Technology*, Springer.

Hazarika, A., Baishya, P., and Maji, T. K., 2015. Bio based wood polymer nanocomposites: A sustainable high performance material for future. In Thakur, V. K. and Kumari, M. (eds). *Eco-Friendly Polymer Nanocomposites: Processing and Properties*. Springer.

Karak, N. 2015. Bio-based hyperbranched polyurethane nanocomposites. In Mark, H.F. (ed). *Encyclopedia of Polymer Science and Technology*, John Wiley & Sons, Inc., Hoboken, USA.

Karak, N. 2016. Bio-based hyperbranched polyurethanes and their nanocomposites as shape memory materials. In Nalwa, H. S. (ed). *Encyclopedia of Nanoscience and Nanotechnology*, American Scientific Publisher (in press).

Karak, N. 2016. Biopolymers for paints and coatings, In Pacheco-Torgal, F., Ivanov, V., Karak, N., and Jonkers, H. M. (eds). *Biopolymers and Biotech Admixtures for Eco-efficient Construction Materials*, UK: Woodhead Publishing House Limited.



Mondal, M. and Bora, U., 2016. Intramolecular free-radical cyclization reactions and applications. In Ma, S. and Gao, S. (eds). *Science of Synthesis: Metal-Catalyzed Cyclization Reactions*. George Thieme Verlag KG.

N. Karak (Ed). 2016. *Experimental Methods on Polymers, Nanomaterials and Their Nanocomposites*. USA: Nova Science Publishers.

Pacheco-Torgal, F., Ivanov, V., Karak, N., and Jonkers, H. M. (Eds). 2016. *Biopolymers and Biotech Admixtures for Eco-efficient Construction Materials*. UK: Woodhead Publishing House Limited.

Pegu, R., Borah, R., and Pratihari, S. 2016. Synthetic compounds for antifungal chemotherapy. In Basak, A., Chakraborty, R. and Mandal, S. M. (eds). *Recent Trends in Antifungal Agents and Antifungal Therapy*, Springer (In press).

Pramanik, S., and Karak, N. 2016. Polymer nanocomposites for adhesive, coating and paint applications. In Tripathi, D. K. and Sahoo, B. P. (eds). *Properties and Applications of Polymer Nanocomposites: Clay and Carbon Based Polymer Nanocomposites*, Springer (In press).

Saikia, B. J., Das, D., Gogoi, P., and Dolui, S. K. 2015. Designing Self-healing Polymers by Atom Transfer Radical Polymerization and Click Chemistry. In Hosseini, M. and Makhlof, A. S. H. (eds). *Industrial Applications for Intelligent Polymers and Coatings*, Springer.

Saikia, C., Sarmah, M., Das, M. K., Ramteke, A., and Maji, T. K. 2015. Curcumin-Loaded Polymeric Nanoparticle: A Promising Route for the Treatment of Cancer. In Depan, D. (ed). *Biodegradable Polymeric Nanocomposites: Advances in Biomedical*, CRC press.

SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED

International and National

A K Dutta and R Borah attended and presented a paper, Design and synthesis of triphenylsulfophosphonium chlorometallates as green reusable catalyst for the synthesis of 1,3-naphthoxazine derivatives, at the Materials Research Society of India (MRSI) Symposium on Advanced Materials for Sustainable Applications, CSIR-NEIST, Jorhat, 18-21 February, 2016.

A K Dutta and R Borah attended and presented a paper, Multicomponent synthesis of tetrahydrobenzo[a]xanthenes and tetrahydrobenzo[a]acridine derivatives, at the UGC-SAP National Seminar, Emerging Trends in Chemical Sciences-2015, organised by Department of Chemistry, Gauhati University, 5 November, 2015.

A Saikia and N Karak attended and presented a paper, Castor oil epoxy/clay nanocomposite for surface coating applications, at the Materials Research Society of India (MRSI) Symposium on Advanced Materials for Sustainable Applications, CSIR-NEIST, Jorhat, 18-21 February, 2016

D Hazarika and N Karak attended and presented a paper, Bio-based waterborne hyperbranched polyester thermoset, at the Materials Research Society of India (MRSI) Symposium on Advanced Materials for Sustainable Applications, CSIR-NEIST, Jorhat, 18-21 February, 2016.

K K Bania attended the Material Research Society of India (MRSI) Symposium, Organized by CSIR-NEIST, Jorhat, Assam, 18-21 February, 2016.

P Baruah and N Karak attended and presented a paper, Bio-based hyperbranched epoxy thermoset as sustainable material at the Materials Research Society of India (MRSI) Symposium on Advanced Materials for Sustainable Applications, CSIR-NEIST, Jorhat, 18-21 February, 2016.

P Bharali presented a poster, Synthesis of $Ce_{1-x}M_xO_y$ (M = Gd, La, Mg) nanopowders by polymerizable complex method: systematic approach, at the UGC-SAP National Conference on Contemporary Developments in Chemical Sciences-2015, Tezpur University, 23-24 November, 2015.

P Gogoi and R Borah attended and presented a paper, Efficient one pot sequential conversion of Biginelli 3,4-dihydropyrimidin-2(1H)-ones to 2-amino-4-arylpyrimidines via condensation-aromatization reaction, at the UGC-SAP National Seminar, Emerging Trends in Chemical Sciences-2015, organised by Department of Chemistry, Gauhati University, 5 November, 2015.

P Gogoi, and R Borah attended and presented a paper, Investigation of acidity and structural changes of NaY zeolite upon loading of $[Dsim][CF_3COO]$ ionic liquid, at the Materials Research Society of India (MRSI) Symposium on Advanced Materials for Sustainable Applications, CSIR-NEIST, Jorhat, 18-21 February, 2016.



R Duarah and N Karak attended and presented a paper, Bio-based hyperbranched epoxy modified hyperbranched polyurethane thermoset, at the Materials Research Society of India (MRSI) Symposium on Advanced Materials for Sustainable Applications, CSIR-NEIST, Jorhat, 18-21 February, 2016.

S Gogoi and N Karak attended and presented a paper, Carbon Dot: Perception as a sustainable nano-filler for polymeric material, at the Materials Research Society of India (MRSI) Symposium on Advanced Materials for Sustainable Applications, CSIR-NEIST, Jorhat, 18-21 February, 2016

S Gogoi, M Kumar, B Mandal, and N Karak attended and presented a paper, Carbon dot included water borne hyperbranched polyurethane as a multidimensional utility material, at the Contemporary Development in Chemical Sciences (CDCS 2015), Tezpur University, Assam, 23-24 November, 2015.

S Saikia, A K Dutta and R Borah attended and presented a paper, Design of novel N,N-sulfonic tetramethylguanidinium carboxylate ionic liquids for the synthesis of tetrahydrobenzo[a]xanthenes and tetrahydrobenzo[a]acridines, at a National seminar, Natural Products: Prospects and Perspectives (NPPP-2016), at NEIST-Jorhat, 21-22 March, 2016.

TALKSBY THE FACULTY ABROAD AND IN INDIA

A J Thakur delivered a talk, Nanoparticle-catalysed Organic Synthesis Enhancement (NOSE) approach, at a National Symposium on Natural Products: Prospectus and Perspectives (NPPP-2016), organized by Chemical Research Society of India, North-East Chapter & CSIR-NEIST, Jorhat, Assam, India, 21-22 March, 2016.

B Sarma delivered an invited talk at Bilateral Symposium, India-Bangladesh Structural Chemistry Conference (IBSCC2015), IISER Kolkata, 18-19 September, 2015.

B Sarma delivered an invited talk at a National workshop on Crystallography Education, organized by Department of Chemistry Gauhati University, 8 November, 2015.

B Sarma delivered an invited talk, Solid States Drug Formulations, at Science Popularization Program, Madhabdev College, Narayanpur, Lakhimpur, Assam, 6 February, 2016.

B Sarma delivered an invited talk, Organic Solid States and Drug Development, at a National Seminar on Recent Developments in Applied Chemistry, Bajali College, Pathsala, Assam, India, 25 January, 2016.

K K Bania delivered a talk, Zeolite-Y Encapsulated Transition Metal Complexes and Their Application in Heterogeneous Catalysis, at Material Research Society of India (MRSI) Symposium, CSIR-NEIST, Jorhat, Assam, 18-21 February, 2016.

N Gogoi delivered a talk, Modulation of the coordination environment: a convenient approach to tailor single ion magnetic anisotropy at National Seminar on Emerging Trends in Chemical Sciences-2015. Department of Chemistry, Guwahati University, 5-6 November 2015.

N Karak delivered a talk, Bio-based advanced hyperbranched polymers for multifaceted applications, National seminar on Role of Chemistry on basic and applied sciences, Holkar Government Science College, Indore, September, 2015.

N Karak delivered a talk, Polymers, nanomaterials and their nanocomposites for multifaceted applications, workshop on Plastics in Yak husbandry, National research center on Yak (NRCY), November, 2015.

P Bharali delivered an invited talk, Facile transformation of $\text{Cu}_2\text{Cl}(\text{OH})_3$ precursor to active catalysts for reactions of environmental importance, at MRSI Symposium, Advanced Materials for Sustainable Applications, and 27th Annual General Meeting of MRSI. CSIR-NEIST, Jorhat, 18-21 February, 2016.

P Bharali delivered an invited talk, Nanomaterials for energy and sustainability, at National Seminar on Recent Development on Applied Chemistry. Bajali College, Pathsala, 25 January, 2016.

R C Deka delivered a talk, Chemical Kinetics II, Department of Chemistry, University of Science & Technology, Meghalaya, 11 April, 2015.

R K Dutta delivered a talk, Low-cost arsenic and fluoride removal methods for rural applications: Arsiro Nilogon and Fluoride Nilogon, at a National Conference on Contemporary Developments in Chemical Sciences, organized by Department of Chemical Sciences, Tezpur University, Tezpur, India, 23-24 November, 2015.

SEMINAR/WORKSHOP/SYMPOSIA/INVITED LECTURES ORGANISED BY THE DEPARTMENT

National Seminar on Contemporary Developments in Chemical Sciences (CDCS-2015), sponsored by UGC, Vinati Organic Limited, 23–24 November, 2015.

DISTINGUISHED VISITORS TO THE DEPARTMENT

Prof. B. C. Ranu, INSA Senior Scientist & J C Bose National Fellow, Department of Organic Chemistry, IACS, Kolkata

Prof. B. Viswanathan, Emeritus Professor, Department of Chemistry, IIT Madras.

Dr. G. Narahari Sastry, Scientist, Indian Institute of Chemical Technology (IICT), Hyderabad.

Prof. M. Palaniandaver, FRSC, FASc, FNA, INSA Senior Scientist, Bharathidasan University, Tiruchirapalli.

AWARDS & HONOURS RECEIVED BY THE FACULTY/ RESEARCH SCHOLARS/STUDENTS**Faculty**

AK Phukan was awarded the Chemical Research Society of India (CRSI) Bronze Medal for the year 2015.

B Sarma was selected as Executive Council Member of National Magnetic Resonance Society (NMRS), India.

N Karak was awarded Bronze medal, Chemical Research Society of India (CRSI), 2016.

N Karak was awarded 4th Dr. S. S. Deshpande National Award, Holkar Government Science College, Indore, 2015.

N Karak received the 9th Polymer Foundation Award, PSMFP 2015.

S K Das won the best poster award in the conference entitled "Drug Discovery and Development: Global Scenario —Indian Prospective" at National Institute of Pharmaceutical Education and Research (NIPER), Hyderabad, 20-21 November, 2015.

SK Dolui received National Technology Innovation Award-2015, in innovative product development category, awarded by the Dept. of Chemicals and Petrochemicals, Ministry of Chemicals and Fertilizers, Govt. of India, New Delhi.

Research Scholars

M Dey received the Best poster award at National Seminar on Emerging Trends in Chemical Sciences-2015. Department of Chemistry, Guwahati University, 5-6 November, 2015.

OTHER IMPORTANT ACTIVITIES OF THE DEPARTMENT/ACHIEVEMENTS OF THE FACULTY

The Department of Chemical Sciences is UGC- SAP funded. It has completed DRS Phase-I and UGC has approved for DRS Phase-II. The total amount sanctioned for DRS-II is Rs. 150 lakh for 5 years.

NUMBER OF STUDENTS WHO PASSED NET-JRF/GATE[2015-2016]

NET: 23

GATE: 24

SLET: 22

NOTABLE PLACEMENT [2015-2016]

OIL, DULIAJAN: 03

THE FACULTY OF THE DEPARTMENT**Professors**

S K Dolui, PhD (IIT, Kharagpur)

Specialization/Areas of interest: Polymer Chemistry

E-mail: dolui@tezu.ernet.in

Nashreen S Islam, PhD (NEHU)

Specialization/Areas of interest: Inorganic Chemistry

E-mail: nsi@tezu.ernet.in

T K Maji, PhD (Calcutta)

Specialization/Areas of interest: Polymer Chemistry

E-mail: tkm@tezu.ernet.in

R K Dutta, PhD (NEHU)

Specialization/Areas of interest: Physical Chemistry

E-mail: robind@tezu.ernet.in

N Karak, PhD (IIT, Kharagpur)

Specialization/Areas of interest: Advance Polymers and Nanomaterials

E-mail: nkarak@tezu.ernet.in





R C Deka, PhD (NCL, Pune)

Head of the Department

Specialization/Areas of interest: Theoretical Chemistry

E-mail: ramesh@tezu.ernet.in

A J Thakur, PhD (NEIST, Jorhat)

Specialization/Areas of interest: Organic Chemistry

E-mail: ashim@tezu.ernet.in

A K Phukan, PhD (Hyderabad)

Specialization/Areas of interest: Theoretical Inorganic and Organometallic Chemistry

E-mail: ashwini@tezu.ernet.in

Associate Professor

Ruli Borah, PhD (NEIST, Jorhat)

Specialization/Areas of interest: Organic Chemistry

E-mail: ruli@tezu.ernet.in

Assistant Professors

P Puzari, PhD (IIT, Guwahati)

Specialization/Areas of interest: Physical Chemistry

E-mail: pancha@tezu.ernet.in

K K Bania, PhD (Tezpur)

Specialization/Areas of interest: Inorganic Chemistry

E-mail: kusum@tezu.ernet.in

P Bharali, PhD (IICT, Hyderabad)

Specialization/Areas of interest: Inorganic Chemistry & Catalysis

E-mail: pankajb@tezu.ernet.in

N Gogoi, PhD (IIT, Bombay)

Specialization/Areas of interest: Inorganic Chemistry

E-mail: ngogoi@tezu.ernet.in

B Sarma, PhD (Hyderabad)

Specialization/Areas of interest: Organic Chemistry

E-mail: bcsarma@tezu.ernet.in

S K Das, PhD (CDRI, Lucknow)

Specialization/Areas of interest: Synthetic Organic Chemistry

E-mail: sajalkd@tezu.ernet.in

U Bora, PhD (NEIST, Jorhat)

Specialization/Areas of interest: Organic Chemistry

E-mail: ubora@tezu.ernet.in

Assistant Professor (Ad-hoc)

S P Mahanta, PhD (Hyderabad)

Specialization/Areas of interest: Physical Chemistry

E-mail: samahan@tezu.ernet.in

Inspire Faculty

S Pratihar, PhD (IIT, Kharagpur)

Specialization/Areas of interest: Inorganic Chemistry

E-mail: spratihar@tezu.ernet.in



Adjunct Professor

M Lakshmi Kantam, PhD (Kuruksheetra)
Specialization/Areas of interest: Inorganic
 E-mail: mlakshmi@iict.res.in

Distinguished Professor

BM Choudhary, PhD (Gujrat)
Specialization/Areas of interest: Inorganic Chemistry
 E-mail: bmchoudhary@gmail.com

Visiting Research Professor

OP Shrivastava, PhD
 Ex Professor (Dr. H. S. Gour University)
Specialization/Areas of interest: Physical Chemistry
 E-mail: dr_ops11@rediffmail.com

THE STAFF OF THE DEPARTMENT**Technical Staff**

B Gohain, PhD (Tezpur)
 Technical Officer
 E-mail: bng@tezu.ernet.in

B J Borah, MSc (Dibrugarh)
 Senior Technical Assistant
 E-mail: biraj@tezu.ernet.in

R Borah, MSc (Dibrugarh)
 Technical Assistant
 E-mail: raju@tezu.ernet.in

N Dutta, MSc (Annamalai)
 Technical Assistant
 E-mail: nipu@tezu.ernet.in

S Phukan, MSc (VMU)
 Technical Assistant
 E-mail: sankur@tezu.ernet.in

M Sarma, MBA (SMU)
 Laboratory Assistant
 E-mail: mranjan@tezu.ernet.in

Office Staff

Babita Das, MSc (IT) (SMU)
 UDC
 E-mail: bobi@tezu.ernet.in

B Das
 MTS
 E-mail: bubuld@tezu.ernet.in







DEPARTMENT OF ENVIRONMENTAL SCIENCE

THE DEPARTMENT

The Department of Environmental Science is an upgradation of the Centre of Environmental Science, which was started in 2003. Since the upgradation in 2004 the Department has been imparting education on regional and global environmental issues. The curriculum for its MSc programme focuses on all important aspects of Environmental Science covering contemporary problems of natural resource conservation and environmental quality. Areas of research include Environmental Pollution, Greenhouse Gas Emission, Riverine Hazards, Geomorphology, Climate, Atmospheric Processes, Vulnerability & Adaptation, Hydrogeochemistry, Vermicomposting, Pollution Remediation, Biodiversity Conservation and Atmospheric System Modeling.

Academic programmes and Student intake

| Academic programmes | Student Intake |
|------------------------------|--|
| MSc in Environmental Science | 30 |
| PhD | Intake variable 15 in the Academic year 2015-16 |

Major facilities and equipment available

Besides laboratories for regular academic activities the department has specialized laboratories that facilitate research. Some of the instruments the laboratories of the department house includes ICP-OES, Laser Leaf Area Meter with Root Measurement Attachment, Light Meter, Portable Photosynthesis Systems, Gas Chromatographs, Ion Chromatograph, TOC Analyzer, Continuous Air Pollution Monitoring Station, UV-Visible Spectrophotometer, Ion meter, Repairable dust sampler and Flame Photometer, GIS laboratory and plant culture house.

- ICP
- Gas Chromatograph with ECD& FID Detector
- Gas Chromatograph with ECD& FID Detector
- Portable Photosynthesis system
- Laser leaf area meter with root measurement Attachment
- High Speed Refrigerated Centrifuge
- HOBO Pro V2 Tea/RH data logger
- Respirable dust sampler with gaseous sampling attachment
- UV-Visible spectrophotometer
- Electrophoresis gel unit
- Flame photometer
- Nephelometer
- Trinocular Microscope with Camera & Software
- Sartorius RO System
- Sartorius Ultra-Pure Water Purification System
- Arc GIS Master Lab Kit (Software)
- ERDAS Software



MAJOR RESEARCH FINDINGS/RESEARCH AND DEVELOPMENT ACTIVITIES

| Principal Investigator | Salient Research Findings |
|------------------------|--|
| A K Das | <ul style="list-style-type: none"> Channel changes in Ai-Manas river system during the last three decades are characterized by neck cut off and channel length reduction in downstream reaches and gradual widening in the upper reaches. Meandering shift and frequent alternation in direction are common too. In terms of floodplain alternation, deposition is dominant over erosion during last three decades. |
| Ashalata Devi | <ul style="list-style-type: none"> Analysis of plant diversity in the four typical forests of Assam reveals high species diversity under threat. One of the forest (Kumurakota Reserve Forest) is highly disturbed, quantified based on disturbance score values. New distribution record of <i>Macacamunzala</i> in high altitudes of Tawang and West Kameng of Arunachal Pradesh. |
| K KBaruah | <ul style="list-style-type: none"> During a 3 year study on monsoon rice ecosystem, it is found that this ecosystem can act as an effective sink of carbon with an overall SOC accumulation rate of $0.566 \text{ Mg C ha}^{-1} \text{ yr}^{-1}$. Bahadur and Dinanath were identified to have high photosynthetic efficiency and high partitioning efficiency out of 06 genotype s of irrigated boro rice studied, and these two varieties are also identified to be low methane emitting rice variety A modern wheat variety, WH -1021 with higher yield and higher photosynthetic efficiency was identified, out of 07 wheat varieties grown under irrigated condition and is considered to be suitable for cultivation in future climate change situation in Indian agriculture. |
| K P Sarma | <ul style="list-style-type: none"> Identified a wetland plant of Assam for remediation of Arsenic from aqueous solution. |
| M Kumar | <p>Understanding of arsenic phase distribution and co-contamination perspective with fluoride in the Brahmaputra flood plains.</p> <ul style="list-style-type: none"> Salient findings: There is Arsenic and Fluoride contamination in the Brahmaputra flood plains however correlation is weak between the two and hot spots are different. <p>Tracing source and distribution of heavy metals in the sediment and water of the Brahmaputra River through coupling of speciation and isotopic fingerprinting.</p> <ul style="list-style-type: none"> Salient findings: Mostly metals are found in residual fractions with the maximum probability of Pb to be leached down to the groundwater and thus enter in food chain through drinking water. <p>Hydro-geochemical investigation of arsenic-contaminated alluvial aquifers of India through multilayer sampling and evaluations of applicable remediation technique.</p> <ul style="list-style-type: none"> Salient findings: Five district of Assam and four districts of Bihar was evaluated for arsenic contamination in different seasons and geochemical mechanism of arsenic release were evaluated. Health risk was calculated as well. |
| S Mitra | <ul style="list-style-type: none"> Alkali metals Na ($33.22 \pm 8.16 \text{ ppm}$) and K ($34.84 \pm 4.97 \text{ ppm}$) is present in the ginger growing soils of northeast India in very high amount than that of alkaline earth metals Ca ($1.33 \pm 0.85 \text{ ppm}$) and Mg ($4.02 \pm 2.93 \text{ ppm}$). Among the micronutrients concentration of Mn ($1.1 \pm 0.49 \text{ ppm}$) is higher in all the soils than all the other elements. Chromosome number of some species of <i>Kaempferia</i> and <i>Hedychium</i> is a new count. The ploidy determination has been done for the first time for many species and does not show any polyploidy. |
| S S Bhattacharya | <ul style="list-style-type: none"> Vermicomposting efficiency of <i>Metaphireposthuma</i> has been established. Moreover, metal remediation potential of vermitechnology has been explored mechanistically. Application of vermicomposted MSW could substitute 20% of chemical fertilization without compromising the yield potential of rice (boro and sali). 7 bacterial isolates from vermicompost and 2 from the intestinal gut of <i>Eiseniafetida</i> (earthworm) have been identified for their prolific N fixing and P solubilizing potential. |



Research projects, ongoing and new

| Project Title | Funding Agency | Amount (in INR) | Duration | Principal Investigator |
|--|------------------------|-----------------|-----------|------------------------|
| Hydro-geomorphic characterization of Manas- Aie and Gaurang river basins- A base line study of geomorphic response to observed precipitation change over Indian region | DST-SERB | 24.60 lakh | 2013-2016 | A K Das |
| Exploration, utilization, conservation and documentation of Alliumspecies in northeastern India | UGC | 10.89 lakh | 2011-2014 | Ashalata Devi |
| Studies on distribution, behavioural ecology, habitat structure and conservation of newly discovered Arunachal macaque (<i>Macacamunzala</i>) in western Arunachal Pradesh India | DST | 23.98 lakh | 2011-2014 | Ashalata Devi |
| Documentation, collection and preservation of biodiversity of Tezpur University | Tezpur University | 2.15 lakh | 2014-2016 | Ashalata Devi |
| Sacred groves of Assam: Biodiversity status and strategies for their conservation | GBPIHED | 9.96 lakh | 2014-2017 | Ashalata Devi |
| Evaluation of Carbon Sequestration and enhancing carbon sinks in rice based agro-ecosystems of Assam | DST | 62.42 lakh | 2012-2015 | K KBaruah |
| Soil-plant-atmosphere study in relation to net CO ₂ flux from terrestrial ecosystem of Assam | Ministry of Earth Sci. | 54.89 lakh | 2013-2016 | K KBaruah |
| Distribution and enrichment of heavy metals among sediments, water and aquatic plants and modeling of ecological impact on wetland ecosystem of the Brahmaputra valley | UGC | 8.32 lakh | 2012-2015 | K P Sarma |
| Spatial Distribution of uranium and associated water quality parameters in six districts of Assam (Sonitpur, Lakhimpur, Morigaon, Nagaon, Jorhat, Sibsagar) | DAE | 24.56 lakh | 2014-2017 | K P Sarma |
| Hydro-Geochemical Investigation of Arsenic contaminated alluvial aquifers of India through multilayer Samplingand evaluations of Applicable Remediation Technique. | DST | 23.65 lakh | 2012-2015 | M Kumar |
| Tracing source and distribution of heavy metals in the sediment and water of the Brahmaputra River through coupling of speciation and isotopic fingerprinting | UGC | 10.60 lakh | 2012-2015 | M Kumar |
| Understanding of arsenic phase distribution and co-contamination perspective with fluoride in the Brahmaputra flood plains | DST-SERB | 25.00 lakh | 2014-2017 | M Kumar |
| Physiochemical characterization of aerosol and source apportionment in mid Brahmaputra plain in Assam; A modeling approach. | Ministry of Earth Sci. | 69.70 lakh | 2011-2015 | R RHoque |
| Spatial and Temporal variation of aerosol optical death (AOD) on Mid Brahmaputra valley | UGC | 10.10 lakh | 2013-2016 | R RHoque |
| Modelling Atmospheric Pollution and Networking (MAPAN) | Director IITM | 20.32 lakh | 2013-2017 | R RHoque |
| Molecular and Physico-Chemical Characterization of Selected Ginger Species from North-Eastern Region | DBT - Twining | 14.70 lakh | 2011-2015 | S Mitra |
| Sustainable utilization of solid waste as a source of plant nutrient in rice based agroecosystem of North East India | CSIR | 14.80 lakh | 2011-2014 | S S Bhattacharya |
| Qualitative development of vermicompost technology through isolation of novel microorganisms and their application in agricultural waste management of Assam | DBT | 64.84 lakh | 2012-2015 | S S Bhattacharya |

