

# ANNUAL REPORT

2017-18

(Approved by the Board of Management vide Resolution No. B.90/2018/5/2.3,  
dt. 17.11.2018)



**Specialized Knowledge Promotes Creativity**

**Tezpur University**

Napam, Tezpur 784028, Assam



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*From the Vice-Chancellor*





## Tezpur University

(A Central University)  
Tezpur - 784028  
Assam, India

- *Visitor's Best University Award - 2016*
- *NIRF India Rankings 2016 : 05*
- *Accredited with 'A' Grade by NAAC*
- *THE Asia Rankings 2018 : 100*
- *THE World Best Small Univ. 2018 - 20<sup>th</sup>*
- *QS Ranking 2019 : IND - 36, BRICS - 146*

**Professor V. K. Jain**  
Vice-Chancellor

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I am glad to present the annual report of the University for the year 2017-18, which marks the 25<sup>th</sup> year of its existence. As you may already be aware, the University has earned considerable reputation as one of the premier institutions of Higher Education in the country.

I am happy that the University continued to excel in both teaching and research in the year. The number of students enrolled this year was 4216 (including 268 students under distance mode), 43% of which were girls. Starting with only just three Departments in 1994, the University now has 22 Departments and 4 Centers under 4 Schools, viz. School of Engineering, School of Humanities and Social Sciences, School of Management Sciences, and School of Sciences, currently offering 75 UG/PG/PhD (including 05 programmes under distance mode) programmes. The University produced 128 quality PhDs during the year, which, for a relatively small university, is rather an impressive achievement. The number of students that earned their postgraduate and undergraduate degrees and diplomas this year was 1305 and 597 respectively. These students include a number of overseas students as well. Simultaneously, our students, during the year, took part in various cultural and sports events and competitions held in different parts of the country and brought accolades to the University.

I take pride in stating that a total of 456 quality papers were published in the year in peer reviewed reputed international and national journals. As for research projects, a total of 209 sponsored research projects with funding to the tune Rs. 7800.60 lakhs (approx) are being carried out. Besides, 10 academic Departments with UGC-SAP (DRS) recognition are executing their research projects. While 5 Departments were awarded

DST-FIST, two departments have the distinction of being Centre of Excellence and Centre of Potential for Excellence in Particular Areas each. On the administrative front as well, we have had a distinct track record of full utilization of funds provided by the Government of India and of total transparency in administrative governance. I take immense pride in stating that the University was ranked 5<sup>th</sup> in the NIRF India Rankings 2016 while Tezpur University ranked 100<sup>th</sup> in Times Higher Education (THE) Asia University Rankings 2018, improving its position from 131-140 from last year. In addition, our University could figure in the 601-800 group of Times Higher Education World University rankings.

I take this opportunity to express my thankfulness and gratitude to the members of the faculties, the entire University staff for their sincere and hard work towards making this University a premier institution of higher education in the country. I take this opportunity also to express my profound gratitude to the members of the Statutory Committees of the University for their guidance and enormous contributions to the growth of the University.

15 November 2018  
Tezpur

  
(V. K. Jain)  
Vice-Chancellor

# TEZPUR UNIVERSITY

## ANNUAL REPORT 2017-18

### *A Gist*

#### UNIVERSITY PROFILE

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

#### HIGHLIGHTS OF THE YEAR 2017-18

Vice-Chancellor	:	Professor Vinod Kumar Jain (from February 22, 2018) Professor Madan M Sarma (Acting, till February 21, 2018)
Pro Vice-Chancellor	:	Professor Dilip Kumar Saikia
Registrar	:	Dr. Biren Das

#### Total number of

Academic departments	:	22
Academic centers	:	05
Academic programmes	:	75
Students	:	4216
Female	:	1812
Male	:	2404
International students	:	13
Female	:	06
Male	:	07
Teachers	:	249
Female	:	62
Male	:	187
Teachers (General)	:	136
Teachers (SC/ST/OBC)	:	113 (SC-33, ST-20, OBC-60)
Non-teaching employees	:	270
Female	:	28
Male	:	242
Non-teaching employees (General)	:	108
Non-teaching employees (SC/ST/OBC)	:	162 (SC-45, ST-22, OBC-95)
Total departments under UGC-SAP DRS I	:	05
Total departments under UGC-SAP DRS II	:	05
Total departments under DST-FIST	:	05
Departments under Centre of Excellence	:	01

Departments under Centre of Potential for Excellence in Particular Areas	: 01
Sponsored ongoing projects	: 209
Sponsored projects beginning 2017-18	: 39
International collaborative research projects	: 16
Total financial outlay	: 7800.60 lakhs
Total amount earned through consultancy projects	: 13.98 lakh
Papers published by faculty in national and international journals	: 456
Conference proceedings	: 86
Books produced by the faculty	: 20
Book chapters produced by the faculty	: 67
Global Initiative of Academic Networks (GIAN) courses	: 01
Seminar/Workshops organized by various departments/centres	: 53
Seminars/Workshops attended by faculty abroad and in India	: 186
Talks given by faculty abroad and in India	: 144
International visits by students and faculty members	: 40
International visitors to the University	: 18
International fellowships	: 08
Awards received by faculty members	: 24
Total number of students who qualified NET, SLET, GATE	: 252