**PUBLICATIONS****In International and National Journals**

- Bhattacharya, S.S. and Kim, Ki-Hyun. Utilization of coal ash: Is vermitechnology a sustainable avenue? *Renewable and Sustainable Energy Reviews*, 58, 2016.
- Bhattacharya, S.S., Kim, Ki-Hyun., Das, S., Uchimiya, M., Hun, Jeon. B., Kwon, E. and Szulejko, J.E. A review on the role of organic inputs in maintaining the soil carbon pool of the terrestrial ecosystem. *Journal of Environmental Management*, 167, 2016.
- Bhattacharya, S.S., Kim, Ki-Hyun, Ullah, A., Goswami, L., Sahariah, B., Bhattacharyya, P., Cho, Sung-Back. and Hwang, OK-Hwa. The effects of composting approaches on the emissions of anthropogenic volatile organic compounds: A comparison between vermicomposting and general aerobic composting. *Environmental Pollution*, 208, 2016.
- Bhuyan, P., Barman, N., Begum, S., Gogoi, D., Borah, S., Kumar, M., Sarma, K.P. and Hoque, R.R. Spatial and Seasonal Variations of Water Soluble Ions in PM10 of Mid-Brahmaputra Plain of Assam Valley. *Asian Journal of Water, Environment and Pollution*, 13(2), 2016.
- Borah, L. and Baruah, K.K. Nitrous oxide emission and mitigation from wheat agriculture: association of physiological and anatomical characteristics of wheat genotypes. *Environ Sci Pollut Res*, 23, 2016
- Daimari, R., Nayaka, S., Upreti, D.K. and Hoque, R.R. New records of lichen for the mycota of Assam state, Eastern Himalaya. *Indian Forester*, 2016 [Accepted].
- Das, N., Patel, A.K., Deka, G., Das, A., Sarma, K.P. and Kumar, M. Geochemical controls and future perspective of arsenic mobilization for sustainable groundwater management: A study from Northeast India, *Journal of Groundwater for Sustainable Development*, 1(1-2), 2016.
- Das, P., Sarma, K.P., Jha, P.K., Ranjan, R., Herbert, R. and Kumar, M. Understanding the Cyclicity of Chemical Weathering 4 and Associated CO₂ Consumption in the Brahmaputra River Basin (India): The Role of Major Rivers in Climate Change Mitigation Perspective. *Aquatic Geochemistry*, 2016 [In press].
- Das, S., Deka, P., Goswami, L., Sahariah, B., Hussain, N. and Bhattacharya, S.S. Vermiremediation of toxic jute mill waste employing *Metaphireposthuma*. *Environ Sci Pollut Res*. DOI 10.1007/s11356-016-6718-x. 2016.
- Deka, J.P., Singh, S., Jha, P.K., Singh, U.K. and Kumar, M. "Imprints of long transported pollution on high altitude Eastern Himalayan lake water chemistry. *Environmental Earth Sciences*, 2016 [In press].
- Deka, J.P., Yamanaka, T., Singh, S., Choudhury, R., Tayeng, G. and Kumar, M. Tracing the imprints of climate change through Hydrogeochemical Studies on the Eastern Himalayan High altitude Lakes. *Journal of Climate Change*, 2(1), 2016.
- Deka, P., Bhuyan, P., Daimari, R., Sarma, K.P. and Hoque, R.R. Metallic species in PM10 and source apportionment using PCA-MLR modeling over mid-Brahmaputra Valley. *Arab J Geosci*, 9, 2016.
- Hazarika, N., Tayeng, T., Das, A.K. Living in troubled waters: stakeholders' perception, susceptibility and adaptations to flooding in the Upper Brahmaputra plain, *Natural Hazards*, 83, 2016.
- Hussain, K., Rahman, M., Prakash, A., Sarma, K.P. and Hoque, R.R. Atmospheric bulk deposition of PAHs over Brahmaputra Valley: characteristics and influence of meteorology. *Aerosol and Air Quality Research*, 2016 [Accepted].
- Kumar, M., Das, A., Das, N., Singh, U.K. and Goswami, R. Co-occurrence perspective of arsenic and fluoride in the groundwater of Diphu, Assam, North-eastern India, *Chemosphere*, 150, 2016.
- Kumar, M., Herbert, R. Jr., Ramanathan, A.L., Rao, M.S., Kumar, P., Deka, J.P. and Kumar, B. Understanding the seasonal dynamics of the groundwater hydrogeochemistry in National Capital Territory (NCT) of India through geochemical modeling. *Aquatic Geochemistry*, 2016 [In press].
- Kumar, M., Patel, A.K., Das, A., Kumar, P., Goswami, R., Deka, P. and Das, N. Hydrogeochemical Controls on Mobilization of Arsenic and Associated Health Risk in Nagaon District of the Central Brahmaputra Plain, India. *Environmental Geochemistry and Health*, 2016 [In press].
- Mitra, S., Singh, P., Manzoor, S., Bhattacharyya, P., Bera, T., Kumar, P.A., Rangan, L. and Borah, P. Can rice and wheat biochar amendment protect the carbon loss from tropical soils - An experimental study. *Environ. Prog. Sustainable Energy*, 35, 2016.
- Prabha, S., Ramanathan, A.L., Gogoi, A., Mazumder, P. and Kumar, M. Assessment of the impact of textile effluents on microbial diversity in Tripura district, Tamil Nadu. *Applied Water Science*, 2016, [In press].
- Sah, R.K. and Das, A.K. Actualizing the role of morphometry in riverine hazards in an Eastern Himalayan river. *Arabian Journal of Geosciences*, 9(3), 2016.
- Sarma, J., Devi, A. and Sarma, G.C. Exploration of non-timber forest products (NTFPs) used by the Mishing community in Sonitpur district of Assam, India, *Pleione*, 10(1), 2016.



- Baroowa, B. and Gogoi, N. Changes in plant water status, biochemical attributes and seed quality of black gram and greengram genotypes under drought, *International Letters of Natural Sciences*, 42, 2015.
- Baroowa, B. and Gogoi, N. Morpho-physiological and yield responses of black gram (*Vignamungo* L.) and green gram (*Vignaradiata* L.) genotypes under drought at different growth stages. *Research Journal of Recent Sciences*, 2015[Accepted].
- Baroowa, B., Gogoi, N., Paul, S. and Baruah, K.K. Response of leaf water status, stomatal characteristics, photosynthesis and yield in black gram and green gram genotypes to soil water deficit. *Functional Plant Biology*.CSIRO,2015[In press].
- Baruah, A. and Baruah, K.K. Organic manures and crop residues as fertilizer substitutes: impact on nitrous oxide emission, plant growth and grain yield in pre monsoon rice cropping system. *Journal of Environmental Protection*, 2015[In press].
- Borah, L. and Baruah, K. K. Physiological and anatomical variations in three rice (*Oryza sativa* L.) genotypes for transport and emission of methane. *Climate Change and Environmental Sustainability*, 3(1), 2015.
- Borah, L. and Baruah, K.K. Nitrous oxide emission and mitigation from wheat agriculture: association of physiological and anatomical characteristics of wheat genotypes. *Environmental Science and Pollution Research*.2015 [In press].
- Das, A. and Kumar, M. Arsenic enrichment in the groundwater of Diphu, Northeast India: Coupled application of major ion chemistry, speciation modeling and multivariate statistical techniques. *CLEAN - Soil, Air, Water*, 43 (11),2015.
- Das, A., Kesari, V., Satyanarayana, V.M., Parida, A., Mitra, S. and Rangan, L. Genetic diversity in ecotypes of the scarce wild medicinal crop *Zingiber moran* revealed by ISSR and AFLP marker analysis and chromosome number assessment. *Plant Biosystems-An International Journal Dealing with all Aspects of Plant Biology*, 149(1), 2015.
- Das, P., Kumar, M. and Sarma, K. P. Speciation of heavy metals in surface sediments of the Brahmaputra River, Assam. *Journal of Environmental Research and Development*, 9(3A), 2015.
- Das, P., Sarma, K.P. and Kumar, M. Understanding of chemical speciation of lead, zinc and copper in vertical profile of the sediments of the Brahmaputra River Assam, India. *Asian Journal of Water Environment and Pollution*, 12(1), 2015.
- Das, S., Bora, J., Goswami, L., Bhattacharyya, P., Raul, P. and Bhattacharya, S.S. Vermiremediation of Water Treatment Plant Sludge employing *Metaphireposthuma*: A soil quality and metal solubility prediction approach. *Ecological Engineering*, 81, 2015.
- Deka, J., Sarma, K.P. and Hoque, R.R. Application Of Multivariate Statistical Approach To Identify Heavy Metal Sources In Oilfield Soil of Brahmaputra Valley. *Int. J. Bio-res. Env&Agri. Sci.*, 1(4), 2015.
- Deka, J.P., Tayeng, G., Singh, S., Hoque, R.R., Prakash, A., Kumar, M. Source and seasonal variation in the major ion chemistry of two eastern Himalayan high altitude lakes, India. *Arabian Journal Geosciences*, 8(12), 2015.
- Deka, J.P., Baruah, B., Singh, S., Chaudhury, R., Prakash, A., Bhattacharyya, P., Selvan, M.T. and Kumar, M. Tracing phosphorous distributions in the surficial sediments of two eastern Himalayan high altitude lakes through sequential extraction, multivariate and HYSPLIT back trajectory analyses. *Environmental Earth Sciences*, 73, 2015.
- Deka, P. and Hoque, R.R. Chemical characterization of biomass fuel smoke particles of rural kitchens of South Asia. *Atmospheric Environment*, 108, 2015.
- Devi, U., Hoque, R.R. and Sarma, K.P. Accumulation of trace metals in soil and trees by the highway passing through an ecological heritage area. *Journal of Environmental Research. and Development*, 9(3). 2015.
- Dutta, G. and Devi, A. Impact of lopping on tree species of tropical Indian forests. *Tropical Plant Research*, 2(1), 2015.
- Dutta, G. and Devi, A. Phenology and population structure of six tree species in tropical forest of Assam, northeast India. *Tropical Ecology*, 56(3), 2015.
- Gogoi, A., Biswas, S., Bora, J., Bhattacharya, S.S. and Kumar, M. Effect of vermicomposting on copper and zinc removal in activated sludge with special emphasis on temporal variation. *Ecohydrology & Hydrobiology*, 15(2), 2015.
- Gope, M., Hoque, R.R. and Balachandran, S. Chemical Speciation Of Zn In Roadside Deposited Dust Of Asansol, West Bengal, India. *Int. J. Bio-res. Env&Agri. Sci.*, 1(4), 2015.
- Hazarika, N., Das, A.K. and Borah, S.B. Assessing land-use changes driven by river dynamics in chronically flood affected Upper Brahmaputra plains, India, using RS-GIS techniques. *The Egyptian Journal of Remote Sensing and Space Science and Space Science*, 18(1), 2015.
- Hussain, K., Balachandran, S. and Hoque, R.R. Sources of Polycyclic Aromatic Hydrocarbons in sediments of the Bharalu River, a tributary of the River Brahmaputra in Guwahati, India. *Ecotoxicology and Environmental Safety*, 122, 2015.
- Hussain, K., Rahman, M., Prakash, A. and Hoque, R.R. Street dust PAHs of a major city in the Brahmaputra Valley of South Asia: profile, toxicity, sources and seasonality of correlations with carbon. *Sustainable Cities and Society*, 19, 2015.
- Jo, S.H., Kim, K.H., Jeon, B.H., Lee, M.H., Kim, Y.H., Kim, B.W., Cho, S.B., Hwang, O.H. and Bhattacharya, S.S. Odor characterization from barns and slurry treatment facilities at a commercial swine facility in South Korea. *Atmospheric Environment*, 119, 2015.



- Krishan, G., Rao, M.S., Kumar, B., Kumar, C.P., Kumar, S., Jaiswal, R.K., Rao, Y.R.S., Tripathi, S., Garg, P.K., Kumar, M. and Kumar, P. Monitoring of Southwest Monsoon Using Isotope Analysis of Ground Level Vapour (GLV) in Indian Sub-Continent, *J of Earth Science and Climate Change*, 2, 2015.
- Krishan, G., Rao, M.S., Kumar, C.P., Kumar, M. and Kumar, B. Investigation of geospatial effects on moisture dynamics in Tezpur (Assam) and Roorkee (Uttarakhand) through isotopes observations. *IWRA (India) Journal*.3(2), 2015.
- Kumar, M., Rao, M. S., Deka, J.P., Ramanathan, A.L. and Kumar, B. "Integrated hydrogeochemical, isotopic and geomorphological depiction of the groundwater salinization in the aquifer system of Delhi, India. *Journal of Asian Earth Sciences*, 111, 2015.
- Patel, A.K., Deka, J.P., Das, A. and Kumar, M. *Alluvial Plains of Darbhanga Province, Bihar: A Zone of Arsenic Vulnerability*. *Indian Groundwater*, 4, 2015.
- Paul, S. and Gogoi, N. Indices and their applicability under high temperature in potato (*Solanum tuberosum*L.) cultivars. *International Letters of Natural Sciences*, 43, 2015.
- Ray, P.C., Kumar, A., Devi, A., Krishna, M.C., Khan, M.L. and Brockelman, Y. Habitat characteristics and their effects on the density of groups of Western hoolock gibbon (*Hoolockhoolock*) in Namdapha national park, Arunachal Pradesh, India. *Int. Journal of Primatology*, 2015 [In press].
- Sah, R. and Das, A.K. Drainage skeletization from flow accumulated area without the use of threshold. *Geocarto International*, 30(8), 2015.
- Sahariah, B., Goswami, L., Faruqui, I.U., Raul, P., Bhattacharyya, P. and Bhattacharya, S.S. Solubility, hydrogeochemical impact, and health assessment of toxic metals in municipal wastes of two differently populated cities. *Journal of Geochemical Exploration*, 157, 2015.
- Sahariah, B., Goswami, L., Kim, K.H., Bhattacharyya, P. and Bhattacharya, S.S. Metal remediation and biodegradation potential of earthworm species on municipal solid waste: A parallel analysis between *Metaphireposthuma* and *Eiseniafetida*. *Bioresource Technology*, 2015.
- Saikia, P., Bhattacharya, S.S. and Baruah, K.K. Organic substitution in fertilizer schedule: Impacts on soil health, photosynthetic efficiency, yield and assimilation in wheat grown in alluvial soil. *Agriculture, Ecosystems and Environment*. 203, 2015
- Sarania, B., Devi, A., Kumar, A., Wang, K. and Rakshit, K. A record of *Scutigernyingchiensis* Fei, 1977 (Amphibia: Anuran: Megophryidae), in Eastern Himalaya of Northeast. India. *Current Science*, 109(3), 2015.
- Sarkar, M. and Devi, A. Assessment of plant diversity in Hologongapar gibbon wildlife sanctuary, Assam, northeast India. *Indian Forester*, 141(6) 2015.
- Sarma, B. and Gogoi, N. Germination and seedling growth of Okra (*Abelmoschus esculentus* L.) as influenced by organic amendments. *Cogent Food and Agriculture*, 2015 [In press].
- Sarma, B., Bhattacharya, S.S., Gogoi, N., Paul, S. and Baroowa, B. Impact of N fertilization on C balance and soil quality in Maize Dhaincha cropping sequence. Accepted for publication. *Journal of Agricultural Sciences*, 60(2), 2015.
- Sarma, J. and Devi, A. Study on traditional worshipping plants in Hindu religion from Nalbari and Sotnipur districts of Assam. *Int. J. of Scientific and Research Publications*, 5(5), 2015.
- Singh, P., Heikkinen, J., Ketoja, E., Nuutinen, V., Palojarvi, A., Sheehy, J., Esala, M., Mitra, S., Alakukku, L. and Regina, K. Tillage and crop residue management methods had minor effects on the stock and stabilization of topsoil carbon in a 30-year field experiment. *Science of The Total Environment*, 518, 2015

Books and Book Chapters

- Sarma, J., Devi, A., & Sarma, G.C. 2016. Ethnobotanical enquiries of medicinal plants used by Munda community for human and animal care in Sonitpur district of Assam, India. In Singha, D. N. (ed). *Natural Resources – utilizing and conserving for human welfare and sustenance*. Chennai: Global Publishing House.
- Singh, D., Prakash, A., Kumar, A., Singh, B.P., Punia, M., Sanyogita, Sharma, H., Kumar, K., and Jain, V.K. 2015. Ambient Noise Levels after CNG Implementation in Transport Sector in Delhi. In Raju N. J., Gossel W., Ramanathan A. L., and Sudhakar M. (eds). *Management of Water, Energy and Bio-resources in the era of climate change: Emerging issues and challenges*. Cham, Switzerland: Springer.
- Das, N., Khanikar, L., Shah, R., Das, A., Goswami, R., Kumar, M., and Sarma, K.P. 2015. Problem, Perspective and Challenges of Arsenic Contamination in the Groundwater of Brahmaputra Flood Plains and Barak Valley Regions of Assam, India, In



Ramanathan, A. L., Johnston, S., Mukherjee, A., and Nath. B. (eds). *Safe and Sustainable Use of Arsenic-Contaminated Aquifers in the Gangetic Plain: A Multidisciplinary Approach*. New Delhi:Capital Publishing Company and Cham, Switzerland: Springer.

TALKS BY THE FACULTY ABROAD AND IN INDIA

Ashhalata Devi delivered a talk, Tree plantation and its significance, in the Bon Mahotsav organized by Missamari Army Camp, Assam, 4 June, 2015.

Ashhalata Devi acted as a Resource person and delivered a talk, Plant diversity, identification and significance, in Green Hub at Tezpur, Assam, 7-15 December, 2015.

KK Baruah acted as a Resource person and delivered a talk, Hormonal regulation of physiological processes in rice and wheat in relation to greenhouse gas emissions, at IPPC 2015, 12 December, 2015.

KP Sarma acted as a Resource person and delivered a talk, Arsenic Contamination in Groundwater: A Global Perspective with Special Emphasis on the Brahmaputra and Barak Valley Regions of the Assam, India, in the National Seminar at Shillong College, 30-31 June, 2015.

SEMINAR/WORKSHOP/SYMPOSIA/INVITED LECTURES ORGANISED BY THE DEPARTMENT

International Workshop on Hydrology: The Interdisciplinary Science of Water, January 4-14, 2016, sponsored by MHRD, Govt. of India.

World Environment Day was observed on 5th June 2015 with a three day programme

NOTABLE PLACEMENT

Dr Leena Borah, Asstt. Professor, CCSU, Guwahati.

DISTINGUISHED VISITORS TO THE DEPARTMENT

Prof B N Goswami, Director, IITM, Pune, India.

AWARDS AND HONOURS RECEIVED BY THE FACULTY/STAFF/RESEARCH SCHOLARS/STUDENTS

Prof K K Baruah was awarded the prestigious J C Bose Gold Medal by Indian Society for Plant Physiology for his outstanding contribution in the field of environmental plant physiology. He received the award in the inaugural ceremony of 3rd International Congress of Plant Physiology held at JNU, New Delhi, 11 December, 2015.

Jintu Sarma, UDC, Department of Environmental Science, was awarded National Award for the Empowerment of Persons with Disabilities, under the Category: Best Employee, 2015 by MoSJE, Govt. of India.

Dr SSBhattacharya, was awarded Anniversary Teacher Award, 2015 by Tezpur University.

ACHIEVEMENTS

Dr M Kumar, has been selected for the Water Advanced Research and Innovation (WARI) Fellowship supported by the Department of Science and Technology, Govt. of India, the University of Nebraska-Lincoln (UNL), the Daugherty Water for Food Institute (DWFI) and the Indo-US Science and Technology Forum (IUSSTF) to carry out research at University of Nebraska-Lincoln.

Dr Nirmali Gogoi, has received, UGC Raman Fellowship for Post-Doctoral Research in USA, 2015-2016.

OTHER IMPORTANT ACTIVITIES OF THE DEPARTMENT

- The Department is supported by UGC-SAP, DST-FIST.

NUMBER OF STUDENTS WHO PASSED NET-JRF/GATE [2015-2016]

- UGC-NET (LS) - 03
- ICAR (LS) - 01

**THE FACULTY OF THE DEPARTMENT****Professors**

K KBaruah, PhD (PAU)

Specialization/Areas of Interest: Environmental Plant Physiology and Biochemistry

E-mail: kkbaruah@tezu.ernet.in

K P Sarma, PhD (NEHU)

Specialization/Areas of Interest: Water & soil Pollution, Hydrogeochemistry, Remediation of Toxic substances

E-mail: sarmakp@tezu.ernet.in

Associate Professors

R R Hoque, PhD (JNU)

Specialization/Areas of Interest: Air pollution and Environmental Monitoring and Assessment

E-mail: rrh@tezu.ernet.in

A K Das, PhD (JNU)

Head of the Department

Specialization/Areas of Interest: Fluvial Geomorphology, Urban Climate

E-mail: apurba@tezu.ernet.in

Assistant Professors

Ashalata Devi, PhD (NEHU)

Specialization/Areas of Interest: Forest Ecology, Wildlife and Biodiversity conservation

E-mail: kh_asha@tezu.ernet.in

Nirmali Gogoi, PhD (Dibrugarh)

Specialization/Areas of Interest: Stress Physiology & Biochemistry

E-Mail: nirmali@tezu.ernet.in

S S Bhattacharya, PhD (VisvaBharati)

Specialization/Areas of Interest: Vermiculture, Plant Nutrition & Soil Fertility Management

E-mail: satya72@tezu.ernet.in

Sumi Handique, MSc (JNU)

Specialization/Areas of Interest: Geochemistry

E-mail: sumihan@tezu.ernet.in

M Kumar, PhD (Tokyo)

Specialization/Areas of Interest: Hydro-geochemistry, Groundwater modelling, Contaminant transport

E-mail: manishk@tezu.ernet.in

A Prakash, PhD (JNU)

Specialization/Areas of Interest: Atmospheric Processes, Air and Noise pollution monitoring and modelling,

E-mail: ap@tezu.ernet.in

S Mitra, PhD (IARI)

Specialization/Areas of Interest: Environmental Pollution, Climate change: Vulnerability and Adaptation; C-Sequestration

E-mail: sudip@tezu.ernet.in

THE STAFF OF THE DEPARTMENT**Technical Staff**

P Goswami, MCA (Dibrugarh),
Senior Technical Assistant
E-mail: pranjol@tezu.ernet.in
J Borah, MSc (Gauhati)
Technical Assistant
E-mail: jborain@tezu.ernet.in

Office Staff

J Sarma, MSc (Gauhati)
UDC
E-mail: jsarma@tezu.ernet.in

P PBasumatary
MTS







DEPARTMENT OF MATHEMATICAL SCIENCES

THE DEPARTMENT

The Department of Mathematical Sciences was established in July 1994 with the objective of producing trained manpower capable of undertaking research and teaching in Mathematics and allied branches. It also aims at creating mathematicians for problem solving in industry and other concerns. The Department has been running a 2-year MA/MSc programme in Mathematics and the PhD programme in Mathematical Sciences since 1994. A 5-year Integrated MSc programme in Mathematics was started in August 2009, followed by an integrated BSc BEd programme in Mathematics in 2011. A 2-year MSc programme in Mathematics is also being offered in the Distance Education mode under the Centre for Open and Distance Learning of the University since 2012. Apart from these programmes, the Department also caters to the teaching of Mathematics of the various BTech, MTech, BVoc and Integrated programmes of the University. Faculty members of the Department have been supervising doctoral research in the areas of Discrete Probability Distributions, Combinatorial Optimization, Number Theory and Mathematics influenced by the work of Ramanujan, Fuzzy Mathematics, Topology and its Applications, Operator Theory and Applications, Computational Fluid Dynamics, Differential Equations, Group Theory, Ring Theory and Graph Theory. The Department has successfully completed several research projects sponsored by DST, ISRO, CSIR, UGC, ICSSR, and DRDO. The Department is being supported under UGC-SAP (Phase-I) since 2011 and under DST-FIST with effect from 2014 for a period of five years.

Academic programmes and Student intake

| Academic programme | Student Intake |
|-----------------------------------|---|
| MSc in Mathematics | 42 |
| Integrated MSc in Mathematics | 20 |
| Integrated BSc BEd in Mathematics | 10 |
| PhD | Intake variable, 05 in the Academic year 2015-16 |

Major facilities and equipment available

A computational laboratory was set up in the Department in 2005 with partial assistance from DST, Govt. of India. The laboratory has scientific and mathematical software packages. The laboratory is fully networked, and is linked to the central computer center of the University via LAN, and has access to the Internet. One Systems Analyst with the help of a technical assistant looks after the laboratory. The laboratory has been fully upgraded in 2015 under FIST grant of the DST.

MAJOR RESEARCH FINDINGS/RESEARCH AND DEVELOPMENT ACTIVITIES

| Principal Investigator | Salient Research Findings |
|------------------------|---|
| N Deka Baruah | Several new congruences for various partition functions were discovered. |
| R K Nath | Several upper and lower bounds for commuting probability of finite rings were obtained. |
| S Sen | Fourth order compact discretization for steady biharmonic pure stream function formulation was established. |

Research projects, ongoing and new

| Project Title | Funding Agency | Amount (in INR) | Duration | Principal Investigator |
|---|----------------|-----------------|-----------|------------------------|
| Fully discrete analysis of two n -level/two-grid methods for Oldroyd model with non-smooth data | UGC | 6.00 lakh | 2014-2016 | D Goswami |

**PUBLICATIONS****In International and National Journals**

- Ahmed, Z. and Baruah, N. D. and Dastidar, M. G. New congruence modulo 5 for the number of 2-colour partitions, *Journal of Number Theory*, 157, 2015.
- Ahmed, Z. and Baruah, N. D. New congruences for l -regular partitions for $l \in \{5, 6, 7, 49\}$, *The Ramanujan Journal*, 40, 2016.
- Baruah, N. D. and Ahmed, Z. New congruences for Andrews' singular overpartitions, *International Journal of Number Theory*, 11, 2015.
- Baruah, N. D. and Boruah, B. Partition identities arising from Ramanujan's formulas for multipliers, *The Ramanujan Journal*, 2016 [In press].
- Baruah, N. D. and Das, K. Parity results for 7-regular and 23-regular partitions, *International Journal of Number Theory*, 11, 2015.
- Das, K. New proofs of some modular equations in the theory of signature 3, *Journal of the Indian Mathematical Society*, 82(3-4), 2015.
- Das, P. K. and Vashisht., L. K. On perturbation of binary Linear codes, *Mathematics for Applications*, 4(2), 2015.
- Das, P. K. and Vashisht., L. K. Error locating codes by using blockwise-tensor product of blockwise detecting/correcting codes, *Khayyam Journal of Mathematics*, 2(1), 2016.
- Dutta, S. Bandwidth Selection for Kernel based Interval Estimation of a Density, *Journal of Data Science*, 2016 [Accepted].
- Dutta, S. Cross-validation Revisited, *Communications in Statistics - Simulation and Computation*, 45(2), 2016.
- Dutta, S. and Biswas, S. Extreme Quantile Estimation Based on Financial Time Series, *Communications in Statistics - Simulation and Computation*, 2016 [In press].
- Dutta, S. and Biswas, S. Assessing Market Risk of Indian Index Funds. *Global Business Review*, 16(3), 2015.
- Dutta, S. and Biswas, S. Extreme quantile estimation based on financial time series, *Communications in Statistics-Simulation and Computation*, 2016 [In press].
- Dutta, S. Consistency of multivariate density estimators using random bandwidths, *Communications in Statistics-Theory and Methods*, 45(2), 2016.
- Dutta, S. Local Smoothing for Kernel Distribution Function Estimation, *Communications in Statistics - Simulation and Computation*, 44(4), 2015.
- Dutta, S. Distribution function estimation via Bernstein polynomial of random degree, *Metrika*, 79, 2016.
- Goswami, D. and Damazio, P. D. A two-grid finite element method for time-dependent incompressible Navier-Stokes equations with non-smooth initial data, *Numerical Mathematics-Theory, Methods and Applications*, 8(2), 2015.
- Hazarika, D. and Mitra D. K.L-locally uniform spaces(II), *Annals of Fuzzy Mathematics and Informatics*, 10, 2015.
- Kalita, D. Properties of first eigenvectors and first eigenvalues of nonsingular weighted directed graphs, *Electronic Journal of Linear Algebra*, 30, 2015.
- Kalita, D. Extremizing first eigenvalue of 3-colored digraphs made with given blocks, *Linear Algebra and its Applications*, 503, 2015.
- Kumar, P., Haloi, R., Bahuguna, D. and Pandey D. N. Existence of solutions to a new class of abstract non-instantaneous impulsive fractional integro-differential equations, *Nonlinear Dynamics and System Theory*, 16, 2016.
- Nath, R. K. and Yadav, M. K. On the probability distribution associated to commutator word map in finite groups, *International Journal of Algebra and Computation*, 25, 2015.
- Nath, R. K. and Yadav, M. K. Some results on relative commutativity degree, *Rendiconti Del Circolo Matematico Di Palermo*, 64(2), 2015.
- Paul, S. On distance and distance Laplacian spectra of corona of two graphs, *Discrete Mathematics, Algorithms and Applications*, 2016 [In press].
- Sen, S. and Kalita, J. C. A 4OEC scheme for the biharmonic steady Navier-Stokes equations in non-rectangular domains, *Computer Physics Communications*, 196, 2015.

SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**International and National**

- D Goswami attended an International Conference on Current Trends in PDEs: Theory & Computations, organized by South Asian University, New Delhi, 28-30 December, 2015.
- D Goswami attended the WHS791x: Technical Communication for Scientists and Engineers, organized by IIT, 08 October – 18 November, 2015.



R Haloi attended a National Program on Differential Equations: Theory, Computation & Applications (NPDE-TCA) organized by Jaypee University of Information Technology, HP, 19-25 October, 2015.

R Haloi attended a National Workshop on Mathematical Analysis and its Applications to Engineering, organized by IIT Guwahati, 02-04 January, 2016.

R Haloi attended an International Conference on Current Trends in PDEs: Theory & Computations, organized by South Asian University, New Delhi, 28-30 December, 2015..

R K Nath attended a School on Analysis and Topology, organized by ISI North East Centre and Tezpur University, 22 February – 04 March, 2016.

R K Nath attended the WHS791x: Technical Communication for Scientists and Engineers, organized by IIT Bombay, 08 October – 18 November, 2015.

TALKS BY THE FACULTY ABROAD AND IN INDIA

D Goswami delivered an invited talk, A 2-grid FEM for the time-dependent incompressible NSEs with non-smooth data, at an International Conference on Current Trends in PDEs: Theory & Computations, South Asian University, New Delhi, 30 December, 2015.

D K Basnet acted as a Resident Faculty in the MTTs program (Level-0, Combinatorics) of the National Board for Higher Mathematics at Goa University, 11- 23 May, 2015.

D K Basnet, Resource person in the TPM (Training Programme in Mathematics, Level 1 & 3, Number theory & Algebra) 2015 of D. A. E. Govt. of India at NISER Bhubaneswar, 8- 20 June, 2015.

N D Baruah delivered an invited talk, Ramanujan and Pi, in a seminar organized by the Department of Mathematics, B. Barooah College, Guwahati, 09 June, 2015.

N D Baruah delivered an invited talk, Pi, in the Pi-Day celebration organized by Girijananda Institute of Management and Technology (GIMT), Dekargaon, Tezpur, 14 March, 2016.

S. Sen delivered the talk, A fast and robust hybrid method for block-structured mesh adaption with emphasis on FSI-LES applications, at Department of Fluid Mechanics, HSU, Hamburg, Germany, 20 November, 2015.

SEMINAR/WORKSHOP/SYMPIOSIA/INVITED LECTURES ORGANISED BY THE DEPARTMENT

Annual Foundation School-I (AFS-I) sponsored by National Council for Mathematics (NCM), Mumbai, 1-29 December, 2015.

School on Analysis and Topology, organized jointly with ISI North East Centre sponsored by ISI Kolkata and Tezpur University, 22 February– 04 March, 2016.

AWARDS & HONOURS RECEIVED BY THE FACULTY/ RESEARCH SCHOLARS/STUDENTS:

S Sen, awarded INSA visiting fellow, 2015.

NUMBER OF STUDENTS WHO PASSED NET-JRF/GATE [2014-2015]: 4

NOTABLE PLACEMENT [2014-2015]:

Manjil P. Saikia, selected for PhD programme, University of Vienna, Austria, 2015

Abhijit Kumar Baruah, selected for PhD programme, University of Delaware, USA, 2016

THE FACULTY OF THE DEPARTMENT

Professors

M Borah, PhD (Gauhati)

Specialization/Areas of interest: Probability Distribution, Optimization using GA

E-mail: mborah@tezu.ernet.in

N Deka Baruah, PhD (Tezpur)

Specialization/Areas of interest: Number Theory and Mathematics influenced by Ramanujan

E-mail: nayan@tezu.ernet.in



D Hazarika, PhD (JMI)

Head of the Department (till 31 July, 2015)

Specialization/Areas of interest: General Topology, Fuzzy Sets and Applications

E-mail: debajit@tezu.ernet.in

M Hazarika, PhD (Tezpur)

Specialization/Areas of interest: Operator Theory, Functional Analysis

E-mail: munmun@tezu.ernet.in

M Nath, PhD (IIT Guwahati)

Specialization/Areas of interest: Graph Theory

E-mail: milan@tezu.ernet.in

Associate Professors

B P Sarmah, PhD (Gauhati)

Head of the Department(from 01 August, 2015)

Specialization/Areas of interests: Theoretical Physics

E-mail: bhim@tezu.ernet.in

S Dutta, PhD (Tezpur)

Specialization/Areas of interest: Statistics (Bayesian Inference Asymptotic Distributions)

E-mail: sdutta@tezu.ernet.in

D K Basnet, PhD (Dibrugarh)

Specialization/Areas of interest: Algebra (Ring Theory)

E-mail: dbasnet@tezu.ernet.in

S Sen, PhD (IIT Guwahati)

Specialization/Areas of interest: Computational Fluid Dynamics

E-mail: shuvam@tezu.ernet.in

Assistant Professors

R Haloi, PhD (IIT Kanpur)

Specialization/Areas of interest: Non-linear Differential Equations, Analysis

E-mail: rhaloi@tezu.ernet.in

B K Sarmah, PhD (Tezpur)

Specialization/Areas of interest: Number Theory, Ramanujan Mathematics

Email: bipul@tezu.ernet.in

R K Nath, PhD (NEHU)

Specialization/Areas of interest: Algebra

E-mail: rknath@tezu.ernet.in

D Kalita, PhD (IIT Guwahati)

Specialization/Areas of interest: Graph Theory

E-mail: kdebajit@tezu.ernet.in

D Goswami, PhD (IIT Bombay)

Specialization/Areas of interest: Finite Element Method

E-mail: deepjyoti@tezu.ernet.in

P K Das, PhD (Delhi)

Specialization/Areas of interest: Coding Theory

E-mail: pankaj4@tezu.ernet.in



Assistant Professors (Ad-hoc)
S Paul, PhD (Tezpur)

2015-16







DEPARTMENT OF MOLECULAR BIOLOGY AND BIOTECHNOLOGY

THE DEPARTMENT

Recognized by the Department of Biotechnology (DBT) of the Ministry of Science and Technology, Government of India, The Department of Molecular Biology and Biotechnology (MBBT) has completed **nineteen** years this year. The Department offers a two-year MSc programme in Molecular Biology and Biotechnology, a five-year Integrated MSc in Bioscience and Bioinformatics and a PhD programme in Molecular Biology and Biotechnology. The objective of the Department has been to contribute to the advancement of the emerging areas of basic and applied Life Sciences and to create manpower in the field of Molecular Biology and Biotechnology. The Department has been granted accreditations for its Post Graduate programme.

The Department was ranked amongst the top ten Biotechnology Departments in the country this year in consideration of the achievements of its students, the high quality research pursued by the faculty, and the advanced facilities for biotechnological research available at the Department.

Academic Programmes and Student intake

| Academic programmes | Student Intake |
|---|---|
| MSc in Molecular Biology and Biotechnology | 30 |
| Integrated MSc in Bioscience and Bioinformatics | 20 |
| PhD | Intake variable 12 in the last Academic year |

Major facilities and equipment available

| | |
|--|---|
| <ul style="list-style-type: none"> • GENOMICS/TRANSCRIPTOMICS DNA SEQUENCERS (4 CAPILLARY) BIOANALYZER QUANTITATIVE PCR | <ul style="list-style-type: none"> • PROTEOMICS FAST PROTEIN LIQUID CHROMATOGRAPHY (FPLC) UHPLC SYSTEMS |
| <ul style="list-style-type: none"> • BIOCHEMISTRY/METABOLOMICS ULTRACENTRIFUGE GC/MS HPLC FTIR SPECTROFLURIMETER | <ul style="list-style-type: none"> • CELL BIOLOGY/CELL IMAGING FLUORESCENCE MICROSCOPE |
| <ul style="list-style-type: none"> • ANIMAL CELL CULTURE FACILITY | <ul style="list-style-type: none"> • PLANT TISSUE CULTURE FACILITY |
| <ul style="list-style-type: none"> • MICROBIOLOGY LAB | <ul style="list-style-type: none"> • BIOINFORMATICS INFRASTRUCTURE FACILITY |

MAJOR RESEARCH FINDINGS/RESEARCH AND DEVELOPMENT ACTIVITIES

| Principal Investigator | Salient Research Findings |
|------------------------|--|
| A K Mukherjee | <p>Snake Venom Research</p> <ul style="list-style-type: none"> • Snake venoms are a pool of biologically active proteins and peptides, many of which have the potential to be developed into therapeutic components. Research work on the assessment of anticoagulant and therapeutic potential of snake venom proteins is in progress. In addition, diagnostic applications of nerve growth factor and α-neurotoxin bounded nanoparticle for endogenous detection of cancer are also pursued. |



| | |
|--------------|---|
| | <ul style="list-style-type: none"> Further, the laboratory has also stepped into the field of venomics and antivenomics of Indian cobra (<i>Naja naja</i> and <i>N. kaouthia</i>) and Russell's viper (<i>Daboia russelli</i>) venom. <p>Environment biotechnology and industrial microbiology</p> <ul style="list-style-type: none"> It has been reported for first time that the biocatalytic DBT desulfurization pathway of a new bacterium <i>Chelatococcus</i> sp. is isolated from a petroleum-oil contaminated soil. Microbial fibrinolytic serine proteases find therapeutic applications in the treatment of thrombosis- and hyperfibrinogenemia-associated disorders. In this regards, an attempt was made to understand the structure and function of a fibrinolytic protease enzyme, Bacifrinase from <i>Bacillus cereus</i> strain Ab01. Fibrin(ogen)olytic protease with antiplatelet and antithrombotic activity from <i>Bacillus cereus</i> strain FF01 was also reported. The results obtained indicated the attractive alternatives for the prevention and/or treatment of cardiovascular disorders. Apart from these, α-amylase enzyme gene from <i>Bacillus licheniformis</i> strain AS08E was cloned and efficiently expressed in <i>E. coli</i> cells using the native signal peptide and investigated the potential application of this recombinant enzyme was investigated in the digestion of non-conventional raw starch for bioethanol production. |
| Sashi Baruah | <p>Immuno-pathogenesis of Systemic Lupus Erythematosus (SLE)</p> <ul style="list-style-type: none"> Clinical and immunological data is being analyzed to identify biomarkers of SLE disease severity and to discriminate between flare and infection. We are also working to understand the immune dysregulation in the disease, mainly in context of T cell and Macrophage activation. SLE diagnostic laboratory has been established in Tezpur University and AMC&H, Dibrugarh under the DBT funded project and patients' service is being provided. <p>Immunology and Immunogenetics of Head and Neck Squamous Cell Carcinoma (HNSCC)</p> <ul style="list-style-type: none"> High resolution typing of KIR2DL1 and HLAC2 has been done in the North-East Indian population and data suggests that alleles delivering stronger inhibitory signal are associated with cancer. Association of HPV subtypes (HPV 16 and HPV 18) is being studied in HNSCC and our findings suggest that HPV 16 but not HPV 18 is associated with disease. Data will be shared with Clinicians for effective treatment. |
| S K Ray | <p>Molecular Plant Microbe Interactions</p> <ul style="list-style-type: none"> We are trying to understand the pathogenesis process of <i>Ralstonia solanacearum</i>, the causal agent of bacterial wilt in many plants, in tomato seedlings. We have shown that <i>R. solanacearum</i> is virulent on 6-7 days old seedlings upon leaf clip inoculation. Now we are also studying the plant protection by the endophytes from <i>R. solanacearum</i> infection. <p>Codon usage bias in bacteria</p> <ul style="list-style-type: none"> We are trying to understand the cause of codon usage bias in organisms. We have studied optimal codons in the high expression genes in many bacteria. Our study has revealed that choice of optimal codons in bacteria is amino acid specific. Interestingly, the study observed that for amino acids such as Gln, Lys and Glu, the choice of optimal codon is influenced by the phylogeny in bacteria. |
| M. Mandal | <p>Probiotics</p> <ul style="list-style-type: none"> Goat milk derived potential probiotic bacterial strain <i>L. lactis</i> AMD17 has been isolated and used for preparation of Dahi using honey. The preparation was found to be stable for more than 28 days in low temperature maintaining the sensory qualities. <p>Bacterial biofilm inhibition</p> <ul style="list-style-type: none"> Few plant extracts have been screened out from the medicinal plants of North East India, which are found to be effective in controlling bacterial biofilm formation. |
| A Ramteke | <ul style="list-style-type: none"> Tobacco chewing and alcohol consumption and hr-HPV infection complement each other in the process of HNC development and progression in NE population. |



| | |
|----------|--|
| | <ul style="list-style-type: none"> Lipid accumulation under hypoxia condition supports PCa growth and invasiveness following reoxygenation. Extracellular vesicles (EVs) biogenesis and cargo depends on lipid availability and de novo lipogenesis in PCa cells. The EVs released under hypoxic condition is loaded with bioactive lipids that enhance the invasiveness of naïve PCa cells. |
| R Doley | <p>Snakebite Management and Search for Novel Toxin</p> <ul style="list-style-type: none"> Reported the venom proteomics profile of India Russell's Viper from South India using tandem Mass spectrophotometry. Isolated and characterized a major protein from the venom of Indian Russell's Viper which target FX and FXa for its anticoagulant activity. Isolated and characterized a Three Finger toxin (3FTx) from the venom of North Eastern Naja kaouthia. Identified and characterized a thrombin inhibitor from the salivary gland of Cattle tick. |
| T Medhi | <ul style="list-style-type: none"> Insecticide resistance in <i>Helopeltis theivora</i> is one of the major problems in tea estates of North East India. Our group is working on understanding of the problem through behavioral, infestation, mortality and detoxifying enzyme system of the pest with purification and characterization of a target enzyme of interest of the insect for his bio insecticide formulation. As a tertiary oil recovery technique, Microbial Enhanced Oil Recovery (MEOR) has been undertaken isolating novel potential biosurfactants from hydrocarbon degrading bacteria for their large scale production by means of process intensification using bioreactors. The research group have also been working on EnFET (Enzyme Field Effect Transistor) biosensors for detection of various hydrocarbons using cytochrome P450 component of hydroxylating enzyme Cytochrome P450 monooxygenase, Interdisciplinary approach for development of a phytoremediation protocol for crude oil contaminated area has been undertaken to expedite remediation in combination of microbial treatment and physicochemical intervention. Our group is also working on traditional practices of using ethnobotanical medicines especially for malaria in selected localities of Assam and North East. Psychoneuroimmunological discourse on yogic principles. |
| E Kalita | <p>Nanocelluloses and Derived Bionanocomposites</p> <ul style="list-style-type: none"> Our group has been working on the isolation of high purity nanocelluloses (>100 nm) from a wide variety of lignocellulose rich agricultural wastes, advocating their possible implementation for assorted applications. The discovery of a novel optical fluorescence property in the native nanocelluloses was reported which encourages their possible use as low cost alternatives to organometallic fluorophores in the development of fluorescence-tags, probes, tracers etc. We have also been working on remediation strategies to address the global issue of groundwater Arsenic (As) contamination. Thorough investigations w.r.t the use of the isolated nanocelluloses in the development of composite biosorbents is pursued in the laboratory. This has led to the development of highly efficient (~95%) nanocellulose based bionanocomposites that facilitate the rapid removal of metallic aqueous contaminants such as Arsenic (As) and other heavy metals. The conjugation of antimicrobial nanoparticles onto the synthesized biosorbents is investigated in details which show their significant potential in combating prevalent water borne Gram positive and Gram negative microflora. <p>Antimicrobial Nanosystems</p> <ul style="list-style-type: none"> Our group is working on the development of facile and economical routes for the generation of effective antimicrobial nanoparticles/composites. With respect to the same, the modulated use of metallic Copper (Cu) nanoparticles as dopant was thoroughly investigated and Cu doped Zinc Sulfide (Cu:ZnS) nanoparticles was synthesized to result in a highly efficient antimicrobial nanosystem with very low collateral cytotoxicity towards eukaryotic cells. |



| | |
|----------------|--|
| S P G Ponnam | <p>Molecular Studies on Keratoconus Patients of North Eastern Region (NER) of India</p> <ul style="list-style-type: none"> Recruitment of patients diagnosed with Keratoconus (OMIM 148300, KC) and controls from NER of India and generating a clinical database. Genetic screening for the identification of the novel as well as reported sequence variants in few candidate genes. Bioinformatic analysis of the novel sequence variations, if any, in order to predict their effect on the function of the protein. |
| A N Jha | <p>An Anti-malarial target: A Drug designing approach</p> <ul style="list-style-type: none"> We have tried to model and inhibit a protein, PI(4) Kinase, recently discovered to be important in all the life stages of Plasmodium falciparum. Our in silico efforts have helped to derive potent molecules that could be effective for an early treatment of malaria. |
| R Mukhopadhyay | <p>Inflammation biology</p> <ul style="list-style-type: none"> We have studied global gene expression of three in vitro models of inflammation where PMA-differentiated THP-1 monocytes have been treated with LPS, IL-6 and TNF-? <p>Study on anti-inflammatory compounds</p> <ul style="list-style-type: none"> We studied mechanism of kaempferol-mediated reduction in expression of pro-inflammatory mediator COX-2 using in vitro cell culture models. <p>Mechanisms of anti-tumor activity of some medicinal plants</p> <ul style="list-style-type: none"> Molecular mechanisms of three medicinal plants extracts were studied for their efficacy to inhibit proliferation, migration and invasive properties of two breast cancer cell lines. <p>Environmental Biotechnology</p> <ul style="list-style-type: none"> Vermiconversion of synthetic dye methylene blue by earthworm Eisenia fetida has been studied. |
| S Saha | <p>Role of protein arginylation in obesity.</p> <ul style="list-style-type: none"> To test the regulation of arginylation on adipogenesis, expression study was performed with differentiated untransfected and PPARγ1 transfected wild type (WT) and ate1 knock out (KO) mouse embryonic fibroblast (MEFs). It was found that arginylation regulate differentiation by modulating PPARγ1 at transcription and translation level. It was observed that arginylation also participate in lipolysis without affecting lipases. <p>Role of protein arginylation in cellular stress responses.</p> <ul style="list-style-type: none"> To test the role of protein arginylation in cellular stress response, effect of heat stress on Wild type (WT) and Ate1 knock out (KO) Mouse embryonic fibroblast (MEFs) were tested. our finding shows that arginylation plays a protective role during heat stress response by regulating HSP gene expression and its mRNA stability. |
| N D Namsa | <ul style="list-style-type: none"> Diarrhoeal episodes remain the second most important cause of child mortality in India. The primary interest of the laboratory is to understand the genome of group A rotavirus strains prevalent in the North-eastern region. The second aspect of research focuses on characterization of potential biosurfactant producing and hydrocarbon / sulfur degrading bacteria and formulation of biological catalyst for efficient bioremediation. Exploring the rich biodiversity of plants and their parts for phytofabrication of nanomaterials for their improved anti-microbial and anti-viral activity. |
| | <p>Insulin resistance and Type 2 diabetes</p> <ul style="list-style-type: none"> We are investigating the effect of plant derived polyphenols on lipid induced impairment of adipocyte and macrophage function. Our study also directed to investigate the interrelationship between inflammation and metabolic pathway in foam cell formation. |



| | |
|------------------|---|
| M V Satish Kumar | <ul style="list-style-type: none"> We are trying to understand the mechanism of amyloid peptide aggregation in neurodegenerative diseases like Alzheimer's and Parkinson's diseases. In silico study on the structure and dynamics of human Lemur Tyrosine Kinase 3 (LMTK3) which has been identified to play a key role as potent regulator of Estrogen Receptor(ER)-? activity and also considered to be a novel therapeutic target for breast cancer. |
| | <p>Countering heat stress in Vigna radiata and Vigna mungo seed germination</p> <ul style="list-style-type: none"> During our study on seed germination of V. radiata (moghani) and V. mungo (matimahi), it was found that ammonium persulfate (APS) and sodium borohydride (NaBH₄) stimulate the germination. Seeds of these plants lose their vigour due to heat stress during storing. The chemicals are found to stimulate germination and vigour in normal as well as heat stressed seeds of the two plants, with exceptions. |

Research projects, ongoing and new

| Project Title | Funding Agency | Amount (in INR) | Duration | Principal Investigator |
|--|----------------|-----------------|----------|------------------------|
| Role of non-canonical function of ribosomal proteins in inflammation | DBT | 152.07 lakh | 2014-17 | R Mukhopadhyay |
| Studies on the efficacy of flavonoid and non-flavonoid polyphenols against chronic inflammation induced disease pathogenesis | DBT | 77.41 lakh | 2014-17 | R Mukhopadhyay |
| Exploring gene expression differences between atherosclerotic and non atherosclerotic coronary and peripheral arteries within a patient to enable discovery of novel targets that mediate development of localized atherosclerotic plaques | DST-SERB | 50.18 lakh | 2015-18 | R Mukhopadhyay |
| Systemic Lupus Erythematosus (SLE) - an Investigation into Diagnostics and Disease Pathogenesis | DBT | 207.24 lakh | 2015-17 | Sashi Baruah |

PUBLICATIONS

In International and National Journals

Aziz, R., Barman, A., Bhattacharjee, U., Kumar, R., Kalita, E., Ray, S. K. Tendril perversion in Cucurbits. *Everyman's Science*, L, 2016.

Baisr, Y., Rather, I., and Konwar, B. K. Rapid and simple DNA extraction protocol from goat rumen digesta for metagenomic analysis. *Pak J. Pharma. Sci.*, 28(6), 2015.

Banik, N., Hussain, A., Ramteke, A. and Maji, T. K. Synthesis and Evaluation of the Properties of Chitosan-Cellulose Whisker Microparticles for Controlled Release of Isoniazid. *American Journal of Polymer Science & Engineering*, 3, 2015.

Barman, A., Sahoo, L. and Ray, S. K. Some conspicuous traits in domesticated rice *Oryza sativa*, due to recessive alleles. *J Plant Sci and Res.*, 3, 2016.

Baruah, V. J., Satapathy, S. S., Powdel, B. R., Konwar, R., Buragohain, A. K. and Ray, S. K. Comparative analysis of codon usage bias in Crenarchaea and Euryarchaea genome reveals differential preference of synonymous codons to encode highly expressed ribosomal and RNA polymerase proteins. *J. Genet.*, 2015 [Accepted].

Bhagyashree Roy, DhruvaJyotiSarma, Tapas Medhi, Santanu Sharma, Development of a Capacitive Sensor for Glucose Concentration Detection (ICECS 2016).

Bhomick, P. C., Singh, S. P., Deb, C. R., Sinha, D. Kakati, L. N. and Konwar, B. K. Molecular Interaction Studies of Chitosan Cross-linked Compounds as Drug Delivery Substrate for Anticancer Agents. *J. Biomed. Sci.*, 5(17), 2016.



- Biswas, A. D., Dev, S. and Mattaparathi, V. S. K. Characterization of the structure of Anopheles gambiae Odorant Receptor 1 (AgOR1) and its binding affinity with novel inhibitors and phytochemicals: A Molecular Dynamics and Docking Approach. *International Journal of Innovations in Engineering and Technology*, 6(4), 2016.
- Bora, B., Biswas, A. D., Gurung, A. B., Bhattacharjee, A., Satish Kumar, M. V. and Mukherjee, A. K. An in silico approach to understand the structure-function properties of a serine protease (Bacifrinase) from Bacillus cereus and experimental evidence to support the interaction of Bacifrinase with fibrinogen and thrombin. *Journal of Biomolecular Structure and Dynamics*, 8, 2016.
- Bora, B., Biswas, A.D., Gurung, A.B., Bhattacharjee, A., Mattaparathi, V.S.K. and Mukherjee, A.K. An insilico approach to understand the structure-function properties of a serine protease (Bacifrinase) from Bacillus cereus and experimental evidence to support the interaction of Bacifrinase with fibrinogen and thrombin. *Journal of Biomolecular Structure and Dynamics*, 2016 [Accepted].
- Borah, R., Kumar, A., Das, M. K. and Ramteke, A. Surface functionalization-induced enhancement in surface properties and biocompatibility of polyaniline nanofibers. *RSC Advances*, 5, 2015.
- Bordoloi, N. K., Bhagowati, P., Chaudhuri, M. K. and Mukherjee, A. K. Proteomics and Metabolomics Analyses to Elucidate the Desulfurization Pathway of Chelatococcus sp. *PLoS One*, 11(4), 2016.
- Brahma, R. K., McCleary, R. J. R., Kini, R. M. and Doley R. Venom gland transcriptomics for identifying, cataloging, and characterizing venom proteins in snakes. *Toxicon*, 93, 2015.
- Chutia, R. S., Phukan, M. M., Kataki, R., Bhaskar T. and Konwar B. K. Exploitation of Pongamia glabra deoiled cake for alternate energy: physico chemical characterization and thermogravimetric studies. *Energy sources part A: Recovery, utilization and environmental effects*, 38(1), 2016.
- Das, D., Sharma, M., Das, H., Sahu, P. P. and Doley, R. Purification and Characterization of Nk-3FTx, A Three Finger Toxin (3FTx) from the venom of North East Indian Monocled Cobra. *Journal of Biochemical and Molecular Toxicology*, 30, 2016.
- Das, H. K., Das, D., Doley, R. and Sahu, P. P. Quantifying Demyelination in NK venom treated nerve using its electric circuit model. *Scientific Reports*, 6, 2016.
- Das, V. K., Bharali, P., Konwar, B. K., Mikkola, J. P., Shchukarev A., and Thakur A. J. A convenient 'NOSE' approach used towards the synthesis of 6-amino-1,3-dimethyl-5-indolyl-1Hpyrimidine-2,4-dione derivatives catalyzed by nano-Ag⁺. *New J of Chemistry (RSC)*, 40 (1935-1939) 2016.
- Das, V. K., Bharali, P., Konwar, B. K., Mikkola, J-P., Shchukarev, A. and Thakur. A. J. A convenient 'NOSE' approach used towards the synthesis of 6-amino-1, 3-dimethyl-5-indolyl-1 H-pyrimidine-2, 4-dione derivatives catalyzed by nano-Ag. *New Journal of Chemistry*, 40, 2016.
- Deep, G., Kumar, R., Nambiar, D. K., Jain, A. K., Ramteke, A., Serkova, N. J., Agarwal, C. and Agarwal, A. Silibinin inhibits hypoxia-induced HIF-1 α -mediated signaling, angiogenesis and lipogenesis in prostate cancer cells: In vitro evidence and in vivo functional imaging and metabolomics. *Molecular Carcinogenesis*, 2016 [Accepted].
- Dey, M. D., and Mukhopadhyay R. Adsorptive Removal of Methylene Blue by Biomass of Aspergillus versicolor: A Mechanistic Study. *Int. J. Adv. Res. Sci. Technol.*, 4, 2015.
- Dey, M. D., Shukla, R., Bordoloi, N. K., Doley, R. and Mukhopadhyay, R. Mechanism of Adsorptive Removal of Methylene Blue Using Dried Biomass of Rhizopus oryzae. *Applied Biochemistry and Biotechnology Part A: Enzyme Engineering and Biotechnology*, 177, 2015.
- Diganta, Das., Md. M. Ansari., Namsa, N. D., Mukherjee, A.K and Doley, R. Assessment of antivenom potential of Anthocephalus cadamba leaves extract: A traditionally used medicinal plants for the treatment of snakebite patients. *Journal of Bioresource*, 2, 2015.
- Dutta, A., Banerjee, A., Saikia, N., Phookan, J., Narayan, M. and Baruah, S. Negative regulation of natural killer cell in tumor tissue and peripheral blood of oral squamous cell carcinoma. *Cytokine*, 76(2), 2015.
- Dutta, M. and Mattaparathi, V.S.K. Inhibition of A β 1-42 Peptide aggregation using short ss-oligonucleotide as polyions: An in silico approach. *Journal of Biomolecular Structure and Dynamics*, 2016 [Accepted].



- Dutta, M., and Mattaparathi, V.S.K. Inhibition of amyloid fibrils formation as well as disassembly of amyloid fibrils in Alzheimer disease using the poly-ion, single stranded nucleotide sequence: an in silico study. *Journal of Proteins and Proteomics*, 6(1), 2015.
- Dutta, M., and Mattaparathi, V.S.K. Inhibition of A β aggregation in Alzheimer disease using the poly-ion short single stranded DNA: an insilico study. *Journal of Biomolecular Structure and Dynamics*, 2015 [Accepted].
- Dutta, M., Chutia, R. and Mattaparathi, V.S.K. Cross-seeding interaction between Amyloid β and Tau protein can enhance aggregation. *Current Biotechnology Journal*, 2016 [Accepted].
- Dutta, M., Deb, A. and Mattaparathi, V.S.K. Investigations on the Structural Characteristics that Seed the Aggregation of Amyloid-1-42 Peptide: Insights from Molecular Dynamics Simulations. *Current Proteomics*, 13(3), 2016.
- Goswami, B. R., Das, M. K., and Das P. P., Medhi, T., Ramteke, A. and Dutta, R. K. Mahi: A unique traditional herbal ink of early Assam. *Current Science*, 2016 [Accepted].
- Hazarika S. N., Gupta, K., Shamin, K. N. A. M., Bhardwaj, P., Boruah, R., Yadav, K. K., Naglot, A., Deb, P., Mandal, M., Doley, R., Veer, V., Baruah, I. and Namsa, N. D. One-pot facile green synthesis of biocidal silver nanoparticles, *Materials Research Express*, 3, 2016.
- Hussain, N., Singh, A., Saha, S., Mattaparathi, V.S.K., Bhattacharyya, P. and Bhattacharya, S.S. Excellent N-fixing and P-solubilizing traits in earthworm gut-isolated bacteria: a vermicompost based assessment with vegetable market waste and rice straw feed mixtures. *Bioresource Technology*, 2016 [Accepted].
- Kalita, E., Nath, B. K., Deb, P., Agan, F., Islam, M. R. and Saikia, K. High quality fluorescent cellulose nanofibers from endemic rice husk: Isolation and characterization. *Carbohydrate Polymers*, 122, 2015.
- Konwar, B. K., Ray, A. and Chattopadhyay P. Anti-Alopecic Activity of a Novel Compound from Aloe barbadensis Miller. *J Pharmacol Clin Toxicol*, 3, 2016.
- Konwarh, R., Saikia, J. P., Karak, N., and Konwar. B. K. Poly(ethylene glycol)-magnetic nanoparticles-curcumin trio: Directed morphogenesis and synergistic free-radical scavenging. *Colloids and surfaces B: Biointerfaces* 12, 2016.
- Kumar, N., Hazarika, S. N., Limbu, S., Boruah, R., Deb, P., Namsa, N. D., Das, S. K. Hydrothermal synthesis of anatase titanium dioxide mesoporous microspheres and their antimicrobial activity. *Microporous and Mesoporous Materials*, 213, 2015.
- Kumar, R., Rai, A. K., Das, D., Das, R. J., Kumar, R. S., Sarma, A., Sharma, S., Katak, A. C. and Ramteke, A. Alcohol and Tobacco Increases Risk of High Risk HPV Infection in Head and Neck Cancer Patients: Study from North-East Region of India. *PLoS ONE*, 2015 [Accepted].
- Lahan, H., Roy, R., Namsa, N. D., and Das, S. K. MoO₃ nanoparticle anchored graphene as bifunctional agent for water purification, *Materials Research Express*, 2016 [Accepted].
- Mahanta, A. and Baruah, S. Lower expression of GATA3 and T-bet correlates with downregulated IL-10 in severe falciparum malaria, *Clinical & Translational Immunology*, 4, 2015.
- Majumdar, S., Dutta, S., Das, T., Chattopadhyay, P. and Mukherjee, A. K. Antiplatelet and antithrombotic activity of a fibrin(ogen)olytic protease from Bacillus cereus strain FF01. *International Journal of Biological Macromolecules*, 79, 2015.
- Majumdar, S., Goswami, S., Keppen, C., Rai, S. K. and Mukherjee, A. K. Statistical optimization for improved production of fibrin(ogen)olytic enzyme by Bacillus cereus strain FF01 and its in vitro thrombolytic potential assessment. *Biocatalysis and Agricultural Biotechnology*, 4, 2015.
- Manhar A. K., Bashir Y., Saikia, D., Nath, D., Gupta, K., Konwar, B. K., Kumar, R., Namsa, N. D., Mandal, M. Cellulolytic potential of probiotic Bacillus subtilis AMS6 isolated from traditional fermented soybean (Churpi): An in-vitro study with regards to application as an animal feed additive. *Microbiological Research*, 186, 2016.
- Manhar, A. K., Saikia, D., Bashir, Y., Mech, R. K., Nath, D., and Konwar, B.K. Mandal, M. In vitro evaluation of cellulolytic Bacillus amyloliquefaciens AMS1 isolated from traditional fermented soybean (Churpi) as an animal probiotic. *Research in Veterinary Science*, 99, 2015.
- Manhar, A. K., Saikia, D., Borah, A., Das, A. S., Gupta, K., Roy, R., Mahanta, C.L., Mukhopadhyay, R. and Mandal, M. Assessment of goat milk-derived potential probiotic L. lactis AMD17 and its application for preparation of dahi using honey. *Annals of Microbiology*, 66, 2016.



- Mattaparathi, V.S.K., Iyer, A. and Swaminathan, R. Crowding by specific size of Dextran switches the substrate specificity of acetylcholine esterase enzyme. *Journal of Proteins and Proteomics*, 6(1), 2015.
- Mechanism of Adsorptive Removal of Methylene Blue using Dried Biomass of *Rhizopus oryzae*- Manash Deep Dey, Ruchi Shukla, Naba K. Bordoloi, Robin Doley and Rupak Mukhopadhyay. *Appl. Biochem. Biotechnol.*, 177, 2015.
- Mukherjee, A. K., Saviola, A. J., Burns, P. D. and Mackessy, S. P. Apoptosis induction in human breast cancer (MCF-7) cells by a novel venom L-amino acid oxidase (Rusvinoxidase) is independent of its enzymatic activity and is accompanied by caspase-7 activation and reactive oxygen species production. *Apoptosis*, 20, 2015.
- Mukhopadhyay R. and Guha, A. K. A Comprehensive Analysis of the Nutritional Quality of Edible Mushroom *Pleurotus sajor-caju* Grown in Deproteinized Whey Medium, *LWT-Food Sci. Technol.*, 61, 2015.
- Nath, B. K., Chaliha, C., Kalita, E. and Kalita, M. C. Synthesis and characterization of ZnO: CeO₂: nanocellulose: PANI bionanocomposite. A bimodal agent for arsenic adsorption and antibacterial action. *Carbohydrate Polymers*, 148, 2016.
- Nath, D., Manhar, A. K., Gupta, K., Saikia, D., Das, S. K. and Mandal, M. Phytosynthesized iron nanoparticles: effects on fermentative hydrogen production by *Enterobacter cloacae* DH-89. *Bulletin of Materials Science*, 38, 2015.
- Prajapati, V.K., Satapathy, S.S., Mattaparathi, V.S.K., Buragohain, A.K. and Ray, S.K. Evidences Indicating the Involvement of Selection Mechanisms for the Occurrence of C34 Anticodon in Bacteria. *Journal of Cell Science & Molecular Biology*, 2(1), 2015.
- Purkayastha, M. D., Borah, A. K., Saha, S., Manhar, A. K., Mandal, M. and Mahanta, C. L. Effect of maleylation on physicochemical and functional properties of rapeseed protein isolate. *Journal of Food Science and Technology*, 1-4, 2016.
- Rao, L. N., Ponnusamy, T., Philip, S., Tarate S., Mukhopadhyay, R., Kakkar V. V. and Mundkur L. Hypercholesterolemia Induced Immune Response and Inflammation on Progression of Atherosclerosis in Apobtm2SgyLdlrtm1Her/J Mice. *Lipids*, 50, 2015.
- Ray A., Bashir Y., Rather I.A., and Konwar B. K. Genome size determination of *Eclipta alba* and *Aloe barbadensis*. *Bangladesh J Pharmacol.*, 10, 2015.
- Ray, S. K. and Goswami, I. Synonymous codons are not same with respect to the speed of translation elongation. *Curr Sci.*, 110, 2016.
- Ray, A., Chattopadhyay, P., and Konwar B. K. Anti-Alopecic Activity of a Novel Compound from *Aloe barbadensis* Miller. *J Pharmacol Clin Toxicol*, 3 (2), 2015.
- Ray, S. K. Teaching based research is a requirement in institutions of higher learning to impart quality education. *Curr Sci.*, 110, 2016.
- Ray, S. K. Why no SSB prize after 45 years of age? *Curr Sci*, 109, 2015.
- Roy, J.K., Manhar, A. K., Nath, D., Mandal, M., Mukherjee, A. K. Cloning and extracellular expression of a raw starch digesting α -amylase (Blamy-I) and its application in bioethanol production from a non-conventional source of starch. *Journal of Basic Microbiology*, 55, 2015.
- Saikia, C., Das, M. K., Ramteke, A. and Maji, T. K. Effect of crosslinker on drug delivery properties of curcumin loaded starch coated iron oxide nanoparticles. *International Journal of Biological Macromolecules*, 2016 [Accepted].
- Saikia, C., Hussain, A., Ramteke, A., Sharma, H. K., Deb, P. and Maji, T. K. Carboxymethyl starch-coated iron oxide magnetic nanoparticles: a potential drug delivery system for isoniazid. *Iranian Polymer Journal*, 24, 2015.
- Saikia, J. P. Synthesis of Colloidal Silver Nanoparticle (SNP) Using *Vigna radiata* Seed Exudate: A Novel Green Method, *Indian Journal of Biology*, 3, 2016.
- Sarmah, M., Banik, N., Hussain, A., Ramteke, A., Sharma, H. K. and Maji, T. K. Study on crosslinked gelatin-montmorillonite nanoparticles for controlled drug delivery applications. *Journal of Materials Science*, 50(22), 2015.
- Satapathy, S. S., Ray, S. K., Sahoo, A. K., Begum, T. and Ghosh, T. C. Codon usage bias is not significantly different between the high and the low expression genes in human. *Int. J. Mol. Genet. Gene, Ther.*, 103, 2015.
- Schlaepfer, I. R*, Nambiar, D. K., Ramteke, A., Kumar, R., Dhar, D., Agarwal, C., Bergman, B., Graner, M., Maroni, P., Singh, R. P., Agarwal, R. and Deep, G. Hypoxia induces triglycerides accumulation in prostate cancer cells and extracellular vesicles supporting growth and invasiveness following reoxygenation. *Oncotarget*, 6, 2015.



Sharma, M., Iyer, J. K., Shih, N., Majumder, M., Mattaparthi, V. S., Mukhopadhyay, R. and Doley, R. Daboxin P, a Major Phospholipase A2 Enzyme from the Indian Daboia russelii russelii Venom Targets Factor X and Factor Xa for Its Anticoagulant Activity. *PLoS One*, 18, 2016.

Sharma, M., Iyer, J.K., Shih, N., Majumder, M., Mattaparthi, V.S.K., Mukhopadhyay, R. and Doley, R. Daboxin P, a Major Phospholipase A2 Enzyme from the Indian Daboia russelii russelii Venom Targets Factor X and Factor Xa for Its Anticoagulant Activity. *PLoS ONE*, 11(4), 2016.

Sharma, M., Krishnamurthy, I. J., Kini R. M. and Doley R. Unveiling the complexities of Daboia russelii venom, a medically important snake of India, by tandem mass spectrometry. *Toxicon*, 107, 2015.

Singh, S. P., and Konwar, B. K. Alkane Base - A Database of Predicted 3D Structures of Metagenomic Alkane Hydroxylase Gene. (*J. Bioinformatics and Intelligent Control*, 4, 2015.

Singh, S. P., Deb, C. R., Kakati, L. N. and Konwar, B. K. Carbon Nanotube Assisted Drug Delivery of Donepezil and Its Derivatives as Acetylcholin-esterase Enzyme (AChE) Inhibitors. *Nanomedicine and Nanobiology*, 2, 2016.

Singh, S. P., Deb, C. R., Kakati, L. N. and Konwar, B. K. MD Simulation Studies of Fumarase Reveal Thermo Dynamical Stability. *J Phys Chem Biophys*, 2161, 2016.

Singh, S. P., Deb, C. R., Kakati, L. N., and Konwar B. K. Virtual Screening on Analogs of 2 Methyl Heptyl Isonicotinate as GlnU Inhibitors of Mycobacterium tuberculosis. *Current Enzyme Inhibition*, 1(12), 2016.

Singh, S. P., Deb, C.R., Ahmed, S.U., Saratchandra, Y., and Konwar B.K. Molecular docking simulation analysis of the interaction of dietary flavonols with heat shock protein 90. *Journal Biomed. Res.*, 30, 2015.

Zhang, F., Patel, D. M., Colavita, K., Rodionova, I., Buckley, B., Scott, D. A., Kumar, A., Shabalina, S. A., Saha, S., Chernov, M., Osterman, A. L. and Kashina, A. Arginylation regulates purine nucleotide biosynthesis by enhancing the activity of phosphoribosyl pyrophosphate synthase. *Nature Communications*, 6, 2015.

Books and Book Chapters

Konwar, B. K. (Ed). 2015. Prospects of microbe and medicinal plant resources. New Delhi: Educationist Press.

Saikia, C. , Sarmah, M. , Das, M. K. , Ramteke, A. , and Maji, T. K. 2015. Curcumin-Loaded Polymeric Nanoparticle: A Promising Route for the Treatment of Cancer. In Depan, D. (ed). *Biodegradable Polymeric Nanocomposites, Advances in Biomedical Applications*, CRC Press.

Saikia, V. , Hussain, A. , and Ramteke, A. 2015. Screening, biochemical characterization and identification of metal resistant bacterial strains isolated from adjoining areas of mining sites. In Konwar, D. , and Kalita, P. (eds). *Molecular Biology and Biotechnology Research in NE India*, Pub Kamrup College, Baihata Chariali, Kamrup, Assam, India.

SEMINAR/WORKSHOP/SYMPOSIA/INVITED LECTURES ORGANISED BY THE DEPARTMENT

National Workshop, High Throughput Omics, 30-31 January, 2016.

DISTINGUISHED VISITORS TO THE DEPARTMENT

Prof B Chatterjee, Univ. of Texas, USA

Prof L S Shashidhara, IISER Pune

Prof M D Abu Reza, Univ. of Rajashashi, Bangladesh

Prof P Balaram, IISc Bangalore

Dr T S Suryanarayanan, Vivekananda Institute of Tropical Mycology, Chennai

AWARDS & HONOURS RECEIVED BY THE FACULTY/ RESEARCH SCHOLARS/STUDENTS

Dr. E. Kalita and Dr. S. P. G. Ponnampalamedu received DBT Overseas Associateship

NUMBER OF STUDENTS WHO QUALIFIED

| | |
|------------|-----|
| NET JRF/LS | :25 |
| GATE | :36 |
| DBT JRF | :14 |
| ICMR JRF | :02 |

**NOTABLE PLACEMENT****In PhD programme**

Mr Biplab Singha, Ms Moumita Sarkar and Ms Shagufta Jahan joined NII, New Delhi
Mr Raju Roy and Ms Bonani Das joined IISc Bangalore
Ms Jayati Das joined NIPGR, New Delhi
Mr Pinaki Banerjee joined NCCS Pune
Mr Sujay Pal joined IICB Kolkata,
Ms Anasuya Bhargav joined IGIB New Delhi
Mr Jayesh Kumar joined ILS Bhubaneswar.

THE FACULTY OF THE DEPARTMENT**Professors**

B K Konwar, PhD (Imperial College, London), DIC
(On lien as Vice-Chancellor, Nagaland University)

Specialization/Areas of interest: Petroleum Biotechnology, Plant Biotechnology, Genetic Engineering- Metagenomics, Bioenergy
E-mail: bkkon@tezu.ernet.in

A K Buragohain, PhD (Imperial College, London), DIC
(On lien as Vice-Chancellor, Dibrugarh University)

Specialization/Areas of interest: Molecular Biology and Plant Biotechnology, Evolutionary Genomics
E-mail: alak@tezu.ernet.in

A K Mukherjee, PhD (Burdwan)

Specialization/Areas of interest: Snake Venom Biochemistry and Microbial Biotechnology
E-mail: akm@tezu.ernet.in

Sashi Baruah, PhD (PGIMER, Chandigarh)

Specialization/Areas of interest: Molecular Immunology
E-mail: sbaruah@tezu.ernet.in

Associate Professors

S K Ray, PhD (CCMB, Hyderabad)

Head of the Department

Specialization/Areas of interest: Plant-Microbe Interactions; Molecular Evolution
E-mail: suven@tezu.ernet.in

M Mandal, PhD (IGIB, Delhi)

Specialization/Areas of interest: Microbial Biotechnology
E-mail: mandal@tezu.ernet.in

A M Ramteke, PhD (JNU)

Specialization/Areas of interest: Radiation Oncology and Molecular Biology
E-mail: anand@tezu.ernet.in

R Doley, PhD (Tezpur)

Specialization/Areas of interest: Molecular Toxinology
E-mail: doley@tezu.ernet.in

Assistant Professors

T Medhi, PhD (IIT Kharagpur)

Specialization/Areas of interest: Redox Biochemistry and Enzymology
E-mail: tmedhi@tezu.ernet.in

E Kalita, PhD (Gauhati)

Specialization/Areas of interest: Molecular Biology
E-mail: ekalita@tezu.ernet.in

S P G Ponnamp, PhD (Hyderabad)

Specialization/Areas of interest: Human Molecular Genetics

E-mail: suryap@tezu.ernet.in

A N Jha, PhD (IISc, Bangalore)

Specialization/Areas of interest: Computational Biophysics, Bioinformatics

E-mail: anjha@tezu.ernet.in

R Mukhopadhyay, PhD (Jadavpur)

Specialization/Areas of interest: Disease Biology, Environmental Biotechnology

E-mail: mrupak@tezu.ernet.in

S Saha, PhD (IISc, Bangalore)

Specialization/Areas of interest: Cell and Molecular Biology, Protein Arginylation and Stress response

E-mail: sougata@tezu.ernet.in

N D Namsa, PhD (IISc, Bangalore)

Specialization/Areas of interest: Molecular Virology/Traditional medicinal plants

E-mail: namsa@tezu.ernet.in

S Dasgupta, PhD (Visva-Bharati)

Specialization/Areas of interest: Molecular Biology/ Disease Biology/Cellular metabolism

E-mail: suman@tezu.ernet.in

M V S Kumar, PhD (IIT Guwahati)

Specialization/Areas of interest: Computational Biotechnology and Bioinformatics

E-mail: venkata@tezu.ernet.in

J P Saikia, PhD (Tezpur)

Specialization/Areas of interest: Plant Biotechnology

E-mail: jyoti06@tezu.ernet.in

THE STAFF OF THE DEPARTMENT

Technical Staff

K K Hazarika, PhD (Tezpur)

Technical Officer

E-mail: kalyan@tezu.ernet.in

N K Bordoloi, PhD (Tezpur)

Senior Technical assistant

E-mail: nabakb@tezu.ernet.in

P Mudoi, MSc (Dibrugarh)

Junior Technical assistant

E-mail: pmudoi@tezu.ernet.in

Office Staff

S Kakati

Assistant

E-mail: sk@tezu.ernet.in

P Bora

MTS

E-mail: pkbora@tezu.ernet.in







DEPARTMENT OF PHYSICS

2015-16

THE DEPARTMENT

Since its commencement in January 1998, the Department of Physics has stridden out not only in its post-graduation teaching but also in new frontiers of research. To keep pace with the advancement in science and technology, new special papers have been included to adapt to new developments within the course content. To preserve this spirit, the Department started in July 2005 a two-year PG programme in Nanoscience and Technology. The areas of specialization for post-graduation are: Condensed Matter Physics; Electronics and Photonics; High Energy Physics; Astrophysics and Nano Science and Technology. To develop the students from the graduate level, the Department also started an Integrated MSc in Physics in 2009. Keeping in mind the need of teachers at the school level, the Department has also been running a BSc-BEd programme since July 2011.

Major thrust areas of research of the Department have been: Astrophysics, High Energy Physics (Theoretical), Nanomaterials, Neutrino, Optoelectronics, Plasma Physics, Microwaves and Solid State Ionics, Electronic structure theory.

Academic Programmes and Student Intake

| Academic programmes | Student Intake |
|---------------------------------|---|
| MSc in Physics | 20 |
| MSc in Nanoscience & Technology | 20 |
| Integrated MSc in Physics | 20 |
| Integrated BSc BEd | 10 |
| PhD | Intake variable, 09 in the Academic year 2015-16 |

MAJOR FACILITIES AND EQUIPMENT AVAILABLE

- High Power Nd-YAG Laser
- Microwave Set-up
- High Vacuum Thin Film Coating Unit
- LCR Bridge Tester
- Computerized insertion loss measurement x-band system
- CTE measurement setup for polymer materials.
- Electronic Balance
- Tube Furnace
- X-Ray Diffraction (XRD)
- Luminescence Spectro Photometer
- Semi Conductor Characterization Setup
- Scanning Electron Microscope (SEM)
- Polarizing Microscope
- UV-Visible Spectrophotometer
- Vector network Analyser
- High Power Microwave Set-up
- FTIR
- CNC Milling Machine



MAJOR RESEARCH FINDINGS/RESEARCH AND DEVELOPMENT ACTIVITIES

| Principal Investigator | Salient Research Findings |
|------------------------|--|
| A Kumar | <ul style="list-style-type: none"> Effect of Swift heavy ion irradiation on electrical and thermal transport of conducting polymer nanostructures. Electrical and Thermal Transport in Conducting Polymer nanostructures. Development of novel Polymer -silicate nanocomposite electrolytes for lithium ion rechargeable batteries. |
| D Mohanta | <ul style="list-style-type: none"> Investigation of magneto viscous and magneto optics properties of novel ferrofluids. Fluorescent nanocrystal induced ion channels biomolecular labeling applications Photonics properties of rare earth doped nanoscale semiconductors subjected to energetic ion irradiation. |
| GA Ahmed | <ul style="list-style-type: none"> Light Scattering studies of various particulate matter and development of associated instruments and software. Nanoparticle based photo -catalytic activity studies, surface resonance studies and characterization studies. |
| JK Sarma | <ul style="list-style-type: none"> Studies on the relativistic and the dynamical spinning sphere models of the electron. Studies on Gluon Distribution Function and Recombination of Partons |
| Ng K Francis | <ul style="list-style-type: none"> Neutrino Masses & Mixing Angles in Neutrino Oscillation. |
| Nidhi S Bhattacharyya | <ul style="list-style-type: none"> Studies of Spin-wave Instability in Ferrites for high power circulation. Synthesis and development of broadband EMI shielding materials using magneto -dielectric-nanoparticles. |
| Nilakshi Das | <ul style="list-style-type: none"> The study of the charging of dust particles in plasma and dynamics of complex plasma. |
| P Deb | <ul style="list-style-type: none"> Development and surface engineering of binary nanoparticles Multifunctional hybrid nanosystems for molecular imaging applications. Electronic Structure theory and Molecular Dynamics study of 2D Materials Energy Storage and Conversion Mechanism of Nanocatalysts |
| PK Karmakar | <ul style="list-style-type: none"> Investigations of a few random problems in solar wind plasma. |

RESEARCH PROJECTS: ONGOING AND NEW

| Title of the Project | Funding Agency | Amount(in INR) | Duration | Principal Investigator |
|--|----------------|----------------|-----------|------------------------|
| Surface functionalization of Muga silk using atmospheric dielectric barrier discharge for biomedical applications. | DST-SERB | 19.20 lakh | 2015-2018 | A J Choudhury |
| Studies and development of some natural silks of Northeast India for advanced biomedical applications using low temperature plasma processes | DST | 35.00 lakh | 2014-2019 | A J Choudhury |
| Development of biologically functionalized conducting polymer nanostructures for biosensing applications. | DAE-BRNS | 24.70 lakh | 2013-2016 | A Kumar |
| Theoretical spectroscopic studies of polycyclic aromatic hydrocarbon molecules and astrophysical implications | DST | 13.20 lakh | 2013-2016 | A Pathak |
| DST-JSPS International Science & Technology Cooperation Grant | DST | 9.16 lakh | 2014-2016 | A Pathak |
| Dynamics of solar prominences and initiation of coronal mass ejections | ISRO | 19.20 lakh | 2015-2018 | A Pathak |



| | | | | |
|---|-----------------|------------|-----------|-----------------------|
| Effect of ion irradiation on nanostructured transition metal dichalcogenide system. | IUAC | 6.50 lakh | 2014-2017 | D Mohanta |
| Transition metal dichalcogenides nanoscale systems subjected to energetic ion irradiation | IUAC, New Delhi | 6.00 lakh | 2014-2017 | DMohanta |
| Investigation of photocatalytic response of TiO ₂ nanostructures under doping and irradiation for practical applications. | UGC | 13.97 lakh | 2013-2016 | GA Ahmed |
| Fabrication of p -i-n photovoltaic devices hybridized with core - shell CdSe/TiO ₂ nanostructures for enhanced quantum efficiency | UGC-UKIERI | 16.53 lakh | 2014-2016 | GA Ahmed |
| Study on neutrino masses and mixing in context of recent neutrino oscillation data. | UGC | 10.50 lakh | 2013-2016 | MK Das |
| Microwave Technology based Tea Processing Systems for NE States | SAMEER | 55.30 lakh | 2013-2016 | Nidhi S Bhattacharyya |
| Studies of ferromagnetic resonance in spinel ferrite & garnets for high power circulators. | DAE-BRNS | 32.37 lakh | 2014-2017 | Nidhi S Bhattacharyya |
| Design and realization of light weight shields to reduce electromagnetic interference (EMI) at microwave ranges (C and X band) with different geometries for customized applications like anechoic chamber, as terminations and stealth for strategic device camouflaging | DeitY | 216.0 lakh | 2016-2019 | Nidhi S Bhattacharyya |
| A Study of the dynamics of dust particles in strongly coupled plasma. | UGC | 9.65 lakh | 2013-2016 | Nilakshi Das |
| Study on the controlled self-assembly of magnetic nanostructures using neutron scattering | UGC-DAE | 7.67 lakh | 2013-2016 | P Deb |
| Development of nanomaterial based dual mode contrast agent and their surface mediated conjugation study from first principle | DBT | 122.2 lakh | 2013-2016 | P Deb |
| Design consideration of SERS substrate for getting extremely enhanced Raman signal. | DST-SERB | 27.24 lakh | 2013-2016 | P Nath |
| Ambient noise assisted microzonation of Tezpur , Northeast India with simultaneous multiwave shear wave analysis | MoES | 10.68 lakh | 2014-2017 | R Biswas |
| High performance ultracapacitors with graphene -based composite electrodes | DST | 28.4 lakh | 2015-2018 | SK Das |

PUBLICATIONS

In International and National Journals

Baruah, N., Das, M. K. and Sarma, J. K. Analysis of Small x Behaviour of Longitudinal and Heavy Favour Structure Functions of Proton, *International Journal of Theoretical Physics*, 54, 2015.