### Financial Profile

Heads of Account	Budget 2017-18	Expenditure
i) Grants-in-Aid General (Recurring)	Rs. 4689.96 lakh	Rs. 2939.58 lakh
ii) Grants-in-Aid General (Salary)	Rs. 7909.51 lakh	Rs. 6990.21 lakh
iii) Grants-in-Aid (Capital Assets)	Rs. 4270.00 lakh	Rs. 2745.25 lakh

### Fund utilized for Infrastructure Development (2017-18)

i) Construction RCC Building for School of Humanities and Social Sciences	Rs. 2328.01 lakh
ii) Construction of KV School Building	Rs. 213.51 lakh
iii) Campus Development	Rs. 59.52 lakh
iv) Equipment	Rs. 95.39 lakh
v) Books & Journals	Rs. 48.82 lakh

### Infrastructure Development

The following construction activities were taken up and completed during 2017-18:

1. Construction of 50 m×21 m×1.80 m Swimming Pool
2. Construction of 2-storied RCC building for Teaching Learning Center (TLC)
3. Construction of 04 nos. of Bicycle stand and a Bus Stop Shed.

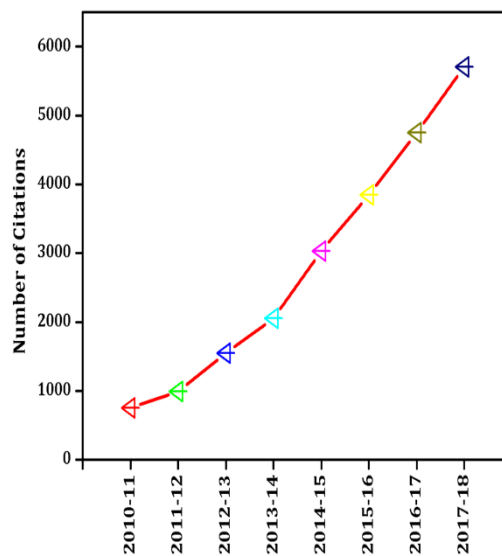
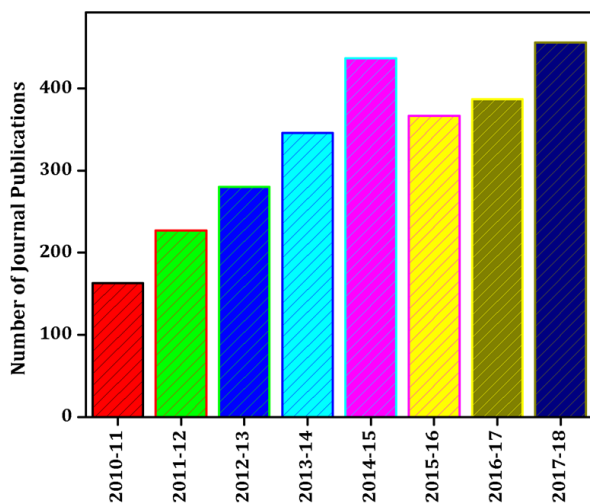
## Further highlights of the year

A number of noteworthy events took place in the university during the period, which includes the following:

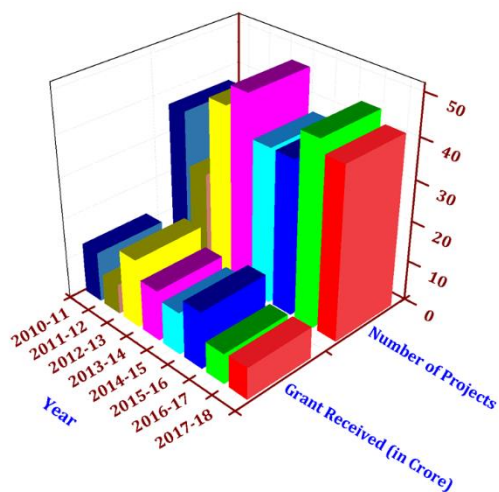
- The University has made a mark in the global arena by attaining position in the 131-140 rankings amongst top 300 in the Times Higher Education Asia University Rankings 2017 which has been declared on 15<sup>th</sup> March, 2017.
- The Times Higher Education World University Rankings has placed Tezpur University within 150 in the list of 200 top universities of the world under 50 years old.
- The University has been selected for the Prestigious Award “Rajbhasha Shield” of the Ministry of HRD, Govt. of India for the year 2015-16 for best implementation of the Official Language Hindi. The award was given on May 04, 2017 at New Delhi.
- The Indian National Science Academy (INSA) has selected Dr. Sanjay Pratihar, a DST-INSPIRE faculty at the Department of Chemical Sciences, Tezpur University, for its prestigious INSA Medal for Young Scientists 2017 in recognition of his commendable contributions to the multimetal complexes, theoretical understanding, selective sensing of Hq<sup>2+</sup> ions and important applications in agriculture.
- The Times Higher Education (THE) declared its World University Rankings 2018 on 5th of September, 2017 at London. Tezpur University is maintaining its ranking in the range 601-800 like previous year.
- The QS (Quacquarelli Symonds) BRICS University Rankings 2018 which feature 300 top universities from Brazil, Russia, India, China and South Africa (BRICS) placed Tezpur University in 171-180th rank.
- R C Deka, Professor, Department of Chemical Sciences and Dean, School of Sciences, has been awarded the prestigious Fellow of the Royal Society of Chemistry (FRSC) in recognition of his contribution to the field of Chemistry. Prof. Deka is internationally known for his seminal work on the development of methods that can potentially remove greenhouse gases from the atmosphere using metal nanoclusters.
- Prof. A. K. Mukherjee, a professor at the Department of Molecular Biology and Biotechnology and Dean, Research and Development, has received the degree of Doctor of Science (D. Sc.) in Biotechnology from the University of Calcutta for his notable contribution to snake venom research.
- Ms Pallabi Das, Dept. of Environmental Science and Ms Kasturi Sarmah of Dept. of Chemical Sciences, Tezpur University were awarded the prestigious GYTI Award 2018 for their innovative work on large-scale synthetic routes to manufacture iron(oxalate) capped metal oxide [Fe(ox)-Fe<sub>3</sub>O<sub>4</sub> (OCIO), Fe(ox)Fe-MnOx (OCIMn), and Fe(ox)Fe-CuOx (OCICu)] nanomaterials that are wonderful soil conditioners for increasing micronutrient availability to plants with least toxicity (Patent application no. 201631010727).
- Prof. Ashis K. Mukherjee, Department of Molecular Biology and Biotechnology, TU has been jointly adjudged for the prestigious Visitor’s Award for Research (Basic and Applied Sciences) for the year 2018.

- Prof. Niranjana Karak of the Department of Chemical Sciences has been awarded with the prestigious Fellow of the Royal Society of Chemistry (FRSC) in recognition of his contribution to the field of Chemistry. Prof. Karak has been consistently working to develop advanced polymers, nanomaterials and their nanocomposites.
- The University has achieved the prestigious Times Higher Education (THE) Emerging Economies University Rankings 2018 (9th May 2018).
- Prof. Ashis K. Mukherjee, Dean, Research and Development, and a senior faculty member from the Department of Molecular Biology and Biotechnology, has been selected for the prestigious Tata Innovation fellowship of the Department of Biotechnology, Govt. of India for the year 2017-18 in recognition of his outstanding research contributions.
- Times Higher Education that published the list of world's best small universities 2018 on August 03, 2018, ranks Tezpur University in 20th position.
- Prof. Ashis K. Mukherjee, Dean, Research and Development, and Head and Coordinator of DBT Nodal Cell for Medical Colleges and Biomedical Research Institutes of NE India has won the prestigious "INSA Teachers Award (2018)" for his consistent and high level of teaching, and inspiring and mentoring students to take up careers in Science and Technology.
- Prof. Ashis K. Mukherjee, Dean, Research and Development, and Head and Coordinator of DBT Nodal Cell for Medical Colleges and Biomedical Research Institutes of NE India has won the prestigious "ICMR Prize for Biomedical Research Conducted Underdeveloped Areas 2017" for his significant contribution in "Biochemical and pharmacological characterization of snake venom and cardiovascular drug discovery". The award was recently announced by the ICMR.
- Valentina Das, a PhD research scholar of Department of Energy, Tezpur University has joined the Department of Biosystems and Agricultural Engineering, Oklahoma State University (OSU), Stillwater, Oklahoma, USA as a US Fulbright Nehru Doctoral Research Fellow.

# HIGHLIGHTS OF OUR PERFORMANCE



*Until 2018*



<i>h</i> -index	60
Number of Publications	2700
Sum of the times cited	29,905
Sum of the times cited without Self Citations	24,909
Average Citations per item	11.08

## Our Notable Achievements during the year

1. **MHRD NIRF Ranking:** The Union Minister of Human Resource Development, Shri Prakash Javadekar, released the India Rankings 2017 for the Educational Institutions on April 03, 2017. Tezpur University ranked 48<sup>th</sup> (Overall) in the National Institutional Ranking Framework (NIRF) and ranked 30<sup>th</sup> amongst the universities.
2. **Times Higher Education (THE) Asia University Rankings 2018:** Tezpur University ranked 100<sup>th</sup> in **Times Higher Education (THE) Asia University Rankings 2018**, improving its position from 131-140 from last year. THE Asia University Rankings 2018 was declared on February 06, 2018. In the same ranking, TU is top ranked among all universities in India and ranked 7<sup>th</sup> in India among all Higher Educational Institutions (HEIs). In "Research" category TU Ranked 4<sup>th</sup> in India just behind IISc, Bangalore, IIT Bombay and IIT Kharagpur.
3. **Times Higher Education World University Rankings 2018:** TU ranked 601-800 in THE World University Rankings 2018, which was declared on September 05, 2017.
4. **The QS (Quacquarelli Symonds) BRICS University Rankings 2018:** TU ranked 171-180. The result was declared on November 21, 2017. The QS BRICS University Rankings is an annual ranking of the top universities in the five BRICS countries – Brazil, Russia, India, China and South Africa.
5. **Times Higher Education World Young University Rankings-2017:** 34<sup>th</sup> in the list of top 50 universities under "Generation Y" (universities established between 1986 and 1999). The result was declared on April 05, 2017.
6. **Raj Bhasha Shield:** Tezpur University was awarded First Prize for best implementation of official language Hindi in 'Region C' for the year 2016 by the Ministry of HRD, Govt. of India on 22/05/2017 at Vigyan Bhawan.