Behera, S. K., Deb, P. and Ghosh, A. Driving electrocatalytic activity by interface electronic structure control in a metalloprotein hybrid catalyst for efficient hydrogen evolution, *Physical Chemistry Chemical Physics*, 18(33), 2016.

Bhattacharjee, S. and Das, N. The linear and non-linear characterization of dust ion acoustic mode in complex plasma in presence of dynamical charging of dust., *Phys. Plasmas.*, 22, 2015.

Bhattacharya, K. and Deb, P. Hybrid nanostructured C-dot decorated Fe₃O₄ electrode materials for superior electrochemical energy storage performance, *Dalton Transactions*, 44, 2015.

Bhattacharya, K., Gogoi, M. and Deb, P. Molecular design of one dimensional magnetic FeNi₃ nanochains and their application in oil removal, *AIP Conf Proc.*, 1731(1), 2016.

Bhattacharya, Parasar, Mondal, and Deb, P. Mesoporous magnetic secondary nanostructures as versatile adsorbent for efficient scavenging of heavy metals, *Scientific Reports*, 5, 2015.



- Biswas, R., Deb, P., and Das, S. Novel optoelectronic properties in barbed wire nanophotonic structures of indium telluride, *Optical Materials*, 47, 2015.
- Borah R. and Kumar, A., Surface functionalization induced enhanced surface properties and biocompatibility of polyaniline nanofibers, *RSC Advances*, 5, 48971-48982, 2015.
- Borah, B. and Karmakar, P. K. A theoretical model for electromagnetic characterization of a spherical dust molecular cloud equilibrium structure, *New Astronomy*, 40, 2015.
- Borah, B. and Karmakar, P. K. Pulsational mode fluctuations and their basic conservation laws, *Advances in Space Research*, 55, 2015.
- Borah, B., Haloi, A. and Karmakar, P. K. A generalized hydrodynamic model for acoustic mode stability in viscoelastic plasma fluid, *Astrophysics and Space Science*, 361, 2016.
- Borah, B., Haloi, A. and Karmakar, P. K. Atypical gravito-electrostatic fluctuations in the presence of active ion-inertial dynamics, *Journal of Plasma Physics*, 82, 2016.
- Borah, M. and Mohanta, D. Composite-Hydroxide-Mediated Formation of Barium Titanate Nanocubes and Their Optical Emission Response, *Chinese Journal of Physics*, 53, 2015.
- Borah, M., Borah, D., and Das, M. K. Discriminating Majorana neutrino textures in light of the baryon asymmetry *Physical Review*, D91, 2015.
- Borah, P., Gogoi D, and Das, N., Role of nonthermal electrons on dust ion acoustic double layer with variable dust charge. *Physica Scripta*, 91, 1, 2015.
- Boruah, J. and Ahmed, G. Laboratory simulation and modeling of size, shape distributed interstellar graphite dust analogues: A comparative study, *Planetary and Space Science*, 125, 2016
- Boruah, R. Mohanta, D., Nath, P. and Ahmed, G. Inverse surface plasmon resonance based effective hydrogen sensing using nanoscale palladium films, *Optical Materials*, 39, 2015.
- Boruah, R. Mohanta, D., Nath, P. and Ahmed, G. Surface Plasmon Resonance-Based Protein Bio-Sensing Using a Kretschmann Configured Double Prism Arrangement, *IEEE Sensors Journal*, 15, 2015.
- Boruah, R. Mohanta, D., Nath, P. and Ahmed, G. Surface plasmon resonance based protein bio-sensing using Kretschmann configured double prism arrangement, *Sensors Journal, IEEE*, 15, 2015.
- Buragohain, M., Pathak, A., Sarre, P., Onaka, T. and Sakon, I. Theoretical study of deuterated PAHs as carriers for IR emission features in the ISM, *Mon. Not. Royal Astron. Soc.*, 454, 2015.
- Chutia, P. and Kumar A., Charge carrier relaxation dynamics and ac conductivity scaling of poly (3, 4-ethylenedioxythiophene) nanoparticles, *Physica Status Solidi A: Applications and Materials Science*, 212, 2015.
- Chutia, P. and Kumar A., Charge carrier relaxation studies in poly (3, 4-ethylenedioxythiophene) nanofibers, *J. Polymer Res.*, 22, 2015.
- Chutia, P. and Kumar A., Electrical conduction mechanism of poly (3, 4-ethylenedioxythiophene) nanofibers at low temperature, *Appl. Phys. A*, 120, 2015.
- Chutia, P. and Kumar A., Electrical transport and morphological studies of polyaniline nanostructures, *Polymer Engineering and Science*, 55, 995-1002, 2015.
- Devi, M, Mohanta, D. and Saha, A. Comparative study of microscopic, spectroscopic and magneto-optic response of ferrofluids subjected to γ -radiation, *Indian Journal of Physics*, 89, 2015.
- Devi, M., Dutta, PP, and Mohanta, D. Analytical calculation of chain length in ferrofluids, *Bulletin of Materials Science*, 38, 2015.
- Dutta, S., Patil, A., and Nath, P., Dye assisted pH sensing using a smartphone, *IEEE, Photonics Technology Letters*, 27, 2015.
- Dutta, S., Sarma, D., and Nath, P. Ground and river water quality monitoring using smartphone based pH sensor *AIP-Advances*, 5, 2015.
- Francis, N. K. Construction of neutrino matrix with non-zero θ_{13} and leptogenesis, *Canadian Journal of Physics*, 93, 2015.
- Francis, N. K. Neutrino mass models with and without θ_{13} in predicting leptogenesis. *Indian Journal of Physics*, 89, 2015.
- Gohain, M. and Karmakar, P. K. A generalized two-fluid model of plasma sheath equilibrium structure, *Europhysics Letters*, 112, 2015.



- Goutam, H. and Karmakar, P. K. A simple model for plasma evolution solar in coronal loops *International Journal of Advanced Research in Physical Sciences*, 2, 2015.
- Goutam, H. and Karmakar, P. K. Equilibrium structure of gravito-electrostatic sheath in the presence of inhomogeneous temperature distribution, *Europhysics Letters*, 112, 2015.
- Goutam, H. and Karmakar, P. K. Gravitoelectromagnetic sheath, *Astrophysics and Space Science*, 357, 2015.
- Halo, A. and Karmakar, P. K. Nonlinear gravito-electrostatic waves in self-gravitating complex plasma in presence of ion-drag effects, *Astrophysics and Space Science*, 358, 2015.
- Husain, I. and Nath, P. Smartphone based platform optical set-up measuring $\lambda/256$ optical phase difference in an interference process, *Applied Optics*, 54, 2015.
- Hussain, T., Narayanan, A., Srikanth, R., Wakker, B. P. and Pathak, A. HST/COS detection of a Ne VIII absorber towards PG 1407+265: An unambiguous tracer of collisionally ionized hot gas? *Mon. Not. Royal Astron. Soc.*, 446, 2015.
- Jha, D. K., Varadarajan, K. S., Patel, A. B. and Deb, P. Direct synthesis of water dispersible superparamagnetic TGA capped FePt nanoparticles: One pot, one shot, *Materials Chemistry and Physics*, 156, 2015.
- Kalita, E., Nath, B. K., Deb, P., Saikia K. High quality fluorescent cellulose nanofibers from endemic rice husk: Isolation and characterization, *Carbohydrate polymers*, 122, 2015.
- Kalita, R., Borah, D., and Das, M. K. Corrections to Scaling Neutrino Mixing: Non-zero θ_{13} , δ_{CP} and Baryon Asymmetry, *Nuclear Physics*, B894, 2015.
- Karmakar, P. K. and Borah, B. Global gravito-electrostatic fluctuations in self-gravitating spherical non-uniform charged dust clouds, *Astrophysics and Space Science*, 361, 2016.
- Kumar, A., Deka, M., Banerjee, S. and Sarmah, S. Recent Trends in Electroactive Polymer Nanocomposites and Swift Heavy Ion Irradiation effects on them, *Journal of Renewable Energy*, 5, 2015.
- Kumar, N., Boruah, R., Deb, P., and Das, S. K. Hydrothermal synthesis of anatase titanium dioxide mesoporous microspheres and their antimicrobial activity, *Microporous and Mesoporous Materials*, 213, 2015.
- Nath, A.K. and Kumar, A. 100 MeV Si⁹⁺ swift heavy ion irradiation induced enhancement in electrochemical properties of electrolyte membrane composites based on ionic liquid-polymer-nanocomposite. *J. Membrane Sci.*, 485, 2015.
- Nath, B. C., Ahmed, G. and Dolui, S. K. An efficient quasi solid state dye sensitized solar cell based on polyethylene glycol/graphene nanosheet gel electrolytes, *Royal Society of Chemistry Adv.*, 5, 2015.
- Nath, N. M., Sarma, K., and Das, M. K. Regge Like Initial Input and Evolution of Non-Singlet Structure Functions from DGLAP Equation up to Next-Next-to Leading Order at Low x and Low Q^2 , *Pramana J. of Physics*, 85, 2015.
- Paul, D., Biswas, R. and Bhattacharya, N.S. Investigating photonic crystal fiber within E to L communication bandwidth with different material composites, *Optik*, 126, 2015.
- Paul, D., Biswas, R. and Bhattacharya, N.S. Predicting different losses of photonic crystal fibers in material and hetero-core domain, *Optical Materials*, 48, 2015.
- Saikia, K., Sen, D., Mazumder, S. and Deb, P. Reassembling nanometric magnetic subunits into secondary nanostructures with controlled interparticle spacing, *RSC Advances* 5(1), 2015.
- Saikia, K., Kaushik, S. D., Sen, D. Mazumder, S. and Deb, P. Fatty acid as structure directing agent for controlled secondary growth of CoFe₂O₄ nanoparticles to achieve mesoscale assemblies: A facile approach for developing hierarchical structures, *Applied Surface Science* 379, 2016.
- Saikia, K. Sarma, D. D. and Deb, P. Organization dependent collective magnetic properties of secondary nanostructures with differential spatial ordering and magnetic easy axis orientation, *Journal of Magnetism and Magnetic Materials* 408, 2016.
- Sarma, J. K. and Deves, M. Analytical approach for the solution of the nonlinear GLR-MQ equation. *Proc. Ind. Nat. Sc. Academy*, 81, 2015.
- Sarma, J. K., N. Baruah and Das, M. K., Analysis of small x behaviour of longitudinal and heavy flavour structure functions of proton, *Int. J. Theor. Phys.*, 54, 2015.



Sarma, J. K., Nath, N. M. and Das, M. K. Q2 evolution of $xF_3(x, Q_2)$ structure function and Gross-Llewellyn Smith sum rule up to next-next-to-leading order at low x and low Q_2 using a Q_2 -dependent Regge ansatz, *Indian J Phys.*, 2015.

Sarma, J. K., Nath, N. M. and Das, M. K. Regge inspired QCD based investigation on the Q_2 dependence of Gross-Llewellyn Smith sum rule up to NNLO QCD corrections, *Journal of Advanced Physics*, 4, 2015.

Sarma, J. K., Nath, N. M. and Das, M. K. Regge like initial input and evolution of non-singlet structure functions from DGLAP equation up to next-next-to leading order at low x and low Q_2 , *PRAMANA*, 85, 2015.

Sarma, J. K., Sarma, R., Tripathi, S., Misra, R., Dewangan, G. and Pathak, A. Relationship between X-ray spectral index and X-ray Eddington ratio for Mrk 335 and Ark 564, *MNRAS*, 448, 2015.

Sarma, R and Mohanta, D. Luminescence and bioimaging response of thio-glycolic acid (TGA) and sodium dodecyl sulfate (SDS)- coated fluorescent cadmium selenide quantum dots, *Journal of Luminescence*, 161, 2015.

Sarma, R., Deka, G. and Mohanta, D. Manifested luminescence and magnetic responses of stoichiometry dependent Cd $_{1-x}$ Mn $_x$ Se quantum dots, *Materials Research Bulletin*, 62, 2015.

Sarma, R., Tripathi, S., Misra, R., Dewangan, G., Pathak, A. and Sarma J. K. Relationship between X-ray spectral index and X-ray Eddington ratio for Mrk 335 and Ark 364, *Mon. Not. Royal Astron. Soc.*, 448, 2015.

Shalima, P., Gogoi, R., Pathak, A., Misra, R., Gupta, R., and Vaidya, B. The Dust Content and Radiation Fields of Sample of Galaxies in the ELAIS-N1 Field, *Publications of the Astronomical Society of the Pacific*, 127, 2015.

Upadhyay, J., Kumar, A., and Buragohain, A.K. Antibacterial and haemolysis activity of polypyrrole nanotubes decorated with silver nanoparticles by an in-situ reduction process. *Materials Science and Engineering C*, 54, 2015.

Upadhyay, J., Kumar, A., Gupta, K. and Mandal, M. Investigation of physical and biological properties of Polypyrrole nanotubes-Chitosan nanocomposites, *Carbohydrate Polymers*, 132, 2015.

Books and Book Chapters

Sirohi, R. S. 2015. *Introduction to Optical Metrology*. CRC Press.

Sirohi, R. S. 2015. Light Experiments to Understand Light. In Ghatak A., Pathak A. and Sharma V. P. (eds). *Light and its Many Wonders*, Viva Books, New Delhi.

Sirohi, R. S. 2015. Holography and its Applications. In Ghatak A., Pathak A. and Sharma V. P. (eds). *Light and its Many Wonders*, Viva Books, New Delhi.

Joenathan C., Barnal A., and Sirohi, R. S. 2015. Advances in Speckle Metrology. In Brown G. T., Guo C., Livshits I., Mayerhoefer T., Popp J., Schmitt M., and Visser D. T. (eds). *The Optics Encyclopedia*, Wiley-VCH.

SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED

International and National

A Kumar attended the Eleventh National Conference on Solid State Ionics, Department of Physics, Tezpur University, 21 December, 2015

A Pathak attended New Horizons@PRL workshop, Physical Research Laboratory, Ahmedabad, July, 2015

A Pathak attended the North East Meet of Astronomers, 2015, Tezpur University, Tezpur, December, 2015

A Pathak attended the Science and Instrumentation Meeting- III, TMT, India, Tezpur University, October, 2015.

R S Sirohi attended an International Conference on Year of Light 2015, IIT Guwahati, 31 October, 2015.

R Sarma attended an International Conference on Complex Systems Approach to Self-organizations, IIT Madras, March, 2016.

R Sarma attended the North East Meet of Astronomers, 2015, Tezpur University, Tezpur, December, 2015

R Sarma attended the Science and Instrumentation Meeting- III, TMT, India, Tezpur University, October, 2015.

Rupjyoti Gogoi attended North East Meet of Astronomers, 2015, Tezpur University, Tezpur, December 2015

Rupjyoti Gogoi attended the IUCAA workshop on Astronomical Data Analysis, Assam Don Bosco University, Guwahati, March 21, 2016

Rupjyoti Gogoi attended the Science and Instrumentation Meeting-III, TMT, India, Tezpur University, October, 2015.



TALKS BY THE FACULTY ABROAD AND IN INDIA

A Kumar delivered a talk, Ion Transport Studies in Ionic Liquid based Polymer Electrolyte Nanocomposites and Swift Heavy Ion Irradiation Effects, Eleventh National Conference on Solid State Ionics, Department of Physics, Tezpur University, 21 December, 2015.

A Kumar delivered a talk, Swift heavy ion irradiation induced modifications in physico-chemical properties of electroactive polymers, in the IUAC Acquaintance Programme Department of Physics, Gauhati University, 16 November, 2015.

A Pathak delivered a talk, Complex large aromatic molecules on Pluto?, in the New Horizons@ PRL workshop, at Physical Research Laboratory, Ahmedabad, 14 July, 2015.

A Pathak delivered a talk, Interstellar PAHs - Emission Mechanism, in the Neem Seminar, Inter-University Centre for Astronomy and Astrophysics (IUCAA), IUCAA, Pune, 30 June, 2015.

A Pathak delivered a talk, Interstellar PAHs: IR spectroscopy, in the Division Seminar, at Physical Research Laboratory, Ahmedabad, 10 July, 2015.

A Pathak delivered a talk, Spectroscopy of Deuterated Polycyclic Aromatic Hydrocarbons: Astrophysical Implications, in the Topical Conference on Charged Particle Collisions and Electronic Processes in Atoms, Molecules and Materials (q-PaCE 2016), Indian School of Mines, Dhanbad, 09 January, 2016.

A Pathak delivered an invited talk, Interstellar substituted PAHs, North-East Meet of Astronomers, Tezpur University, Tezpur, 26 - 28 October, 2015.

A Pathak delivered an Invited talk, Thirty Meter Telescope: Science & Instrumentation Meeting III, Tezpur University, Tezpur, 01 December, 2015.

P Deb delivered a talk, Miniaturisation is the Name of the Game, in Amazing NANO-2016, Assam Don Bosco University, 1 February, 2016.

P Deb delivered a talk, Nanotechnology: Manufacturing the Future, in the Indo German Convention of Lindau Alumni held in Kasturba Medical College, Manipal University, 21 August, 2015.

R S Sirohi delivered a talk, 2015: The International Year of Light (IYL), at Nehru Science Center Mumbai, October 28, 2015.

R S Sirohi delivered a talk, History of Light from Greek period till Now, International Year of Light 2015, IIT Guwahati, 31 October, 2015.

R S Sirohi delivered a talk, Light & Holography, at IIT Patna, 15 December, 2015.

R S Sirohi delivered a talk, Optical Components, at Doon University, Dehradun, 13 February, 2016.

R Sarma delivered a talk, An improved algorithm for characterizing low and high dimension chaotic attractors Complex Systems Approach to Self-organizations, IIT Madras, March 2016

R Sarma delivered a talk, Dynamics of driven coupled order parameter system, in the Science and Instrumentation Meeting- III, TMT, India, Tezpur University, October, 2015.

R Sarma delivered a talk, Extracting hidden information from a scalar time series, in the North East Meet of Astronomers, 2015, Tezpur University, Tezpur, December, 2015.

Rupjyoti Gogoi delivered a talk, Data Analysis in Infrared Astronomy, in the IUCAA workshop on Astronomical Data Analysis, J.B. College, Jorhat, 17 March, 2016.

Rupjyoti Gogoi delivered a talk, Infrared counterparts of X-ray sources in globular clusters, India-TMT Science & Instrumentation Meeting III, Tezpur University, December 1, 2015

Rupjyoti Gogoi delivered a talk, Infrared study of some nearby elliptical galaxies, North East Meet of Astronomers-I (NEMAI), Tezpur University, 26 October, 2015.

Rupjyoti Gogoi delivered a talk, Introduction to Infrared Astronomy, in the IUCAA workshop on Astronomical Data Analysis, Assam Don Bosco University, Guwahati, 21 March, 2016.



Rupjyoti Gogoi delivered a talk, The dust content and radiation fields of a sample of galaxies in the ELAIS-N1, in the Workshop on Electromagnetic Scattering as a Tool in Astronomy and Astrophysics, MK Bhavnagar University, Bhavnagar, Gujarat, 4 January, 2016.

DISTINGUISHED VISITORS TO THE DEPARTMENT

Dr. Ankona Datta, TIFR, Mumbai

Prof. Charles Joenathan, Rose-Hulman Institute of Technology, USA

Prof. D. Kanjilal, Director, Inter-University Accelerator Centre (IUAC), New Delhi

Prof. L.N. Hazra, Calcutta University

Prof. Mustansir Barma, Professor of Eminence, TIFR, Hyderabad

Prof. Mushahid Hussain, VC, M.J.P Rohilkhand University, Bareilly

Prof. Nikhil Chakrabarti, SINP, Kolkata

Dr. P. Shalima, IIA, Bangalore

Prof. J. R. Kayal, Jadavpur University, Kolkata.

AWARDS & HONOURS RECEIVED BY THE FACULTY/STUDENTS/RESEARCH SCHOLARS

Faculty

A Pathak received DST-JSPS International Scientific Collaborative project with University of Tokyo, Japan from June 2014-May 2016.

P Deb received UGC Research Awards for the year 2014-2016.

P Deb received Anniversary Best Teacher Award, Tezpur University, for the year 2015.

P Debreceived APS-IUSSTF Professorship Award in Physics 2015-16 from American Physical Society and the Indo-U.S. Science & Technology Forum.

SEMINARS/WORKSHOPS/SYMPOSIA/OTHER SUCH PROGRAMMES ORGANIZED BY THE DEPARTMENT

- Eleventh National Conference on Solid State Ionics, December, 2015.
- North East Meet of Astronomers, December, 2015.
- India-TMT Science & Instrumentation Meeting III, Tezpur University, December, 2015.

NUMBER OF STUDENTS WHO PASSED NET/SLET/JRF/GATE

NET: 2

SLET: 12

GATE: 2

NOTABLE PLACEMENT: 15

THE FACULTY OF THE DEPARTMENT

Professors

A J Choudhury, PhD (Oxford)

Pro Vice Chancellor (till 31 December, 2015)

Specialization/Areas of Interest: Nanotechnology, Condensed Matter Physics, Laser based Instrumentation

E-mail: ajc@tezu.ernet.in



Bharat Ratna Lokapriya Gopinath Bordoloi Chair Professor

R S Sirohi, PhD (IIT Delhi)

Padma Shri, FNAE, FNASc, FOSA, FSPIE, FOSI, AvH Fellow, AvH Awardee

Professor of Eminence

Specialization: Coherent Optics, Optical Instrumentation, Laser Application, Optical Metrology

E-mail: sirohi@tezu.ernet.in

A Kumar, PhD (IIT Kanpur)

Dean, School of Sciences

Specialization/Areas of Interest: Materials Science/Condensed matter Physics, GPS

E-mail: ask@tezu.ernet.in

J K Sarma, PhD (Gauhati)

Specialization/Areas of Interest: High Energy Physics, Particle Physics

E-mail: jks@tezu.ernet.in

Nidhi S Bhattacharyya, PhD (Delhi)

Specialization: Microwave, Material Devices and Antennas

E-mail: nidhi@tezu.ernet.in

Nilakshi Das, PhD (Gauhati)

Specialization/Areas of Interest: High Energy Physics, Plasma Physics

E-mail: ndas@tezu.ernet.in

Associate Professors

GA Ahmed, PhD (Gauhati)

Head of the Department

Specialization/Areas of Interest: Laser Physics

E-mail: gazi@tezu.ernet.in

P Deb, PhD (Jadavpur)

Specialization/Areas of Interest: Mesoscopic and nanoscopic physics, and Computational nanoscience

E-mail: pdeb@tezu.ernet.in

D Mohanta, PhD (Tezpur)

Specialization/Areas of Interest: Nanotechnology & Condensed Matter Physics

E-mail: best@tezu.ernet.in

P K Karmakar, PhD (Gauhati)

Specialization/Areas of Interest: Theoretical Plasma Physics

E-mail: pkk@tezu.ernet.in

M K Das, PhD (Gauhati)

Specialization/Areas of Interest: High Energy Physics, Neutrino

E-mail: mkdas@tezu.ernet.in

P Nath, PhD (Gauhati)

Specialization/Areas of Interest: Fibre Optics

E-mail: pnath@tezu.ernet.in

Assistant Professors

Ng K Francis, PhD (Gauhati)

Specialization/Areas of Interest: High Energy Physics (Theoretical)

E-mail: francis@tezu.ernet.in

R Biswas, PhD (Dibrugarh)

Specialization/Areas of Interest: Electronics & Condensed Matter Physics, Seismology

E-mail: rajib@tezu.ernet.in

A Pathak, PhD (Gorakhpur)
Specialization/Areas of Interest: Astrophysics
E-mail: amit@tezu.ernet.in

Rupjyoti Gogoi, PhD (Gauhati)
Specialization/Areas of Interest: High Energy Physics
E-mail: rgogoi@tezu.ernet.in

SK Das, PhD (IISc, Bangalore)
Specialization/Areas of Interest: Materials Science
E-mail: skdas@tezu.ernet.in

DST Inspire Faculty

A J Choudhury, PhD (Gauhati)
Specialization/Areas of Interest: Electronics & Photonics
E-mail: arup01@tezu.ernet.in

Contractual Faculty

R Sarmah, PhD (IISc, Bangalore)
Specialization/Areas of Interest: Condensed Matter Physics
E-mail: ritupan@tezu.ernet.in

THE STAFF OF THE DEPARTMENT

Technical Staff

K Baruah, PhD (Gauhati),
Technical Officer
E-mail: kiba@tezu.ernet.in

RBoruah, PhD (Tezpur)
Technical Assistant
E-mail: rboruah@tezu.ernet.in

M Gohain, Diploma
Laboratory Assistant
E-mail: mgohain@tezu.ernet.in

B Boro, BSc (Dibrugarh)
Laboratory Assistant
E-mail: bbiju@tezu.ernet.in

D Deka, BSc (Guwahati)
Laboratory Assistant
E-mail: ddeka@tezu.ernet.in

Office Staff

U Patir, BSc (Tezpur)
UDC
E-mail: patir@tezu.ernet.in

N Sarma
MTS



ONGC-CENTRE FOR PETROLEUM BIOTECHNOLOGY (ONGC-CPBT)

2015-16

THE CENTRE

The CPBT was established in the year 1999 with financial support from Oil & Natural Gas Corporation Ltd. ONGC(L). The Centre became permanent on 30th April, 2010 with additional financial support from ONGC(L) and it was renamed as ONGC-CPBT.