### Recent Awards/Accolades for the Faculty

1. **TU Faculty Selected for INSA Young Scientist Medal:** Dr. S Pratihar of Department of Chemical Sciences, Tezpur University was awarded the prestigious Indian National Science Academy (INSA) Medal for Young Scientist Award for the year 2017, for his excellent contribution to multi-metal complexes, theoretical understanding, selective sensing of mercury ions and important applications in agriculture.
2. **GYTI award to TU Scholars:** Ms. Pallabi Das, and Ms. Kasturi Sarmah, Research Scholars of the Departments of Environmental Science, and Chemical Sciences, respectively, were awarded the prestigious GYTI Award 2018 by the Hon'ble President of India at Rashtrapati Bhawan on March 19, 2018. The duo received the award for their innovative work on large-scale synthetic routes to manufacture iron (oxalate) capped metal oxide nanomaterials that are wonderful soil conditioners for increasing micronutrient availability to plants with least toxicity.
3. **Patent granted to Prof. R K Dutta and Suresh Kumar Nath** on Arsiron Nilogon and Fluoride Nilogon, for developing highly efficient, safe, low cost and simple methods for removal of arsenic and excess fluoride from contaminated drinking water.



4. **Doctor of Science (DSc) Degree has been awarded to Prof. A K Mukherjee** in Biotechnology by the University of Calcutta for his notable contribution to snake venom research.
5. **FRSC to Prof. R C Deka:** Prof. Ramesh Ch. Deka, Professor, Department of Chemical Sciences and Dean, School of Sciences was awarded the prestigious Fellow of the Royal Society of Chemistry (FRSC) in recognition of his contribution to the field of Chemistry.
6. Dr. P Barah was awarded Ramalingaswami Re-entry Fellowship by the Ministry of Science and Technology, Dept. of Biotechnology, Govt. of India.
7. Prof. D C Baruah joined as a visiting professor in the Department of Mechanical and Industrial Engineering, University of South Africa.
8. Prof. K Kikhi was appointed as the Ambedkar Chair Professor, Tezpur University on 18<sup>th</sup> April, 2017.
9. Prof. C K Sharma, Department of Sociology, was nominated as a member to the Governing Council of Centre for Southeast Asian Studies, Gauhati University in May, 2017.
10. Professor K P Sarma, Dept. of Environmental Science, published a book titled "Ardrabhumi aru Asom". He won Jagaddhatri Haramohan Das Sahitya Award for the year 2015-16 for the same book.

#### **SEMINAL BOOKS PUBLISHED BY MEMBERS OF THE FACULTY**

**Longmailai M. (Ed.). 2017. *Biate Tong Riseina Bu: A Learner's Book of the Biate Language.* (Authored by Boro R R. and Brahma D.), Tezpur: Centre for Endangered Languages, Tezpur University**

The book is a description of the Biate Language, its linguistic and ethnolinguistic features. The book also has a word list of the human body parts, flora fauna, words related to elements and nature. The book is an attempt to help the native speakers revitalize their mother tongue.

**Nath A K. (Ed.). 2017. *Khelma Chong Anchuna Lekhabu: A Learner's Book of the Khelma Language,* (Authored by Bhattacharya P R, and Dutta B). Tezpur: Centre for Endangered Languages, Tezpur University.**

The book is a collection and description of Khelma words, their traditions and rituals, folktales, folk songs, lullabies, proverbs collected during the four field trips to the ten Khelma villages that come under the Umrangso circle under New Sangbar block, Dima Hasao district of Assam. The book is written in simple language and the IPA fonts of vowels and consonants are given to learn and pronounce the sounds phonetically.

Hope, this book will be beneficial to the speakers of Khelma in a form of language learner.

**Barbora M. (Ed.). 2017. *Hrangkhol Nam Chonga Irchuna Lekhabu: A Learner's Book of the Hrangkhol Language,* (Authored by Borgohain T.), Centre for Endangered Languages, Tezpur University.**

This book is a primer on the Hrangkhol language. This work is an outcome of the research carried out by the staff members of the Centre for Endangered Languages, Tezpur university, an UGC sponsored centre. The book includes the sounds of Hrangkhol illustrated with visual images, a collection of basic sentences, parts of speech, word list covering various domains, folk tales, folk songs and ethnolinguistic information about the community.

**Borah G K (Ed.). 2017. *Onaeme Leih Dangdo Laireiboung: A Learner's Book of the Onaeme Language.* (Authored by Dutta N, and Sarangthem B), Tezpur: Centre for Endangered Languages, Tezpur University.**

The book is a description of the Onaeme Language, its linguistic and ethnolinguistic features. The book also has a word list of the human body parts, flora fauna, words related to elements and nature. The book is an attempt to help the native speakers revitalize their mother tongue.

**Shougrakpam, D. (Ed.). 2017. *Purum Chong Kinchuna Zedetrubu: A Learner's Book of the Purum Language*, (Authored by Meitei E M.), Centre for Endangered Languages, Tezpur University.**

Purum Chong Kinchuna Zedetrubu is a collection of Purum oral literature and linguistic features. The book is a collection of Purum sound systems, parts of speech, sentences, folk tales, folk songs, proverbs. The book also has a word list on the human body parts, kinship terms, food items, natural objects, flora, fauna, colour terms, numerals and ethnolinguistic account of the Purum community. The book includes a pictorial word list to facilitate children of the Purum tribe to learn the language easily. Purum is an endangered language and the number of speakers is very low. This book is an attempt to help the native speakers revitalize their mother tongue.

**Patgiri B and Gope A. (Eds.). 2017. *Liangkhun Ketibu Khuang: A Learner's Book of the Liangmai Language*. (Authored by Widinibou C), Centre for Endangered Languages, Tezpur University.**

A Learner's Book of the Liangmai Language is a collection of Liangmai socio-cultural and linguistic features. Culture and language are intricately entangled and learning a language essentially familiarises us with the culture of the speech community. With this outlook, A Learner's Book of the Liangmai Language endeavours to motivate the community to revitalize their language, identity and culture while encouraging the young Liangmai generation to develop their very own linguistic awareness. The book not only describes the common grammatical aspects of Liangmai but also presents a few interesting facts of the aspects of language which may ignite further research.

**Sarma M M. 2017. *Barnamoi Biswasahitya (World Literature)*. Guwahati: Guwahati University.**

It is a collection of critical essays on the works of a number of leading writers of the world such as Runosake Akutagawa, Miwajawa Kenji, Haruki Murkami(Japan),Naguib Mahfouz (Egypt), JuanRulfo (Mexico), Gabriel Garcia Marquez(Columbia), Amos Tutuola(Nigeria), Ngugi wa Thiongo (Kenya) , Asia Djebbar (Algeria), Adonis (Syria), Tomas Transstromer (Sweden), Gunter Grass (Germany),Mo Yan (China) and Seamus Heaney (Ireland) and on the literature of several countries.

**Sarma, M M. 2017. *Anubad Adhyayan:Tatva aru Prayog (Translation Studies: Theory and Practice)*. Guwahati: Bandhab.**

The book is about the nature and types of translation, history of translation and translation studies and theories of translation. It has been recommended by a number of universities as an essential reading for students of translation and translation studies at the postgraduate level. The book is also used as an essential reference book.

**Sarma, M M. 2018. *Kewal Sagarar Sabda (Only the sound of the sea)*. Guwahati: Papyrus**

It is a collection of the latest short stories written by the author who writes as Madan Sarma/Dr Madan Sarma in Assamese.

**Mahanta, P. J. 2017. *Asamar Bhakti Sangeet: Parampara aru Parivardhan*. Guwahati: Purbachal Prakash**

This book is a collection of articles on the Vaisnavite Music of Assam edited by Dr. Pradip Jyoti Mahanta, formerly Professor in the Department of Cultural Studies, Tezpur University, Tezpur.

The present volume of essays addresses some of the issues inherent in the tradition of Vaisnavite devotional music of Assam with the glory of its melody and rhythm and the embedded message of Bhakti. As a tradition of performing art, the Vaisnavite Music of Assam is regarded as the Assamese heritage and identity. Although it has a variety of forms and styles along with the binarity of both sacred and secular, this musical tradition is moving a long way through the centuries with its own grandeur.

This volume includes some of the Assamese articles by scholars in a seminar held under the auspices of the Department of Cultural Studies, Tezpur University, Assam in 2012 under Special Assistance Programme (SAP DRS-I) funded by University Grants Commission (UGC) granted in 2011. These articles could not be included in the previous volume: 'Vaisnavite Music of Assam: Its Institutionalization and Performative Context', edited by Prof. Pradip Jyoti Mahanta and published by Purbachal Prakash, Guwahati, 2016.


Besides, the editor made a supplementary important addition of published articles related to this field of study from renowned scholars like Dr. Kesavananda Dev Goswami, Ambikagiri Raichoudhury, Dr. Maheswar Neog, Dr. Birendranath Datta, Dr. Nagen Saikia, Dr. Pradipjyoti Mahanta, and Nilakanta Bora.