The Centre aims at:

- conducting research and impart training in Petroleum Biotechnology;
- encouraging and nurturing industry-academy interaction;
- undertaking such academic, manpower development, training and research programs as may be necessary to achieve the above objectives;
- transferring technology to ONGC(L).

Major facilities and equipment available

- Gene Pulser
- BOD cum Shaker etc.

| Principal Investigator | Salient Research Findings |
|------------------------|--|
| A K Mukherjee | <ul style="list-style-type: none"> • Four new bacterial strains capable of degrading polyaromatic hydrocarbons have been isolated and taxonomically characterized for their field trial in bioremediation of petroleum oil contaminated soil samples. • A dirhamnolipid was purified and identified using LC-MS/MS, NMR & FTIR analyses. The enzymes involved dirhamnolipid synthesis pathway were also characterized using proteomic approach. • The above dirhamnolipid biosurfactant was found to be efficient for its application in petroleum oil recovery from oil wells. |
| T Medhi | <ul style="list-style-type: none"> • Soil, contaminant as well as microbial characterization of crude oil contaminated soil have been done as preliminary interdisciplinary steps to develop a phytoremediation protocol by using selected plant species. |

Research projects, ongoing and new

| Project Title | Funding Agency | Amount (in INR) | Duration | Principal Investigator |
|--|----------------|-----------------|-----------|------------------------|
| Proteomics study of aromatic hydrocarbons degradation enzymes of some selected bacterial strains: prospecting strategies for environmental bioremediation. | ONGC-CPBT | 7.06 lakh | 2014-2016 | A K Mukherjee |
| Development of phytoremediation protocol for bioremediation of crude oil contamination. | ONGC-CPBT | 8.16 lakh | 2014-2016 | T Medhi |

PUBLICATIONS

In International and National Journals

Bordoloi N.K., Bhagowati P. Chaudhuri M.K., Mukherjee A.K. PLoS ONE, 11(4), 2016.



Gogoi D., Bhagowati P., Gogoi P., Bordoloi N.K., Rafay A., Dolui S.K., Mukherjee A.K. RSC Advances, 2016 [In press].

THE PERSONAL OF THE CENTRE

Head, ONGC-CPBT

AK Mukherjee, PhD (Burdwan)

Professor, Dept of Molecular Biology & Biotechnology

Specialization/Areas of Interest: Snake Venom Biochemistry, Venomics and Antivenomics of Indian cobra and Russells Viper, Environmental Biotechnology and Industrial Microbiology, Drug Discovery from Natural Resources.

E-mail: akm@tezu.ernet.in

Technical Staff

A Saikia, B Sc (Gauhati)

Technical Assistant

E-mail: anupams@tezu.ernet.in

Junior Research Fellows

P Bhagowati, MSc (NIT, Rourkela)

E-mail: pabb195@tezu.ernet.in

M N Deka, MSc (VIT, Vellore)

E-mail: manabd@tezu.ernet.in

Office Staff

N Das

Section Officer (Finance) (part time)



DBT NODAL CELL

THE CELL

Moving forward with the unique academia-biomedical mandate to strengthen healthcare in the northeastern states of India, the DBT Nodal Cell, Tezpur University has added significant milestones. The two ongoing projects are:

- I) Development/Upgrading infrastructure in Medical Colleges / Institutes of the northeastern region (with a sanctioned grant of Rs. 40.00 crores).
- II) Research grants to support MD/MS Thesis to medical students of the northeastern region (with a sanctioned grant of Rs 4.50 crores).

DEVELOPMENT/UPGRADING OF INFRASTRUCTURES IN MEDICAL COLLEGES/INSTITUTES OF NORTH EASTERN STATES OF INDIA

- 2,95,176 patients visiting DBT HEALTHCARE laboratories in 2014-2016 in NER provided affordable/no cost diagnostics through the upgraded infrastructure provided by this project.
- Three laboratories under this project have accorded national/international recognition
 - ❖ The Revised National Tuberculosis Program has recognized the DBT Healthcare Laboratory For Tuberculosis Dept. Microbiology, Agartala Government Medical College & Hospital, Tripura as reference Laboratory for Tuberculosis for the state of Tripura.
 - ❖ The DBT Healthcare Molecular Biology/Virology Laboratory, Dept. Microbiology, Assam Medical College & Hospital, Dibrugarh, Assam has been identified as APEX Lab. by Centre for Disease Control, Atlanta for surveillance of Acute Encephalitis Syndrome.
 - ❖ The DBT Healthcare Molecular Diagnostic Laboratory, Dept. Microbiology, Regional Institute of Medical Sciences, Imphal, Manipur has been graded "Good" twice by Royal College of Pathologists, Australia-Serology Team, NSW, Australia.

RESEARCH/THESIS GRANT FOR MD/MS STUDENTS FROM THE NORTHEASTERN STATES OF INDIA

- 12.5% of all students enrolled for MD/MS Courses in NER Medical Colleges have been reached in this first project through the DBT MD/MS Thesis Grant Scheme.
- To date about 270 students have been awarded the DBT MD/MS Thesis Grant Award with 10 phases of the grant implemented.

TALKS BY THE FACULTY ABROAD & IN INDIA

Gaurangi Maitra delivered a lecture, The Ecosystem that nurtured Gregor Mendel, in an International Conference on Molecular Signaling: Recent trends in Biosciences, NEHU, Shillong, 18-20 November, 2015.

SEMINARS/WORKSHOPS/SYMPOSIA/INVITED LECTURES ORGANIZED BY THE CELL

- Screening Committee Meeting for Evaluation of MD-MS Thesis Grant applications, 1 February, 2016.
- DBT Nodal Cell Meeting with Adviser DBT & Vice Chancellor, Tezpur University, 27 April, 2016
- Screening Committee Meeting for Evaluation of the MD-MS Thesis grant Under NER, 12 August, 2016

DISTINGUISHED VISITORS TO THE CELL

Dr. P Sharma, Senior Consultant, NERBPMC, New Delhi.

Dr. R Kapur, Adviser, DBT, New Delhi.

Prof. S Bhattacharya, INSA Golden Jubilee Research Professor & Emeritus Professor, Visva-Bharati

**THE PERSONAL OF THE CELL****Head and Coordinator**

AK Mukherjee, PhD (Burdwan)
Professor, Department of Molecular Biology & Biotechnology
E-mail: dbt_nc@tezu.ernet.in, akm@tezu.ernet.in

Joint Coordinator

R C Deka, PhD (NCL, Pune)
Head, Department of Chemical Sciences
E-mail: ramesh@tezu.ernet.in

Financial Advisor

K Dutta
Deputy Registrar, Finance Section
E-mail: kumarj@tezu.ernet.in

Scientist

Gaurangi Maitra, PhD (VisvaBharati)
E-mail: gmaitra@tezu.ernet.in

Office Staff

Mitali Tamuly, BSc (Gauhati)
E-mail: meetaly@tezu.ernet.in.





CENTRE FOR OPEN AND DISTANCE LEARNING

THE CENTRE

The University established the Centre for Open and Distance Learning (CODL) in June, 2011 with the aim of disseminating knowledge and imparting quality education through open and distance learning mode. The center offers various post-graduate, undergraduate, diploma and certificate programmes in emerging areas of science, technology, social-sciences, management and humanities with a flexible system to cater to the needs of the learners who otherwise can not avail the regular mode of education. The basic focus of the Centre has been to prepare human resource of the region skilled and employable.

Academic programmes and Student Enrolled

| Academic Programmes | Student Enrolled |
|--|------------------|
| MSc in Mathematics | 11 |
| MA in Mass Communication | 10 |
| PG Diploma in Human Resource Management | 19 |
| PG Diploma in Retail Management | 03 |
| PG Diploma in Investment Management | 03 |
| PG Diploma in Environmental Management | 03 |
| PG Diploma in Renewable Energy and Energy Management | 13 |
| PG Diploma in Governance and Development | 02 |
| PG Diploma in Functional Hindi | - |

OTHER IMPORTANT ACTIVITIES OF THE CENTRE

CODL has planned to launch the MA programme in English, Assamese, Sociology and Hindi.

Preparation of study materials for these programmes are in progress. It has been endeavored to make these programmes as up to date as possible. The syllabi have been framed in such a way that it covers the latest developments in the concerned disciplines. Simultaneously, the need of the students and demands of NET examinations have also been taken care of.

Further, it has been decided to launch MA in Education & BA programme from CODL.

Efforts have been made to make the programmes responsive to the needs of the learners in the changed socio-educational environment. In addition to the content based programmes there will be courses on soft skills. CODL will be activating more study centre so that the Centre can reach more students.

THE PERSONNEL OF THE CENTRE

Director

S Katakya, PhD (Dibrugarh)

E-mail: sanjibk@tezu.ernet.in

Joint Director

S Sharma, PhD (Tezpur)

Associate Professor, Department of Electronics and Communications Engineering

E-mail: sss@tezu.ernet.in

**Assistant Professor**

S Sahoo, PhD (Tezpur)

Assistant Professor, Dept. of English and Foreign Languages

E-mail: ssahoo1@tezu.ernet.in

Programme Coordinators

ABhuyan, Business Administration

A K Das, Sociology

D C Baruah, Energy

D Nath, Disaster Management

NirmaliGogoi, Environmental Science

Runumi Das, Business Administration

S Dutta, Mathematical Science

S Mahapatra, Energy

S Sen, Mathematical Science

SK Tripathi, Hindi

UK Pegu, Mass Communication & Journalism

Office Staff

K Konch, BA (Dibrugarh)

Stenographer

E-mail: kkonch@tezu.ernet.in

R Bora

MTS

E-mail: ranjit@tezu.ernet.in

COMMUNITY COLLEGE

2015-16

ABOUT THE COLLEGE

The Community College of Tezpur University started functioning from July, 2015. The primary objective of the college is to offer demand driven vocational modular courses to impart employable skills, to facilitate skill up-gradation, multi-skilling, multi entry and exit, vertical mobility and life-long learning in a flexible manner to various target groups with provision for horizontal as well as vertical mobility.

ACADEMIC ACTIVITIES

Presently the Community College is offering a Diploma Programme in Paralegal Practice to provide functional understanding of law and the Indian Legal System and to develop paralegal skills to access law and justice. It is a full time programme of one year (two semesters) duration with an intake of 50 students.

Moreover, a full time Certificate Program in Income Generation in Financial Services Sector with an intake of 25 students and a Diploma programme on computer applications is proposed to be started in near future.

SEMINAR/WORKSHOP/SYMPOSIA/INVITED LECTURES ORGANISED BY THE DEPARTMENT

GN Sahewala, Sr Advocate of the Gauhati High Court delivered a lecture on 25 July, 2015.

GN Sahewala, Sr Advocate of the Gauhati High Court was invited to give a series of lecture from 26 – 27 Oct, 2015.

Nilay Dutta, Sr Advocate of the Gauhati High Court was invited to give a series of lecture on 26 Nov, 2015.

DISTINGUISHED VISITORS TO THE COLLEGE

Dr Anurag Deep, Associate Professor, Indian Law Institute, Delhi

Prof BC Chakraborty, Retired Professor, Department of Law, Gauhati University

Debojit Senapati, Advocate, Gauhati High Court

GN Sahewala, Senior Advocate, Gauhati High Court

Nilay Dutta, Senior Advocate, Gauhati High Court



**THE PERSONNEL OF THE COLLEGE*****Nodal Officer***

ABaishya, MTech

E-mail: anukul@tezu.ernet.in

Guest Faculty

JBaishya, Senior Advocate, District and Session Court, Tezpur

Dharitri Sharma, Faculty, Tezpur Law College

Mridula Sarmah, Faculty, Tezpur Law College

BKalita, Advocate, District and Session Court, Tezpur

NGahatraj, Faculty, Tezpur College

AK Sharma, Dept. of Computer Science and Engineering, Tezpur University

K Das, Dept. of Mathematical Science, Tezpur University

Pinky Dutta, Research Scholar, Dept. of Business Administration, Tezpur University

BJKalita, Research Scholar, Dept. of Business Administration, Tezpur University

THE STAFF OF THE COLLEGE***Office Staff***

BidishaBaishya, BCom (Gauhati)

Office Assistant

E-mail: bidisha@tezu.ernet.in

Technical Staff

PBhuyan, Diploma in CSE

Technical Assistant

E-mail: pranjalb@tezu.ernet.in

CENTRAL FACILITIES



- ★ The Central Library
- ★ Centre for Inclusive Development
- ★ CIIE
- ★ Computer Centre
- ★ Engineering Cell
- ★ Health Centre
- ★ Horticulture Section
- ★ IQAC
- ★ International Office
- ★ SAIC





THE CENTRAL LIBRARY

THE LIBRARY

The Central Library, Tezpur University, was established in 1994 along with the establishment of the University. The library aspires to achieve the height of an ideal University library in the region as well as in the country. The Central Library has a collection of more than one lakh books and journals. The collection covers the latest information resources on all areas of Engineering Technologies, Sciences, Management, Social Sciences, and Humanities. The library is providing access to e-resources & databases through the e-ShodhSindhu Consortia of INFLIBNET Centre and the DelCon Consortium. It is also a member of DELNET and is utilising its services. The library users can access book database, theses, journal database, e-journals and other e-resources from any computer within the University campus. The Central Library is an invaluable resource for the students, the researchers and the faculty members of the University. The library delivers high quality innovative information products, services and programmes that are integrated with teaching, learning and research activities. The mission of the Library is to support and supplement learning, teaching and research programmes.

The Library is located at the heart of the University campus and is housed in an aesthetically built three storied building occupying an area of 4734 sq.m.



**Management**

The Library Committee is the apex body for the management of the Library and the committee consists of Vice-Chancellor of the University as the Chairperson, Librarian as the Member-Secretary, Deans, and nominees of the Academic Council, and two students as members.

Opening Hours

The Library is open from 9am–12 midnight on all working days and from 10 am to 9.00 pm on Saturdays and Sundays.

COLLECTIONS: Current Collection of the Library

| | |
|---|------------|
| Books | 77431 |
| Books added during 2015-2016 | 11483 |
| Journals (Print +online) | 12378 |
| Print Indian Journals subscribed for 2016 | 78 (print) |
| Foreign Journals subscribed for 2016 | 97(print) |
| E-Journals | 12203 |
| Direct Purchased | 307 |
| Through e-ShodhSindu Consortium | 10725 |
| Through DBT e-Library Consortium (DeLCON) | 1171 |
| Back volume of journals | 7848 |
| Online Databases | 17 |
| Theses | 407 |
| Dissertations | 753 |
| CD | 2100 |
| VCDs | 81 |
| VHS Cassettes | 36 |
| Newspapers/Magazines | 10 |
| Manuscripts | 32 |

LIBRARY SERVICES

The Library is providing the following services:

- 15 Hours Reading Facility
- Book lending services
- Book Bank Facility For EWS
- Reference services
- Current Awareness Services (Monday Morning, InfoJ, InfoGranth)
- Inter-Library Loan Services(Through DELNET, American Centre, JCCC)
- OPAC/WebOPAC
- Online renew and reservation of books
- Internet access facility @1Gbps NKN
- Department-wise User orientation Programme
- Digital Library Services
- Research Support Services
- Information literacy programme
- Document delivery service(DELNET, JCCC)
- Separate reading facility for Children
- Reprography services (outsourced)
- Library & Information Services to outsiders on request
- Plagiarism check



VISITORS TO THE LIBRARY (2015-2016)

| Visitor category | Students | Research Scholars | Faculty members | Staffs | Outsiders | Total |
|-----------------------|----------|-------------------|-----------------|--------|-----------|-------|
| Average daily visitor | 341 | 25 | 09 | 4 | 4 | 393 |

DEVELOPMENTAL ACTIVITIES AT THE LIBRARY

The following developments took place during 2015-2016.

ETD Repository @TU: A Reservoir of Theses & Dissertations of TU

The Central Library developed a repository of Theses & Dissertations under the scheme of Shodhganga, UGC, INFLIBNET Centre. It is the reservoir of Tezpur University's intellectual output stored in a repository, hosted and maintained by the Central Library. It provides a platform for research scholars to deposit their theses/dissertations and make it available to the entire scholarly community world-wide for open access. The ETD Repository has the ability to capture, index, store, disseminate and preserve ETDs (Electronic Theses and Dissertations) submitted by the researchers of Tezpur University only.

Electronic Theses and Dissertation (ETD) Lab

Central Library has set up ETD Lab for digitization of theses and dissertations under the scheme of Shodhganga.

Bibliography Compiled on Sardar Vallabhbhai Patel (Vol.2)

The Central Library compiled the second volume of the Bibliography on Sardar Vallabhbhai Patel covering a wide range of primary and secondary sources of information. The Vice-Chancellor, Tezpur University released the volume as a mark of respect for Sardar Vallabhbhai Patel's contribution to India's unity, safety and security.

SEMINAR/WORKSHOP/SYMPOSIA/INVITED LECTURES ORGANISED BY THE LIBRARY

The following events were organized during 2015-2016.

Book Exhibition

On the occasion of *Rashtriya Ekta Divas*, an exhibition of books and photographs pertaining to Sardar Vallabhbhai Patel was organised by the Central Library during 31 October to 6 November, 2015 at the Central Library. Inaugurating the exhibition, the Vice-Chancellor, Tezpur University commended the exhibition as a careful way to discover Sardar's life and wisdom and as an inspiration for the younger generation. Several books on Sardar Patel's life, his involvement in the freedom struggle of India, his political career as well as the Indian Nationalist Movement were exhibited.

Library Orientation Programme

Central Library conducted department wise Library Orientation Programmes for the newly admitted students and research scholars during 4 – 8 August, 2015. The main objective of the programme was to introduce the students to the library facilities, resources, services and library techniques and to make them a regular and efficient user of the library.

Librarian's Day Celebration at Central Library

National Librarians' Day was celebrated at the Central Library on 12 August, 2015 on the occasion of the birthday of S. R. Ranganathan, who is considered the father of Library Sciences in India.

Walk to the Library Programme

The Central Library conducted the annual Walk to the Library programme on 3 August, 2015. Since 2010, Tezpur University annually organises a walk of all the students to the Central Library in the beginning of the new academic session in order to inculcate the habit of reading books and visiting the library among students.

The first meeting of 19th DELNET-NACLIN 2016

The first meeting of 19th NACLIN- 2016 was held on 18 December 2015 at the Conference Hall, Central Library. Dr HK Kaul, Director and Dr Sangeeta Kaul, Network Manager, DELNET, New Delhi, the Registrar, Tezpur University and local Librarians attended the meeting to discuss the theme/subthemes of the 19th NACLIN-2016.

**2-Day in-house Training Programme on LibSys**

The Central Library organised a two-day long Training Programme on LibSys (an Integrated Library Management Software) from 30 April to 01 May, 2015 for the library staffs to enhance their technical skills for managing LibSys software smoothly. Mr. Abhramalya Saha from Libsys, Kolkata was invited to conduct the programme.

Released the International Journals of Library Management and Services (IJLMS)

Dr H K Kaul, Director, DELNET, New Delhi released the International Journal of Library Management and Services (IJLMS), a biannual peer-reviewed journal of the Society for Advancement of Librarianship (SAP) on 18 December 2015. The Editor –in-Chief of the journal is Dr. Mukesh Saikia.

PUBLICATIONS**In International and National Journals**

Saikia, M. and Gohain, A. Use of Library Resources and User's Satisfaction in SRELS. *Journal of Information Management*, 52(4), 2015.

Books and Book Chapters

Das, J. M. 2015. Library reach to user through social media: Prospects and Problems a practical approach to LPU. In *Library Information Science & Information Technology for Education (NCITE, 2015)*. New Delhi: Rohini Modern Education Society.

Das, J. M. 2015. Wireless Environment of Lovely Professional University: A Library Scenario Case Study. In *Knowledge Organization in Academic Libraries (I-KOAL, 2015)*. Library Professional Association (LPA), New Delhi.

Das, J. M. 2016. Paradigm shift of libraries to digital world: An overview of central universities NE India. In *Contemporary Innovation in Library Information Science, Social Science and Technology for Virtual World (ICCLIST-2016)*. New Delhi: Rohini Modern Education Society.

Eqbal, M. 2015. *Role of Libraries in Indian Culture and Management*. Delhi: Shree Kala Prakashan.

Saikia, M. and Eqbal, M. 2016. *Library and Information Management*. New Delhi: Intellectual Property publication.

Saikia, M., Eqbal, M. and Pratap, D. 2016. *Library Management: New Trends and Challenges*. New Delhi: Academic Publications.

Saikia, M., Eqbal, M. and Pratap, D. 2016. *Managing Library and Information Services in Digital Age*. Guwahati: DVS Publishers.

Sarma, D. 2015. Manpower Development in Library and Information Services in India: Issues and Challenges. In Saikia, M., Eqbal, M. and Pratap, D. (eds). *Managing Library and Information Services in Digital Age*. Guwahati: DVS Publishers.

SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**International and National**

M Eqbal attended a Workshop cum Training programme on Institutional Digital Repository and Metadata Engineering jointly organised by the Centre for Career Development & Lakshminath Bezbaroa Central Library, IIT Guwahati and the National Digital Library (NME-ICT Project), IIT Kharagpur, 4-5 July, 2015.

M Eqbal attended a Workshop cum Training on Patent Search and Analysis, organised by Tezpur University IPR Cell in collaboration with TIFAC, DST, New Delhi, 21 November, 2015.

M Saikia attended a meeting of the University Librarians of NE region at INFLIBNET Centre, Gandhi Nagar, 27 July, 2015.

M Saikia was invited as a resource person in the National Workshop on Prospects of Consortia for North East India Library, Organised by Gauhati University, Guwahati in collaboration with the Indira Gandhi National Centre for the Arts (IGNCA), New Delhi, 17-18 March, 2016.

M Saikia was invited as a resource person in the UGC sponsored National Seminar on UGC-INFONET Digital library consortia: a gateway to higher education with special reference to NE Region, organised by Haji Anfar Ali College, Doboka, Nagaon, Assam, 30 April, 2015.

M Saikia was invited as speaker in the first biannual conference of LIPSA at CKB, College Jorhat, Assam, 13 June, 2015.



FUTURE PLANS

- RFID implementation
- Remote login access of E- Resources
- Establishment of separate competitive examination section (CES)
- Design and develop a Children's library Portal
- Design and develop a Gov. Publication Portal
- Establishment of Manuscript archival section/museum
- Establishment of Braille Section
- CD Library Portal
- Android Apps for Central Library
- Library e-Newsletter (Quarterly)
- Web-scale discovery service

THE PERSONNEL OF THE LIBRARY

M Saikia, PhD (NEHU)
Librarian
E-mail: mukesh@tezu.ernet.in

M Eqbal, PhD (AMU)
Deputy Librarian
E-mail: meqbal@tezu.ernet.in

J M Das, MLISc (Gauhati)
Assistant Librarian
E-mail: @tezu.ernet.in

S Sahoo, MLISc, MCA (Utkal)
Information Scientist
E-mail: @tezu.ernet.in

D Sarma, MLISc (Gauhati)
Professional Assistants
E-mail: dsarma@tezu.ernet.in

A Gohain, MPhil (VMU)
Professional Assistants
E-mail: anjang@tezu.ernet.in

Monmi Choudhury, MLISc (IGNOU)
Professional Assistants
E-mail: monmi@tezu.ernet.in

D K Gogoi, MLISc (IGNOU)
Semi Professional Assistants
E-mail: dkgogoi@tezu.ernet.in

R Sharma, BA, DLISc (KKHOU)
Library Assistants
E-mail: rajesh@tezu.ernet.in

Aru Das, BLISc (IGNOU)
Library Assistants
E-mail: arudas@tezu.ernet.in

H Sarmah, BA (Gauhati)
LDC
E-mail: hsarmah@tezu.ernet.in

P Basumatary, BLISc (SHIATS)
LDC
E-mail: pinchu@tezu.ernet.in

M K Nath, BA (Gauhati)
Library Attendants
E-mail: mknath@tezu.ernet.in

M Tamuli, BA (Gauhati)
Library Attendants
E-mail: mtamuli@tezu.ernet.in

D Ahmed
MTS

M Chakraborty
MTS

Kanaka Das
Bearer





CENTRE FOR INCLUSIVE DEVELOPMENT

THE CENTRE

In its efforts to create a congenial atmosphere for equal opportunity and inclusive growth, the University created the Centre for Inclusive Development in 2013 as an umbrella of the Equal Opportunity Cell, SC/ST Cell and Training & Placement Cell. The prime objective of the Centre is to pay special attention to the weaker sections of the target groups and take appropriate measures, mainly academic and action research, for their improvement. The main target groups of the Centre are (i) students and employees of Tezpur University, and (ii) the society at large. In pursuance of its objective, the Centre carries out various activities including remedial and supportive programmes, employability enhancement programmes, career counseling & placement of students, action research, executing projects from concerning agencies and government departments, and reaching out to the needy sections of the society, particularly women and children, and make efforts for their development by sharing resources of the University.

The academic programmes of the Centre are run under the School of Humanities & Social Sciences while others are carried out as central activities of the University.

Academic Programmes and Student Intake

| Academic programmes | Student Intake |
|---|----------------|
| Certificate Course in Technical Writing | 15 |
| PG Diploma in Child Rights & Governance | 20 |

Major facilities

- Computer Laboratory with 15 PCs.
- Seminar Hall (100 seater)
- Multi-media projector with screen – 01
- Class Rooms – 02

SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED

Nandarani Choudhury attended an Orientation Programme for Faculty members on Child Rights and Governance, organized by Tezpur University and UNICEF-Assam, 21 – 27 December, 2015.

R K Doley attended a Training cum Sensitization Programme on Disability Issues for Government Service Providers, organized by Tezpur University and Rehabilitation Council of India, Ministry of Social Justice & Empowerment, Government of India, 10 – 12 December, 2015.

R K Doley attended an Orientation Programme for Faculty Members on Child Rights and Governance, organized by Tezpur University and UNICEF-Assam, 21 – 27 December, 2015.