**Datta D. *LaTeX in 24 Hours: A Practical Guide for Scientific Writing*. Cham (Switzerland): Springer International Publishing, 2017**

The book 'LaTeX in 24 Hours' presents direct and concise explanations and examples to various LaTeX syntax and structures, allowing a reader to quickly understand the basics that are required for preparing document, such as book, project report, journal article, presentation slides, academic thesis and dissertations, or anything of that kind.

**Bhuyan MH, Bhattacharyya DK and Kalita JK. *Network Traffic Anomaly Detection and Prevention: Concepts, Techniques, and Tools*, Springer, 2017.**

**KHELMA CHONG ANCHUNA LEKHABU**  
A Learner's Book of the Khelma Language




**KHELMA CHONG ANCHUNA LEKHABU**  
The book is a collection and description of Khelma words, their traditions and rituals, folktales, folk songs, lullabies, proverbs collected during the four field trips to the ten Khelma villages that come under the Umrangso circle under New Sangbar block, Dima Hasao district of Assam. The book is written in simple language and the IPA fonts of vowels and consonants are given to learn and pronounce the sounds phonetically. Hope, this book will be beneficial to the speakers of Khelma in a form of language learner.

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Tezpur University

**ONAEME LEIH DANGDO LAIREIBOUNG**  
A Learner's Book of the Onaeme Language



The book is a description of the Onaeme Language, its linguistic and ethnolinguistic features. The book also has a word list of the human body parts, flora fauna, words related to elements and nature. The book is an attempt to help the native speakers revitalize their mother tongue.

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**Biate Tɔng Riseina Bu**  
A Learner's Book of the Biate Language

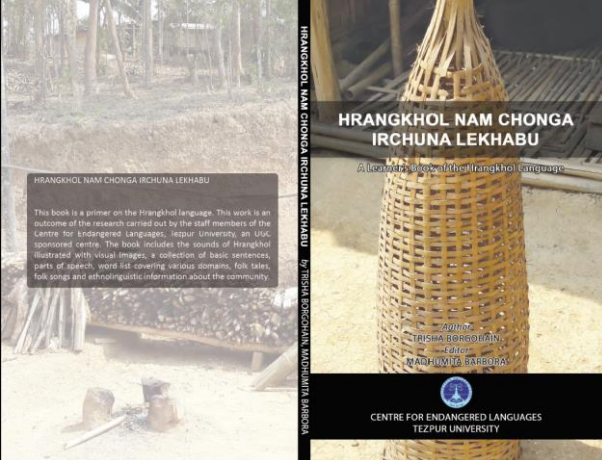


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Tezpur University

**HRANGKHOL NAM CHONGA IRCHUNA LEKHABU**  
A Learner's Book of the Hrangkhoh Language




This book is a primer on the Hrangkhoh language. This work is an outcome of the research carried out by the staff members of the Centre for Endangered Languages, Tezpur University, an IISX sponsored centre. The book includes the sounds of Hrangkhoh illustrated with visual images, a collection of basic sentences, parts of speech, word list covering various domains, folk tales, folk songs and ethnolinguistic information about the community.

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Tezpur University

**LIANGKHUN KETIBU KHUANG**  
A Learner's Book of the Liangmai Language



**LIANGKHUN KETIBU KHUANG**  
A Learner's Book of the Liangmai Language is a collection of Liangmai socio-cultural and linguistic features. Culture and language are intricately entangled and learning a language essentially familiarises us with the culture of the speech community. With this outlook, *A Learner's Book of the Liangmai Language* endeavours to motivate the community to revitalise their language, identity and culture while encouraging the young Liangmai generation to develop their very own linguistic awareness. The book not only describes the central grammatical aspects of Liangmai but also presents a few interesting facts of the language which may ignite further research.

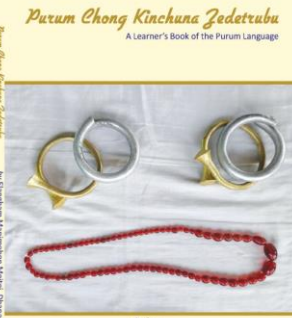
**KEY FEATURES OF A LIANGMAI READER**

- Authentic language data collected by the author during 4 extensive field trips
- An ideal reference and practice book for beginners
- Clear grammatical explanations with examples in both Liangmai and English
- IPA transcriptions for basic words to classify sounds
- Meanings of each word, phrase and sentences in English
- Supplementary tables, figures and diagrams for each topic
- Basic conversations

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**Purum Chong Kinchuna Zedetrubu**  
A Learner's Book of the Purum Language