TALKS BY THE FACULTY ABROAD AND IN INDIA

Nandarani Choudhury acted as a resource person in the Pre-placement grooming programme for students of the School of Engineering, 17-18 August, 2015.

R K Doley delivered a talk, Soft skills for enhancing students' employability, at a National Workshop on Employability Skills for Youths, organized by the LTK College, North Lakhimpur, in collaboration with the Rajiv Gandhi National Institute of Youth Development, 9 – 10 March, 2016.

**SEMINAR/WORKSHOP/SYMPOSIA/INVITED LECTURES ORGANISED BY THE CENTRE**

Consultative Workshop on Child Rights and Governance, organized in collaboration with UNICEF-Assam, 24 – 25 August, 2015.

Training cum Sensitization Programme on Disability Issues for Government Service Providers, organized jointly with the Rehabilitation Council of India, 10-12 December, 2015.

Orientation Programme for Faculty members on Child Rights and Governance, organized in collaboration with UNICEF-Assam, 21 – 27 December, 2015.

DISTINGUISHED VISITORS TO THE CENTRE

Er. Pankaj R. Maru, National Coordinator (NHIS-National Trust), Ministry of Social Justice & Empowerment, Govt. of India, New Delhi.

OTHER IMPORTANT ACTIVITIES /ACHIEVEMENTS OF THE CENTRE**UGC-CSIR NET Coaching 2015**

Coaching for UGC-CSIR NET for the year 2015 was conducted during October – November 2015. A total of 347 students from 13 departments participated in the programme.

Outreach Programmes

- Completed and launched the following community services :
 - renovation work of the Napaam Crematorium
 - construction of a public Toilet complex at Napaam,
 - construction of the main entrance gate and front boundary fencing of the Napaam ME School
- The project on generating energy from locally available bio-mass wastes progressed to stage III during the year under report and about 32 households installed equipment for generating energy for cooking and electrification.
- A two-week course on Basics of Communicative English, was conducted during 30 March – 12 April, 2015 for the 10th passed youths of nearby villages.
- Conducted two awareness camps on (i) swine flu and protection; and (ii) Swachh Bharat Abhiyan involving the students of the University at Napaam ME School and Amolapam village respectively.
- As practiced in the past years, the faculty and students rendered voluntary services in taking tutorial classes, counseling, etc. to the students of the neighboring villages, particularly, those appearing at the Board examinations.

EQUAL OPPORTUNITY CELL**THE CELL**

The Equal Opportunity Cell of the University was created by a mandate of the UGC specifying the need of a functionary within the university set up which would facilitate affirmative action in order to ensure equal opportunity for all within its folds.

The Equal Opportunity Cell primarily orients its activities around training and development programs for the students which provide them with supplementary academic support in the form of remedial coaching. Furthermore, the Cell conducts sensitization and awareness programmes on a wide array of subjects ranging from Gender Issues, Human Rights, and Inclusion of Marginalized Groups to Peace and Conflict.

The objectives of the Cell are:

- To create an atmosphere of Equal Opportunity through awareness generation programmes.
- To provide auxiliary support towards skill development and enhancing employability of students.
- To tailor development and sensitization programmes to meet the distinct needs of the students.
- To expedite legal redressal in matters of violation of equal opportunity.

Programmes Organized by the Equal Opportunity Cell during 2015-2016

State-level Workshop for Capacity Building on Research Methodology Related to Language Teaching-Learning In collaboration with Govt. of Assam, SCERT and UNICEF, 30 March – 2 April, 2015.



Workshop on Research Methodology in Social Sciences in collaboration with Department of Sociology, sponsored by ICSSR-NERC, Shillong, 21 – 26 September, 2015.
UGC-Sponsored Six Months Course in Technical Writing programme, Autumn Semester, 2015.

SC/ST CELL

The SC/ST Cell was set up under the Notification No F 15-2/GA-II (SCT)/3638-A dtd 16.10.07. The Cell is headed by a Liaison Officer who is assisted by a supporting staff. The Cell takes care of the welfare of the Scheduled Caste and Scheduled Tribe (SC/ST) students and employees of the University.

The objectives of the Cell are:

- To implement the reservation policy for SC/ST students and employees of the University.
- To collect data regarding the implementation of policies in respect of admission, appointment to teaching and non-teaching positions at the University; to analyze the data showing the trends and changes towards fulfilling the required quota.
- To take up such follow-up measures for achieving the objectives and targets as laid down by Government of India and UGC.
- To implement, monitor continuously and evaluate the reservation policy in the University and suggest measures for ensuring the effective implementation of the policy and programmes of the Government of India.

The SC/ST Cell has been strictly following the UGC guidelines in exercising its function. The Cell organized the following programmes during 2015-2016.

Programmes Organized by the SC/ST Cell

- Monitored admissions and recruitments to ensure that govt. guidelines spelt out for those activities are strictly followed.
- Conducted UGC-CSIR NET Coaching programme for SC/ST, OBC (NCL) and Minority Students in association with 13 departments.
- Coordinated with the Government of Assam for Post-Matric Scholarships for SC and ST students.
- Arranged an interaction with the Vice Chancellor for SC/ST students in the beginning of the session 2015-16 (August 2015).
- Displayed a Complaint Box outside the SC/ST Cell along with awareness drives as to how complaints or grievances, if any, can be lodged (hard copy or online).
- Furnished information related to SC/ST students and employees to the UGC/MHRD as asked from time to time.

TRAINING & PLACEMENT CELL

The Cell

The Training and Placement Cell of the University is continuing as an effective institutional arrangement primarily aiming to train and place the students in the best known corporate entities all over India. So far 140 students with diverse profiles have been placed in the reputed companies across the country. The positive feedback of the corporate visitors alluded the enthusiasm of our students in the placement process. A total of 45 companies participated in the final placement process. We have strengthened our relationship with 28 past recruiters and established relationship with 17 new companies. Some of the prominent brands that came for final placements were Power Grid Corporation, Oil India, Amazon, Sap Labs, Dubar India, Nestle, Tech Mahindra, Wipro, Intel, Huawei Technologies, Vodafone, Pantaloons, DHL, HDFC Assets Management Company, Dalmia Cement, Airtel, Asian Paints, Axis Bank, Colgate Palmolive, ICICI Bank, Mahindra Finance, Zaloni Technologies, TNS World, XL Dynamics, Sap Labs, AMUL, Aasray Food, XL Dynamics etc. Diversity in terms of gender was well appreciated by the industry. The University was able to place more than 80 percent of the Management students in the



beginning of their 4th semester. The new recruiters accounted for 41 percent of the total recruitments, which indicates the high rise of institute's visibility in the industrial corridors. Also, the substantial rise in the pick ratio reflects the strong association and faith of the corporate on the capabilities & business acumen of our students. Apart from the organisations listed above, a few more organisations and educational institutions have intimated their willingness to recruit from the University shortly.

The Cell uses the facilities of the University, central as well as departmental, for conducting its activities as required.

Programmes organized during 2015-2016

- Two days Pre-placement grooming workshop, Empowering the people to reach greatest potentials - Art of Resume Writing & Business English, for Pre final & final year students, 9-10 May, 2015.
- A Capsule Pre-placement grooming programme for BTech students on interview techniques on 7 Aug 2015.
- Pre-placement grooming programme for School of Engineering students on resume writing, group discussion, interview techniques & mock interviews, 17-18 August, 2015.
- Under the Industry-Institute Interaction initiative, the Cell organized a Students workshop, IT Industry-Trends and Requirements, by Mr. Kushal Banerjee, Academic Relationship Manager-Eastern India, TCS, 4 Sept 2015.
- Organized, Mahindra Auto Quotient Competition, in collaboration with Mahindra & Mahindra, 1 December 2015.
- Conducted an Induction Publicity Exhibition Vehicle (IPEV) - Road Drive in association with Indian Air force, 16 February, 2016.
- A Capsule Pre-placement grooming programme for students of the School of Humanities & Social Science, 1 March, 2016.
- Organized a skype session as a part of the Industry-Institute Interaction initiative, Facebook as an organization & its Culture by Dr. Nitin More, Head-L&D, Facebook, 2 March, 2016.

LIST OF COMPANIES THAT RECRUITED OUR STUDENTS DURING 2015-16

- | | | |
|------------------------------|---------------------------|--------------------------|
| • Tech Mahindra | • Zaloni | • Wipro |
| • Amazon | • Dalmia Cement | • Huawei |
| • Vodafone | • Aluform India | • TCS |
| • Aasray Food | • XL Dynamics | • Intel |
| • Sap Labs | • Mphasis | • Linnovate Technologies |
| • Software AG | • Siemens | • Pragmatic Software |
| • Netcracker online services | • ICICI Bank | • Colgate Palmolive |
| • DHL | • Axis Bank | • Mahindra Finance |
| • Pantaloons | • Oil India Limited (OIL) | • Airtel |
| • AMUL | • SIBNJITSLIFE | • CG Foods |
| • Azim Premji Foundation | • Sesta | • Infocognito |
| • Dubar India | • PowerGrid corporation | • Berger Paints |
| • Mahindra & Mahindra | | |

THE PERSONNEL OF THE CENTRE

R K Doley, PhD (IITGuwahati)
Director
E-mail: rkdooley@tezu.ernet.in

Deena Davy, MA (Calicut)
Training & Placement Officer
E-mail: deena@tezu.ernet.in

L Boro
Assistant Registrar, SC/ST Cell
E-mail: lboro@tezu.ernet.in

Nandarani Choudhury, MA (Calcutta)
Education Officer, Equal Opportunity Cell
E-mail : nandaranic@gmail.com

Bhanu Panging Gogoi, PhD (Dibrugarh)
Assistant Education Officer, Equal Opportunity Cell
E-mail: bhanubj@tezu.ernet.in

M Baruah, BTech (Amravati)
Lower Division Assistant
E-mail: tnp@tezu.ernet.in

J Das
MTS



CENTRE FOR INNOVATION, INCUBATION AND ENTREPRENEURSHIP

The Centre for Innovation Incubation and Entrepreneurship (CIIE) was established in September 2013 through a merger with the Entrepreneurship Development Cell (EDC) of the University, which was opened in August 2010. The CIIE is being funded by AICTE and Tezpur University.

PARTICIPATION OF THE CENTRE/CELL IN THE COURSES OFFERED BY ACADEMIC DEPARTMENTS

| Course code | Course title | Total credit | Offering Department |
|-------------|------------------|--------------|------------------------|
| ME481 | Project-I | 12 | Mechanical Engineering |
| ME482 | Project-II | 24 | Mechanical Engineering |
| EN539 | Project (part-I) | 08 | Energy |
| EN540 | Project (part-I) | 16 | Energy |

MAJOR FACILITIES AND EQUIPMENTS AVAILABLE

The Centre is well equipped with the following:

- one Technology Display Hall
- one Central Workshop

FACULTY/STAFF PARTICIPATION IN TRAINING/WORKSHOP/SHORT TERM COURSES/CONFERENCES

U K Bharali was invited as a speaker at TED-X, organized by IIT Guwahati, 16 March, 2016.

RESEARCH PROJECTS, ONGOING AND NEW

| Project title | Funding Agency | Amount (in INR) | Duration | Principal Investigator |
|--|---|-----------------|----------|------------------------|
| Design of a dehulling/deseeding machine for all types of oil bearing seeds | Micro, Small and Medium Enterprise, Govt. of India (MSME) | 5.20 lakh | 2 years | |
| Design, development and testing of a green fuel powered energy efficient vehicle | MSME | 6.25 lakh | 2 years | |
| Production of natural Antioxidant Enriched Sandesh using Single Screw Extruder | MSME | 6.25 lakh | 2 years | |
| Development and fabrication of small capacity paddy parboiling system with process completion indicator ahead of onset of husk splitting | MSME | 5.50 lakh | 2 years | |
| Portable peripheral nerve testing instrument | MSME | 5.90 lakh | 2 years | |
| Polluted Air Purification Machine | MSME | 2.50 lakh | 2 years | |
| Low cost and user friendly portable Lift for home – for elderly person and patient | MSME | 6.25 lakh | 2 years | |
| Designing a cycle for Mr. Shivam Ayangia, a differently able student | - | - | - | U Bharali |

**PARTICIPATION IN OUTREACH PROGRAMMES**

P K Laskar has participated in National Science Day at Nagaon with his innovation, Polluted Air Purification Machine, 28 February, 2016.

PP Dutta attended a meeting of Innovation Club Members at Rashtrapati Bhavan, New Delhi, 15 March, 2016.

ENCOURAGING LOCAL INNOVATOR

Local Innovator Mr. Sanjay Darjee was imparted a 15-day training on electronics components at ECE Department, 09-30 March, 2016.

Mobile starter for water pump-Involving a local innovator Mr. Sanjay Darjee, successfully completed the project.

INNOVATION DISPLAY HALL

Tezpur University Innovations display hall, TUNOVATION, was inaugurated in December 2014 during the 12th Convocation of the University. TUNOVATION displays various innovations made by students and faculty members as a part of their projects or research work. Apart from displaying technical items, the hall also displays collection of cultural antiques of the North East Region including musical instruments, masks and terracotta. The hall is looked after by the Centre for Innovation, Incubation and Entrepreneurship (CIIE). The following technologies and antiques have been displayed:

- Low cost and user friendly portable lift for home for elderly persons and patients
- A de-seeding machine for bio-fuel application
- Mechanised paddy thrasher
- Motorised tri-cycle
- Automated public toilet flusher
- Hand-held Tea tasting instrument
- Electric Car
- Chilli gun for self-protection
- Cultural antiques of North East (Musical instruments, Musk and Terracotta)
- Utility Cleaning Device
- Weed Cutter
- Wet cum dry grinder
- Smart paddy trasher
- A cost effective intelligent helmet system

WORKSHOP FACILITIES

The following machineries have been installed in the centre for performing student project and innovative designs

- Arc welding and Teg welding machine with welding accessories
- Hand drill and Portable pillar drill with motor & Choke
- Angle grinder
- Chop saw
- Bench grinder and Grinding stone
- Spary machine
- Electric blower
- Envil

In addition to the above facilities, the Department of Mechanical Engineering and the Department of Electronics and Communication Engineering have the workshop facility for projects.

ADVISORY COMMITTEE OF THE CENTRE

Pro-Vice Chancellor
All Deans of Schools
Dean, Research & Development
Dean, Students' Welfare
Head, Dept of ECE
Head, Dept of Energy
Head, Dept of ME
Prof Chandan Goswami, Dept of BA
Prof S M Hazarika, Dept of CSE
Prof R C Deka, Dept of Chemical Science

THE CURRENT MEMBERS OF THE CENTRE

S Roy, PhD
Head
E-mail: xoumik@tezu.ernet.in

U K Bharali
Visiting Director
E-mail: ukbharali@yahoo.co.in

U Roy
UDC
E-mail: uttamroy@tezu.ernet.in



THE COMPUTER CENTRE

THE CENTRE

The University has a well-equipped Computer Centre (CC) with 152 latest configured Desktop Personal Computers (PCs) spread over three units of laboratories, which are supported by high-end servers and a host of latest software packages. The resources in the CC are extensively used for computational works & practical courses as well as for skill tests, online interviews, workshops, etc.

The ICT-enabled campus of the University is well supported by the Computer Centre. As a whole, the Centre provides a support system for the University Community in the form of hardware, software and network-related activities. The Local Area Network (LAN) is spread throughout the campus with the use of Optical Fiber Cables (OFCs) and high speed switching network which connects all the academic Departments, Centres, offices and other facilities. Apart from this, Wi-Fi has also been extended to the hostels and the residential areas of the campus to meet the ever growing need for ICT. A 70-seater state-of-the-art Video Conferencing facility is also available for Online Meetings, Interviews and Virtual Classes.

A number of Software Packages developed by the CC have been extensively used in various processes of the University, such as Online Leave Application and Approval System, Student Result Processing, Financial Accounting, Employee Payroll System, Income Tax Management, Employee Information System, etc.

Other important services rendered by the CC include the Telephony System and the Video Surveillance System which runs over the Campus LAN. The Internet facility is being facilitated through the high performance 1Gbps link of National Knowledge Network (NKN).

SERVICES PROVIDED BY THE CENTRE

The primary goal of the Computer Centre is to provide quality ICT services including computational facilities to the University community. In addition to the maintenance of the computational infrastructure, the following services are supported by the Computer Centre:

- Email & Internet Services
- Credit/audit practical courses of different Departments
- Organising practical sessions for various workshops and refresher courses of different Departments/Centres
- Organising training programmes for the employees
- Assist the Administration in the process of selection and procurement of computing resources
- Providing maintenance services for computers/ peripherals to the Faculty/Staff /Departments
- Maintaining and monitoring the Campus LAN; Wired as well as wireless
- Maintaining and monitoring various Internet Links
- System Administration, Network Administration and monitoring of various servers - Email, Web, Proxy, Firewall, etc.
- Maintaining the University Website and intranet portal
- Develop, procure and maintain software for administrative and other purposes of the University
- Software maintenance Services
- Providing and maintaining the MMPs in the auditorium and conference halls
- EPABX system administration and maintenance
- IP CCTV Surveillance Management

Academic programmes and Student intake

| Academic programme | PG / UG | Duration | Student Intake |
|--------------------------|---------|----------|----------------|
| DOEACC 'O' Level Diploma | UG | 1 Year | 20 |
| DOEACC 'A' Level Diploma | UG | 1 Year | 20 |



Major facilities and equipment available

2015-16

| EQUIPMENT | | | |
|-----------|--|--------------------------------|----------|
| SL | Particulars | Hardware (Make/Model) | Quantity |
| 1 | Four Party Video Conferencing System | Polycom 8000 Series | 1 |
| 2 | Avaya S8500 VoIP Telephony Server with 1200 Analog line capacity | Avaya S8500 | 1 |
| 3 | Voice Media Gateway | Avaya G650 | 2 |
| | | Avaya G450 | 2 |
| | | Avaya G700 | 5 |
| | | Avaya G430 | 2 |
| 7 | L3 Switch | Extreme X450 | 4 |
| | | Huwawei Quidway 9303 | 1 |
| 8 | Gigabit L2 Switch 48 Port | Extreme X350 48T | 56 |
| | | Allied Telesis AT -x510L-52GT | 3 |
| 9 | Gigabit L2 Switch 24 Port | Extreme X350 24T | 19 |
| | | Extreme X150 24T | 8 |
| | | Huwawei Quidway S5324TP-PWR-SI | 8 |
| | | HP 2520G | 9 |
| | | Allied Telesis AT -x510L-28GT | 11 |
| 10 | Firewall | Huwawei Edumon | 1 |
| 11 | Router | Cisco ASR 1000 | 1 |
| | | Cisco 2801 | 1 |
| | | Cisco 1750 | 1 |

SERVERS

| SL | Server Particulars | Hardware (Make/Model) | Operating System and Application Platform |
|----|-------------------------------------|------------------------|---|
| 1 | Secondary Storage Server | HP StoreEasy 1650 | Windows Storage Server 2012 |
| 2 | Email cum DNS Server | IBM / X226 | Redhat Enterprise Linux ES 4.0/ Sendmail, Bind |
| 3 | Proxy/NAT/Firewall Server | IBM / x3630M3 | Redhat Enterprise Linux ES 6.0/ Squid Proxy |
| 4 | Wireless NMS Server | HP / DL-380G5 | CentOS/Aruba Airwave |
| 5 | Oracle 10g Database (old) | HP / DL-380G5 | Windows 2003 Server/ Oracle 10g Suite |
| 6 | Oracle 10g Database (new) | IBM/X3560 | Windows 2008 R2 Server/ Oracle 10g DB |
| 7 | Oracle 10g App. Server(new) | IBM/X3560 | Windows 2008 R2 Server/ Oracle 10g App |
| 8 | File cum Kaspersky Antivirus Server | HCL / GL-2360 | Windows 2003 Server/ Kaspersky Total Space Security Admin |
| 9 | File Server cum Programming | HP DL 180G5 | Redhat Enterprise Linux ES 4.0/ Open Source |
| 10 | Video Streaming Server with Storage | IBM/X3650 + IBM/DS3524 | Windows 2008 R2 Server/ Adobe Media Server 5 |
| 11 | Network Video Storage (NVR) | Honeywell HUS-NVR-1032 | HUS-NVR-1032 |
| 12 | Web Server | IBM/X3560 | RHEL 6/Apache |
| 13 | VoIP Telephony Server | Avaya/S8500 | Avaya Linux Call Manager |

Computer Terminals & peripherals available

| Unit No. | Unit Name/Location | Terminals & Peripherals |
|----------|---|--|
| Unit-0 | Central Computer Centre (Academic Building -2) | Terminals - 60 (Core i5 / Windows 7 Pro. Desktops) Laser Printer - 2 Scanner - 2 Projector -1 |
| Unit-1 | Computer Centre-Cluster-1 (SoE Complex) | Terminals = 68 (Core i5 / Windows 7 Pro. Desktops) Laser Printer =1 Scanner = 1 Projector = 1 |

OTHER IMPORTANT ACTIVITIES OF THE CENTRE

- Under MHRD initiative, site survey is completed for a WiFi enabled campus,
- Data & Voice Networking of Humanities & Social Sciences Academic Complex
- Installation of 32TB Secondary Storage Device at CC
- Live Webcast of 13th Convocation Ceremony
- Process for establishment of 2nd Video Conference facility with 150 Capacity at HSS Academic Complex
- Process for augmentation of CC Cluster-2 Lab with 32 More computers
- Process for establishment of CC Cluster-3 at HSS Academic Complex

THE PERSONNEL OF THE CENTRE

Head of the Centre

N Sarma, PhD (IIT Guwahati)
Professor, Department of Computer Science & Engineering
E-mail: nitya@tezu.ernet.in

Computer Engineer

D K Sarma, MS (Tezpur)
Specialization/Areas of Interest: Computer Networks and Security
E-mail: dhiraj@tezu.ernet.in

Junior Programmers

D C Choudhury, MCA (Tezpur)
P Rajkhowa, BE (JEC) [on EoL]

Senior Technical Assistant

AK Das, Diploma

Technical Assistants

M Baruah, Diploma
N K Deka, Diploma
P Borah, MS (IT)

Student Assistants: 5

MTS: 03 (01 contractual)

EPABX Technicians: 1 (contractual)







THE ENGINEERING CELL

THE CELL

The Engineering Cell of the University was established in March 1995. Its primary responsibility is to develop and maintain the infrastructure of the University Campus, covering an area of about 262 acres of land. The following are the major duties and responsibilities of the Cell:

- Allotment and execution of construction projects involving civil, electrical, water supply and sanitary works
- Repair and maintenance of buildings and roads
- Maintenance of power supply in the university campus
- Maintenance of water supply to all the buildings including hostels and canteens
- Overall maintenance and development of the University campus

CONSTRUCTION ACTIVITIES

The following construction activities were accomplished during 2015-16.

- Construction of a RCC 3 storied Extension to the Central Library
- Construction of an Assam Type Machine House for the Department of Mechanical Engineering
- Construction of Speed Breakers

ONGOING CONSTRUCTION WORKS

Construction works of the following buildings taken up during the year are still continuing and likely to be completed during the year 2015-16.

- Construction of an Academic Building for the School of Humanities and Social Sciences
- Construction of a state-of-the-art Swimming Pool
- Construction of a 100 capacity RCC 3 Storied Boys' Hostel
- Creation of a Barrier free Environment – Construction of Ramps and Toilets for persons with disabilities
- Replacement of old CGI Sheets by Dyna Roof Sheets in the Community Hall

WORKS DONE WITH TENDER PROCESS

The tendering process of the following projects have been completed

- Construction of a RCC 3-storied Teaching Learning Center (TLC) Building
- Construction of a RCC 2-storied Security Barrack

POWER SUPPLY

The Govt. of Assam has sanctioned 2 MW of power to Tezpur University. This power is released to the University by APDCL as per the load demand. Currently, the University is drawing 1.5 MW from the 132/33 KV Depota Grid Sub-Station of APDCL through a 13.50 KM long dedicated power line. This power is received at the University end through a 2 x 2.5 MVA, 33/11KV Sub-Station constructed by the University and is distributed through an 11KV H.T. Ring Main connected to 4 nos. of Sub-station of capacity 2 x 315 KVA, 11KV/0.433 KV located at peak load centres inside the campus. During 2015-16, the total number of interruptions in power supply to the university was 306.50 hours. This includes in house maintenance shutdown of 12 hours.

WATER SUPPLY

Four deep tube wells, each 102 meters deep with submersible pumps, were installed in the University campus to access ground water.

Two overhead reservoirs (OHR) of capacity 3.0 lakh liter and 3.50 lakh liters were constructed to store treated water. The water from the OHR reaches the consumer points through a pipe-line network under gravity flow.



The present requirement of water in the university campus is more than 8.50 lakh liters per day. The demand is likely to increase with the completion of new Academic Buildings and Hostels. There was no instance of interruption in supply of treated water during the concerned year.

PROPOSALS FOR THE YEAR

Planning and designing of the following projects has been undertaken:

- A Central Lecture Hall Complex
- An Indoor Stadium of 2000 capacity
- Sewerage and drainage System
- ARCC Academic Building for the Department of Physics
- A Foreign Students' Hostel
- A Girls' Hostel of 400 capacity

THE PERSONNEL OF THE CELL

Executive Engineer

RR Hazarika, BE (REC, Silchar)

E-mail: rrhz@tezu.ernet.in

Assistant Engineers

J C Nath

G Kalita

Jr. Architect

Rashmi Dutta

Jr. Engineers

D Borkataki

S Goswami

S Talukdar

B Sarma,

Assistant

T Das

MTS



Health Centre

The Centre

Health Centre of Tezpur University has been functioning since 1995. It provides health care services to the students, faculty members and staff and their families. The facility was shifted to a new building with required modern facilities in September, 2010. At present we have over 5000 beneficiaries, which includes people working at our construction sites.

SERVICES/FACILITIES AVAILABLE

In addition to the usual OPD services, the centre also has ten beds, available for initial care of indoor cases including emergency cases.

OPD Services

The OPD timings are as follows:

| Session | Morning | Evening |
|--|-------------------|--------------|
| April to September | 8.30AM to 12.30PM | 4 PM to 6 PM |
| October to March | 8.30AM to 12.30PM | 3 PM to 6 PM |
| Saturdays and Sundays - 10 AM to 12 NOON | | |

One Medical Officer is always available 24hrs on emergency duty. The cases requiring hospitalization are referred to the referral Hospitals at Tezpur. Ambulance service is available round the clock and is provided free of cost.

A stock of common medicines including life saving drugs are maintained and are supplied free of cost. Routine laboratory investigations are also done free of cost.

One Autoanalyser (fully automatic) and one Hormone Analyser (Mini-Vidas) have been installed which has improved the facilities required for investigations. Ultrasound scanning, ECG and X-ray facilities are also made available at the Health Centre for the benefit of the University community.

We also keep a set of appliances for person with disability.

Visit by Specialists

The University has engaged Specialists of different disciplines (Paediatrics, Obstetrics and Gynaecology) who visit the Health Centre on specific days of the week on a regular basis for the benefit of the University community.