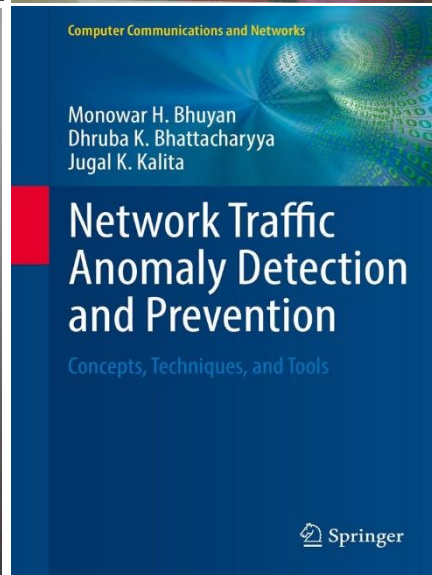
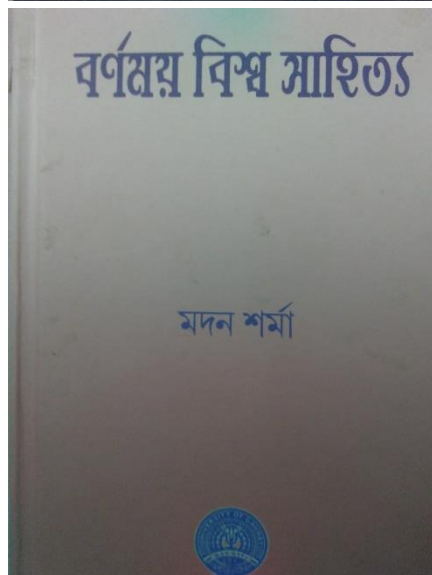
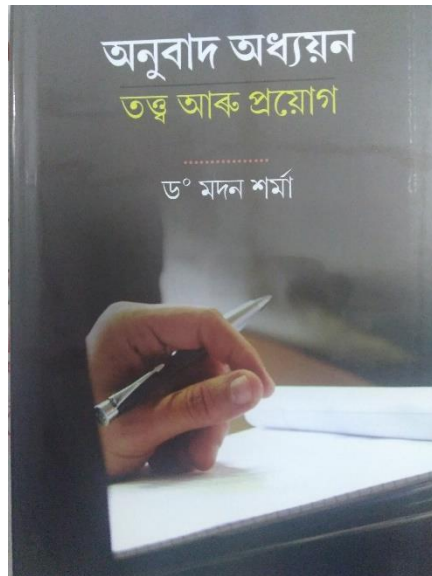


**Purum Chong Kinchuna Zedetrubu** is a collection of Purum oral literature and linguistic features. The book is a collection of Purum sound systems, parts of speech, sentences, folk tales, folk songs, proverbs. The book also has a word list on the human body parts, kinship terms, food items, natural objects, flora, fauna, colour terms, numerals and ethnolinguistic account of the Purum community. The book includes a pictorial word list to facilitate children of the Purum tribe to learn the language easily.

Purum is an endangered language and the number of speakers is very low. This book is an attempt to help the native speakers revitalize their mother tongue.

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## TEZPUR UNIVERSITY: AN OVERVIEW

Tezpur University, established on January 21, 1994 by an Act of Parliament of India as a residential Central University, is currently offering 73 Programmes at the Under-Graduate (Degree/Diploma/Certificate), Integrated, Post-Graduate (Degree/Diploma) and Doctor of Philosophy levels in various disciplines through 22 Departments and 4 Academic Centers.

The term of office of the fourth Vice Chancellor, Prof. M. K. Chaudhuri came to an end on 20.05.2017; Prof. V. K. Jain joined as the new Vice Chancellor of the University on 22.02.2018. The Silver Jubilee Celebrations began on 21 January 2018, with the first Vice Chancellor Prof. K. M. Pathak inaugurating the event and Shri Utpal Bora, CMD, OIL, Digboi, releasing the Celebration calendar.

During the last twenty-four years of its existence, the University has most fruitfully engaged in the capacity building both in terms of infrastructure and human resource development, which is immediately evident from the global and national recognitions it has received. The University ranked 100th in Times Higher Education (THE) Asia University Rankings 2018, improving its position from 131-140 last year. In the same ranking, the University is top ranked among all Universities in India and ranked 7<sup>th</sup> in India among all Higher Educational Institutions (HEIs). In "Research" category TU Ranked 4th in India just behind IISc, Bangalore, IIT Bombay and IIT Kharagpur. The University also featured in Times Higher Education World University Rankings 2018 by attaining a position in the band 601-800 position. The University also figured in The QS (Quacquarelli Symonds) BRICS University Rankings 2018 where it was ranked 171-180. However, in the MHRD NIRF Ranking 2017, the University ranked 48<sup>th</sup> and ranked 30th amongst all the Universities. The University was awarded Raj Bhasha Shield for best implementation of official language Hindi in 'Region C' by the Ministry of HRD, Govt. of India.

During the period, a number of faculty members brought laurels to the University and the region. Dr. Sanjay Pratihari of Department of Chemical Sciences was awarded the prestigious Indian National Science Academy (INSA) Medal for Young Scientist Award for the year 2017; a patent was granted to Prof. R K Dutta on Arsiron Nilogon and Fluoride Nilogon, for developing highly efficient safe low cost and simple methods for removal of arsenic and excess fluoride from contaminated drinking water; Prof. A K Mukherjee was conferred Doctor of Science (DSc) in Biotechnology by the University of Calcutta for his notable contribution to snake venom research; Prof. R C Deka, Department of Chemical Sciences, and Dean, School of Sciences was awarded the prestigious Fellow of the Royal Society of Chemistry (FRSC) in recognition to his contribution to the field of Chemistry; Dr. P Barah, Department of MMBT was awarded "Ramalingaswami Re-entry Fellowship" by the Ministry of Science and Technology, Dept. of Biotechnology, Govt. of India.