A Psychiatrist from Lokpriya Gopinath Bordoloi Regional Institute of Mental Health also visits the University regularly for offering counselling on stress related problems. One Sonologist visits the health centre once a week for ultrasound scanning. One Physiotherapist visits the health centre twice a week for physiotherapy of the differently abled students.

Other Important Activities

- The Medical Officers pay periodic visits to the hostels and canteen to assess the prevailing hygiene of the dining hall, water supply and the surroundings to prevent the outbreak of waterborne diseases amongst the boarders.
- Annual Health Checkup programme for the employees was started on 02/09/15 for the current year.
- Fogging in the campus was done in the month of July to prevent outbreak of mosquito borne diseases.
- Pulse Polio Immunization camps were organized in the campus as per directive of the Government.
- Blood donation camp was also organised on 17/03/16.
- Japanese-B encephalitis vaccine was given to TU employees on 02/04/15.
- Health checkups of students of Takshashilla Vidyapith and Kendriya Vidyalaya, Central University, Tezpur are done regularly.

**FUTURE PLANS**

- Upgradation to 30 bedded indoor facilities to be completed in a phased manner.
- OPD facilities for outsiders.
- Regular vaccination programme for children.

THE PERSONNEL OF THE CENTRE**Chief Medical Officer**

Dr. D K Goswami, MD
E-mail: dkg@tezu.ernet.in

Medical Officers

Dr. Jonali Sarma Goswami, MBBS, DLO
E-mail: jonalis@tezu.ernet.in

Dr. Lucky Hazarika, MBBS, DMCH
E-mail: drlucky@tezu.ernet.in

Pharmacist

P Baruah, Diploma in Pharmacy
E-mail: pnb@tezu.ernet.in

Laboratory Technicians

A Baruah, Certificate in Laboratory Technician
E-mail: anuj@tezu.ernet.in

Niramoni Das, Certificate in ANM
E-mail: nira@tezu.ernet.in

Nurses

Eliza H Barla, Diploma in GNM
E-mail: eliza@tezu.ernet.in

Amrita Purty, Diploma in GNM
E-mail: annie@tezu.ernet.in

Radiographer

H Debnath, DMRT
E-mail: debnathhiten123@gmail.com

MTS

M K Saikia
J Rajbongshi



THE HORTICULTURE SECTION

THE SECTION

The Horticulture Section of Tezpur University is entrusted to carry out landscaping and beautification activities inside the University campus. The Assistant Horticulturist employed at Horticulture Section looks after the whole horticultural/landscaping activities under the supervision of a Campus Horticultural Committee with a teacher as Coordinator. He is assisted by one Multi Task Staff (MTS), one supervisor along with 28 daily wage labourers and a tractor driver. The annual horticultural activities during the concerned period were the following:

PLANTATION PROGRAMMES

A total of 137 seedlings of different ornamental plants/shrubs and fruit trees (excluding plantation in the HSS Building premise, the Botanical Garden and of the One Tree One Student Plantation Programme) were planted in different parts of the University campus, which include the VC's residence, the School of Engineering complex including the Dhaba premise, Kendriya Vidyalaya, the Guest House, the Citrus Garden, roads of the residential colony, etc.

A total of 883 seedlings of different types of fruit, timber and avenue trees were planted through One Student One Tree Plantation programme in different locations of the University campus: the plot located at the eastern side of the approach road near the Entrance gate; additional plots near the Krishi Vigyan Kendra; the School of Engineering Complex; the University boundary walls; the premises of Patkai, Kanchanjungha and CV Raman Men's Hostels; the vacant plot located in front of Patkai Men's Hostel; the premises of the Health Centre quarters; Kendriya Vidyalaya; the Dhaba; the Guest House, and the garden located in front of VC's residence near the Water body as well as the roadside of the C and D-type residential colony etc.

NEW DEVELOPMENTAL WORK

Landscaping of the premise of HSS Building (eastern side) (by planting 46 nos of different ornamental plants and shrubs, about 175 RM hedge, etc.) was done.

A total of 125 seedlings of different plants species of medicinal plants, fruit trees, and orchids and other economically important plants and herb species were planted in the Botanical Garden.

MAINTENANCE OF THE EXISTING TREES

Essential maintenance work was carried out on each and every old tree on the campus.

MAINTENANCE OF THE EXISTING GARDENS

Essential maintenance work on all the flower gardens which are located in front of the Administrative Building, the Auditorium, the Guest House, the Library, the Community Hall, the Health Centre, the Student Activity Centre, Department of Energy, Department of Chemical Sciences, Department of MBBT, Department of Environmental Sciences, Department of Mass Communication and Journalism, Department of Business Administration, Academic Buildings I and II, School of Engineering, VC's residence, the Cafeteria, the Sophisticated Analytical Instrumentation Centre, the Community hall, the Chandraprabha Saikianee Bhaban, the Shopping Complex, the Day Care Centre, the Car Parking area near Administrative Building, Takshashilla Vidyapeeth, and the Children's Park, the Botanical Garden etc. was carried out throughout the concerned year.

MAINTENANCE OF HOUSE PLANT POTS FOR INDOOR DECORATION

Essential maintenance work was also carried out on all the house plant pots (about 900 in number) placed in the Administration Building, the Academic buildings, the Library, the New Guest House, the Community Hall, the KBR Auditorium, the Health Centre, the Student Activity Centre and all other office buildings of the University.

MAINTENANCE OF VERMI-COMPOST PROJECT

A Vermi-compost project has also been running successfully and has provided a part of the requirement of organic manure. About 10.33 quintals of vermi-compost was produced during the concerned year.



MAINTENANCE OF THE UNIVERSITY NURSERY

The University has a nursery of its own, which has been the source of seedlings of ornamental and fruit trees of different types; shrubs; indoor plants and also some seasonal flowers for the use of the University. Essential maintenance work was carried out in the nursery throughout the concerned year.

OTHER ACTIVITIES

In addition to the above, the section also maintains the surroundings of various administrative buildings, different offices and academic buildings, the Library, the Auditorium, the Guest House, the Chandraprabha Saikianee Bhaban, the Community Hall, the Sports Complex, the Shopping Complex/Day Care Centre, the Children's park, Takshashilla Vidyapeeth, Kendriya Vidyalaya, the Car Parking area and the sides of the campus roads from time to time.

THE PERSONNEL OF THE CELL

Coordinator

U K Pegu, PhD (JMI)

Assistant Professor, Department of Mass Communication and Journalism

E-mail: uttamkp@tezu.ernet.in

Assistant Horticulturist

G Hazarika, MSc (AAU)

E-mail: gin@tezu.ernet.in



Internal Quality Assurance Cell

The Internal Quality Assurance Cell (IQAC) took steps to foster the spirit of quality among the members of the University Community. Towards this end the following two events were organised-

1. Induction cum Orientation Programme on Professional Qualities in Education, on 20-21 April 2015. Prof. Rajesh P. Khambayat from NITTTR Bhopal was the resource person in this event attended by young faculty members of the University.
2. Discussion on Ranking of Institutions and Accreditation, on 4 September 2015. This event saw active brain-storming among the faculty members present including a few from neighbouring Colleges, and the outcome of the discussions were sent to the NAAC for consideration during formulation of the New Education Policy.

To streamline the assessment of teachers for promotion under CAS, the IQAC carried out consultations and removed ambiguity on some points. Also, the existing format of application was improved.

The University applied for the third cycle of accreditation by NAAC as the period of previous accreditation was getting over in January 2016. A designated Steering Committee prepared the SSR which was submitted to NAAC. In March 2016 the IQAC arranged an internal stock taking of all the departments and offices prior to the actual visit by the NAAC Peer Team.

As the earlier IQAC Committee's term was getting over in 2015, a new IQAC was constituted on 26 October, 2015 with 22 members, including five external members.

THE PERSONNEL OF THE CELL

Director

U Sharma, *PhD (Tezpur)*

Professor & Head, Department of Computer Science & Engineering

E-mail: iqac@tezu.ernet.in





THE INTERNATIONAL OFFICE

The International Office (IO) of Tezpur University was established in February 2013. The IO is presently manned by a part-time Director, Professor PK Das, Dept. of English and Foreign Languages, and a part-time Assistant Director, DrRupakMukhopadhyay, Assistant Professor, MBBT. It has no office staff. The IO's main activity has been handling the application and enrollment process of international students. It also organizes talks and seminars on overseas education and research opportunities.

ACTIVITIES

The IO processed its first admissions under the 'Sponsored by Home Country' category when it facilitated the admission of Syrian nationals Ms. Batoul Khoja and Ms. Mai Mohamad to the PhD programme of the Dept. of English and Foreign Languages. The two international scholars arrived on July 27, 2015.

On September 22, 2015, the IO organized an interactive seminar for students on overseas education. The seminar was conducted by Global Reach, a pioneering consultancy company, which represents more than 350 universities from all over the world. 180 students participated. The Seminar was conducted by Ms. RinjeeBaruah, Manager (Counselling) and Ms. Aparna Saha (registered counsellor).

The IO held a meeting with Pro Vice-Chancellor, Deans and Controller of Examinations on October 14, 2015, to discuss how to increase number of international students in Tezpur University.

The IO held a meeting with Mr. SP Kakoti Bora, Regional Director (Guwahati), Indian Council for Cultural Relations (ICCR) on October 30, 2015. He interacted with the ICCR sponsored students of the University. The IO also discussed with him how to increase the number of ICCR sponsored students in Tezpur University.

The 'Home-hospitality with Indian families' programme' was initiated by the IO as a 'best practice'. Under this programme, faculty, staff, research scholars and others are invited to host international scholars of the university to their homes. The programme was initiated with a dinner for international scholars given by the Vice Chancellor at his residence on February 17. Ms. Dina Swagiary, Research Scholar, Department of Cultural Studies became the first person to host an international scholar when she invited Ms. Wanlaya Namtham, ICCR-sponsored Research scholar from Thailand, to her home in Udalguri district.





SOPHISTICATED ANALYTICAL INSTRUMENTATION CENTRE

2015-16

The Centre

Instrumental methods of analysis form an indispensable aspect of Research and Development in advanced scientific research. Tezpur University has a number of Departments and Centers working on areas which require sophisticated analytical equipment. The Sophisticated Analytical Instrumentation Centre (SAIC) at Tezpur University is set up to cater to these requirements. The Centre also extends these facilities to other educational institutions and industries located in the northeastern region and even beyond. The Centre also provides demonstration of instruments and their utility in different fields of research to college students of Northeast and beyond.

Management

The Management Committee of the Centre comprises of seven faculty members from different departments. It is chaired by the Dean R & D.

Opening hours

The Center is open during 9 am and 5.30 pm on all working days.

Major facilities available in the Centre

- Transmission Electron Microscopy (TEM)
- Single Crystal XRD
- Powder XRD
- BET (Surface and Pore size analyzer)
- Raman Spectrometer
- Atomic Absorption Spectrometer (AAS)
- High Performance Liquid Chromatography (HPLC)
- GPC (Gel Permeation Chromatography)
- Scanning Electron microscopy (SEM)
- NMR (multi-nuclei)
- Gas Chromatography and Mass Spectrometer (GC-MS)
- Thermal Analyzer (TGA-DSC)
- CHN Analyzer
- Inductively Couple Plasma Optical Emission Spectrophotometer (ICP-OES)
- Fourier Transform Infrared Spectrometer (FTIR)
- DNA Sequencer

Services of the Centre

The Centre provides the following services:

- Analysis of sample as per user defined protocol
- Instrument facility is available for internal as well as external users.
- Provide consumables (analytical gases, LN₂, chemicals, spare parts and glass blowing works) to all central facilities, departmental requirements as well as personal projects as and when required.
- Gives demonstration, presentation on the use and application of various spectroscopic and analytical techniques to students, teachers and scientists from different Laboratories, Universities and Industries.

Visitors to the Centre

| Visitor Category | Internal User | External user | Total |
|---------------------|---------------|---------------|-------|
| Average visitor/day | 40 | 10 | 50 |

**Future plans**

The Centre plans to purchase three pieces of sophisticated equipment, namely, a) Solid state NMR (500 MHz); b) HR-Mass spectrometer; and c) GC-Mass.

Additionally, the Centre also proposes to procure the following equipment: a) XPS and b) Confocal microscope.

The Centre plans to organize short-term courses/workshops on the use and application of various spectroscopic and analytical techniques for students, teachers and personnel from other laboratories, universities and industries.

THE PERSONNEL OF THE CENTRE**Head of the Centre**

N Karak, PhD (IIT Kharagpur)
Professor, Department of Chemical Sciences
E-mail: nkarak@tezu.ernet.in

Technical Officer

A Hazarika, MTech (Tezpur)
E-mail: anilh@tezu.ernet.in

Technical Assistants

P Kurmi
E-mail: prakash@tezu.ernet.in

T R Nath

E-mail: trnath@tezu.ernet.in

Glass Blower

P Bharali,
E-mail: pankaj@tezu.ernet.in



PROGRAMMES ORGANIZED BY THE UNIVERSITY

2015-16

- The University organized the first All Assam Inter Institutional Bihu Competition on 25 April 2015. Teams from three other institutes from Assam, apart from the host institute, participated in the competition.
- The University offered glowing tribute to Kalaguru Bishnu Prasad Rabha on Rabha Divas on 19 June 2015. Mrs. Malaya Goswami, an eminent actor from Assam delivered a talk on Shri Rabha's work and Dr. Parineeta Goswami analyzed the songs of Shri Rabha in her talk. She also presented a bouquet of the maestro's composition in front of the gathering.
- The University joined the rest of the country and the world in mourning the sudden demise of Dr. APJ Abdul Kalam, Former President of the Nation, Ex-Visitor of the University, on 27 July 2015. In a condolence meeting held on that solemn day, the University community led by the Vice Chancellor, Prof. Mihir Kanti Chaudhari, offered floral tribute to the departed soul and observed a minute's silence.
- The University paid rich tributes to Nobel Laureate Kaviguru Rabindranath Tagore on his death anniversary on 7 August 2015. Prof. Nandita Goswami Bhattacharyya, former Vice Principal of Cotton College, was invited to deliver a talk on the life and contributions of Kaviguru to mark the occasion.





- The 69th Independence Day was celebrated on 15 August 2015 at Tezpur University. The National Flag was hoisted by the Vice Chancellor, Prof. Mihir Kanti Chaudhari. The Vice Chancellor urged the gathering to work and contribute towards the development of the country. He also remembered the martyrs of the Indian Freedom Movement. A Pre Independence Day Concert, "Har Lamha Watan Ke Naam", under the aegis of the Indian Army was organized on 14 August, 2015.
- The Hindi Fortnight was observed at Tezpur University from 14 to 28 September 2015 by organizing competitive events like essay writing, quiz, recitation etc. among the students, University staff and the children of the University fraternity. Winners were awarded with cash prizes and certificates at the Valedictory Function organized on 28 September 2015.
- The University observed the Tithi of Srimanta Sankardeva on 20 September 2015. The students of the University staged a play on the "Childhood of Srimanta Sankardeva" accompanied by Nagara Naam and Xatriya dance.
- The University organized the Tezpur University Endowment Programme, Shrimanta Sankardeva Lecture, on 15 September 2015. A talk "Tagore's Puja Songs in the Background of Bhakti" was delivered by Prof. Amiya Das former Professor of Comparative Literature, Jadavpur University and Vice Chancellor of Vidyasagar University (1995-1999), Midnapore, West Bengal.
- The University paid glorious tribute to the Father of the Nation, Mahatma Gandhi on Gandhi Jayanti, 2 October 2015 with a day long programme which concluded with a Quiz and a Peace Concert held at the Community Hall on campus. The week-long Swachh Bharat Abhiyan was also inaugurated by the NSS Cell, Tezpur University from 2-8 October 2015. Along with the NSS volunteers, the University community also took active participation in the various cleanliness drives and awareness programmes organized by the Cell.
- The University community, led by the Vice Chancellor, Prof. Mihir Kanti Chaudhari and the Registrar, Dr. Biren Das, paid rich floral tribute to Sahityarathi Lakshminath Bezbarooa on his 151st birth anniversary on 14 Oct 2015 at his bust installed in front of the Central Library.
- The University, in association with Sahitya Akademi, Regional Office, Kolkata, organized the Professor Maheswar Neog Centenary Lecture on 26 October 2015. Prof. Nagen Saikia, former Lakshminath Bezbarooa Professor, Dibrugarh University deliberated on "Sattriya Nrityar Rastriya Pratishtha aru Dr.Maheswar Neog".
- The University observed the Rashtriya Ekta Divas (National Unity Day) on the occasion of the 140th birth anniversary of Sardar Ballabhbai Patel on 31 October 2015. A weeklong exhibition of books, photographs and bibliography on Sardar Patel was organized at the Central Library of the University. The exhibition was inaugurated by the Vice Chancellor. An inter-institutional debate competition (Wrangle) in association with TechXetra, 2015 on the motion "Secularism is essential for modern India" was organized on 31 October 2015.
- The University observed the Vigilance Awareness Week-2015 from October 26 to 31, 2015 with various competitive events like quiz, recitation and essay writing competition centered round the theme. In this connection a lecture on "Preventive Vigilance as a Tool of Good Governance" was delivered by Shri G.N. Sahewalla, Senior Advocate of Gauhati High Court, Guwahati on 27 October 2015.



- The University commemorated the death anniversary of Dr Bhupen Hazarika, the maestro of modern Assamese music on 5 November 2015. Shri Pranjai Saikia, renowned stage and film personality graced the occasion as the Chief Guest. A session of music and dance based on the maestro's compositions was the highlight of the programme.
- The University observed the National Press Day on 16 November 2015 with a public lecture on the theme "Reconciling freedom and accountability: A case for self-regulation" delivered by Mr. AS Panneerselvan, eminent journalist and Readers' Editor of The Hindu.
- The University is organized a day long programme to celebrate 65 years of Indian Constitution on 26 November 2015. The programme was inaugurated by the Vice-Chancellor. A panel discussion with eminent scholars Prof. Apurba Kumar Baruah, National Fellow, ICSSR, Delhi, Mr. Nilay Dutta, Sr. Advocate, Gauhati High Court, Prof. M.A. Kalam, Tezpur University, and Prof. Akhil Ranjan Dutta, Gauhati University and chaired by Prof. Amarjyoti Choudhury, Pro Vice-Chancellor, Tezpur University was organized to mark the occasion. An essay competition on "Ambedkar and His Legacy in the Indian Constitution" was also organized among the students of the University.
- The University hosted the Inter University East Zone Youth Festival, christened "Brahmaputra Mahotsava" during 3-7 January 2016. Altogether 21 Universities participated in the festival in a host of cultural and literary competitions. Tezpur University emerged as the Champion and Banaras Hindu University was declared the Runner up. This was the second time Tezpur University hosted this festival with great success.
- The University observed the 153rd birth anniversary of Swami Vivekananda on 12 January 2016. A painting competition was organized among the school going children of the University campus on the theme of 'Portrait of Swami Vivekananda'. An essay competition on the theme of 'Swami Vivekananda as inspiring role model for youth' was also organized for the students. An oration was delivered by Prof. Sunil Kumar Dutta, Head, Dept. of Social Work on 'Swami Vivekananda and his role in Nation Building' The celebrations concluded with a presentation on 'Swami Vivekananda's vision of India and Indian youth' by Ms. Kalyani Kaushik, a student of 6th Semester B.Tech in Mechanical Engineering.
- The University celebrated its 23rd Foundation Day on 21 January 2016. The Vice Chancellor of the University, Prof. Mihir Kanti Chaudhari inaugurated the celebrations by hoisting the University flag in the morning. Three distinguished speakers were invited to deliver the Foundation Day oration. They were Prof. Padmanabhan Balaram, Former Director, Indian Institute of Science, Bangalore, Ms. Mamang Dai, journalist, poet and author and Prof. Sanjoy Hazarika Director, Centre for North East Studies, JMI, New Delhi. In this connection a painting and a debate competition was also organized. The University also presented its annual Best Performer Awards to the University staff. The winners were awarded with cash prizes and certificates. A cultural programme was also organized in the evening.
- The University, along with the rest of the country, celebrated the 67th Republic Day. The day began with a bicycle rally the students and other members of the University fraternity. The Vice Chancellor, Prof. Mihir Kanti Chaudhari hoisted the National Flag and wished everyone on this auspicious occasion. The students from the campus schools and the students of the University presented a colourful cultural programme. A friendly cricket match was also organized.
- The University observed the Shilpi Divas on 17 January 2016 to commemorate the contribution of Rupkonwar Jyotiprasad Agarwala to the cultural and literary life of Assam with a colourful programme of oration, quiz and recitation.
- The SPIC-MACAY chapter of Tezpur University organized a series of performances by invited artistes during October 2015—March 2016. On 8 October 2015, Mrs. Sreeparna Chakraborty performed a Kathak recital, on 10 October 2015, Sri Supratik Sengupta entertained the University audience with his Sitar recital and on 8 March 2016, Pandit Hari Prasad Chaurasia enthralled the gathered audience with his Flute recital.



TECH XETRA 2015

This eighth edition of Tech Xetra the annual techno-cultural festival of Tezpur University was held from 29 October-1 November 15 with the theme "Empowering peace and security: a TECH step forward". The Festival was inaugurated by Shree Padmanabha Balakrishna Acharya, the Honorable Governor of Assam in presence of a host of other dignitaries. Various workshops and competitions like the Robophronesis, Impulse, Code Masters were organized. TechXetra'15 achieved new heights with the initiation of the lecture series by eminent personalities such as Prof. J N Goswami, the principal scientist of India's moon mission and many others. TechXetra'15 also collaborated with ISRO, INDIAN ARMY, KTM, AVENUES to add to the grandeur of the festival as well as to expose the student participants to the heightened experience. Underside, an international metal band from Nepal, Aditi Singh Sharma, an upcoming singer from Bollywood and DJ Tejas entertained the crowd on all days of the festival.



INSCIGNIS 2016

Tezpur University celebrated the InSCIGNIS 2016 with a one-day programme on the 28 February on the occasion of National Science Day commemorating the contributions of the first Nobel Laureate in Physics for India, Sir C. V. Raman. As a part of the festival, a series of events were organized such as Science exhibition, scientific cartoon painting, science quizzes, experimenting and designing competitions, at both open and school levels. A workshop on C programming was held for the students. Shri. Dinesh Chandra Goswami, a noted Assamese writer and winner of Sahitya Academy's Bal Sahitya Puraskar for 2014 delivered a lecture on the occasion. A panel discussion on 'The present education system and its relevance to the youth of India' was also organized which was chaired by Prof. Malayan and Dutta, Tezpur University. As a part of InSCIGNIS-2016 some out-reach and awareness programmes were organized with a view to promoting science among the school children of the nearby areas.

2015-16



**THE YEAR IN FIGURE****Statistics :: Employees****Teaching**

| Employees | As on 31.03.2015 | Joined during 2015-16 | Left during 2015-16 | As on 31.03.2016 |
|---------------------|------------------|-----------------------|---------------------|------------------|
| Professor | 57 | 0 | 1 | 56 |
| Associate Professor | 46 | 0 | 1 | 45 |
| Assistant Professor | 123 | 1 | 6 | 118 |
| Total | 226 | 1 | 8 | 219 |

Non-Teaching

| Employees | As on 31.03.2015 | Joined during 2015-16 | Left during 2015-16 | As on 31.03.2016 |
|---------------|------------------|-----------------------|---------------------|------------------|
| Group-A | 34 | 2 | 0 | 36 |
| Group-B | 53 | 2 | 1 | 54 |
| Group-C | 101 | 4 | 4 | 101 |
| Group-C (MTS) | 72 | 2 | 1 | 73 |
| Total | 260 | 10 | 6 | 264 |

**Statistics: SC/ST Employees, Female / Male Employees
(as on 31 March, 2016)****Teaching**

| Employees | SC | OBC | ST | Gen | Female | Male | Total |
|---------------------|-----------|-----------|-----------|------------|-----------|------------|------------|
| Professor | 1 | 9 | 3 | 43 | 10 | 46 | 56 |
| Associate Professor | 7 | 13 | 2 | 23 | 3 | 42 | 45 |
| Assistant Professor | 21 | 30 | 12 | 55 | 36 | 82 | 118 |
| Total | 29 | 52 | 17 | 121 | 49 | 170 | 219 |

Non-Teaching

| Employees | SC | OBC | ST | Gen | Female | Male | Total |
|---------------|-----------|-----------|-----------|------------|-----------|------------|------------|
| Group-A | 3 | 10 | 2 | 21 | 3 | 33 | 36 |
| Group-B | 10 | 20 | 4 | 20 | 11 | 43 | 54 |
| Group-C | 16 | 40 | 12 | 33 | 9 | 92 | 101 |
| Group-C (MTS) | 13 | 25 | 5 | 30 | 5 | 68 | 73 |
| Total | 42 | 95 | 23 | 104 | 28 | 236 | 264 |

**STATISTICS: STUDENTS
(as on 31 March 2016)**

| Total | Male | Female | General | | SC | | ST | | OBC/MOBC | | PWD | |
|-------|------|--------|---------|--------|------|--------|------|--------|----------|--------|-----|---|
| | | | Male | Female | Male | Female | Male | Female | Male | Female | | |
| 3505 | 2018 | 1487 | 1028 | 799 | 271 | 148 | 132 | 129 | 565 | 402 | 22 | 9 |

Completed and edited by

Dr Rupam Kataki, Associate Professor, Dept of Energy

Dr Ashim J Thakur, Professor, Dept of Chemical Sciences

Dr Arup Roy, Associate Professor, Dept of Business Administration

Dr Hemjyoti Medhi, Assistant Professor, Dept of English and Foreign Languages

Dr Sarmistha Das, Assistant Professor, Dept of Sociology

Ms Reetamoni Narzari, Assistant Professor, Dept of English and Foreign Languages

Dr Arup J Choudhury, Assistant Professor, Dept of Physics

Mr Barnam Saharia, Assistant Professor, Dept of Electronics and Communication Engineering

Hindi version

Dr Surya K Tripathi, Associate Professor, Dept of Hindi

Mr Kul Pd Upadhyay, Hindi Officer

Ms Rekha Bezbaruah, Hindi Translator

Advisor

Prof Gautam K Borah, Dept of English and Foreign Languages

Acknowledgements

Dr Sanjeeb Mahanta, Assistant Professor, Dept of Chemical Sciences

Most photographs that appear in this Annual Report were taken by the students of the University. Their contribution is gratefully acknowledged.

Published by

The Registrar

Tezpur University

Printed at

Bhabani Offset and Imaging Systems Pvt. Ltd.

7 Lachit Lane, Rajgarh Road

Guwahati 781007

Phone: 0361 2524056

Web: www.bhabani@bhabani.com



TEZPUR UNIVERSITY

Napaam, Tezpur 784028, Assam

Phone: +91 3712 267007/8/9

Fax: +91 3712 267005/6

E-mail: registrartu@tezu.ernet.in

Web: <http://www.tezu.ernet.in>