Our faculty members received a number of project grants from various national and international bodies, viz. UGC, DST, DBT, AICTE, DAE, DRDO, DRL, ICMR, MoES, ICSSR, UNICEF, etc. The amount of research grants (Extramural funding) during the period was Rs 7800.60 lakh while the consultancy earning was Rs 13.98 Lakh. The faculty members of the University have regularly published research papers in peer-reviewed journals, and books and book chapters. As many as 456 numbers of papers were published in UGC listed journals during the period. 3 patents were granted during the period and a good number of faculty members were invited to foreign universities to deliver talks. A MOOC under SWAYAM prepared by a faculty member of the Department of Business Administration received approval from the UGC.

Our students during the period performed very well in co-curricular and extension activities. The students displayed their talents at various Zonal/State and National level tournaments/competitions. The University has maintained a healthy male/female ratio and has provided a gender friendly environment. It is matter of pride for the University that it has been able to provide accommodation to all its students in its 12 well-designed hostels and 4 transit hostels. As an addition to the existing infrastructure, the University has created an excellent swimming pool for the students and the employees. Apart from LAN connections, the campus is now Wi-fi enabled. The University has also just completed an RCC two-storied building for Teaching Learning Centre.

During the period, the University invited a good number of distinguished experts and intellectuals, including the noted Human Rights Activist Professor Anand Teltumbde, Senior Professor, Goa Institute of Management, leading linguists, Prof Klaus-Uwe Panther, Emeritus Professor, Hamburg University, Germany, Prof. George van Driem, University of Berne, Switzerland, Dr. Ch. Mohan Rao, former Director and Sir JC Bose National Fellow, Centre for Cellular & Molecular Biology (CCMB), Hyderabad, Dr. Robert Barthos, Research Fellow Scientist, Hungarian Academy of Sciences, Budapest, Prof. Vipul Prakash, Department of Civil Engineering, IIT Roorkee. The invitees delivered lectures and interacted with the faculty members and the students.

Other areas like extension and outreach programmes, placement of students, achievements, financial profile etc. of the University are presented in designated sections of the current Annual Report.



## FINANCIAL PROFILE

The Accounts of the University are maintained in five parts: **Part-I** deals with **Recurring and Salary Funds**, **Part-II** for transactions related to Funds under **Non-Recurring and other schemes**, **Part-III** for **Earmarked Funds** and externally **funded research projects**, **Part-IV** for transactions related to **Debts and Deposits** Account and **Part-V** for maintenance of **Provident Funds**. The accounts for the year 2017-18 have been prepared in such formats as prescribed by the Ministry of HRD, Govt. of India.

Opening balance at the beginning of the year 2017-18 was **Rs.2998.13 lakh**. During the year, the University received a total amount of **Rs.14104.99 lakh** under all the schemes, viz., Recurring, Salary, Creation of Capital Assets and Research Projects. The University also generated an amount of **Rs. 1907.56 lakh** as internal receipts/revenue forming part of Grants-in- Aid Recurring. Thus, the total fund available during the year was **Rs.19010.68 lakh**. Against the same, an amount of **Rs.15403.72 lakh** was spent during the year 2017-18, leaving an unspent balance of **Rs.3606.96 lakh**.

The following statement presents the Receipts and Expenditure for the year 2017-18 at a glance.

### Statement of Receipts & Expenditure for the financial year 2017-18

*(Rupees in lakh)*

RECEIPTS			EXPENDITURE		
Particulars	Amount	Total Amount	Particulars	Amount	Total Amount
<b>A) Opening Balance</b>	2,998.13	2,998.13	<b>A) Expenditure</b>		
<b>B) Grants received :</b>			I. Recurring Expenditure	2,939.58	
I. Grants-in-Aid (Recurring)	515.83		II. Salary Expenditure	6,990.21	
II. Grants-in-Aid (Salary)	6,794.17		III. Expenditure for Creation of Capital Assets	2,745.25	
III. Grants-in-Aid (Creation of Capital Assets)	4,270.00		IV. Expenditure on Research Projects	2,728.68	15,403.72
IV. Grants for Research Projects	2,524.99	14,104.99			
<b>C) Internal Receipts</b>	1,907.56	1,907.56	<b>Closing Balance</b>	3,606.96	3,606.96
<b>Grand Total</b>		<b>19,010.68</b>	<b>Grand Total</b>		<b>19,010.68</b>



## ACADEMIC PROFILE

The office of the Controller of Examinations deals with the academic matters related to admission of students, examinations, declaration of results and issue of grade cards, transcripts and certificates. Besides, this office deals with some welfare matters of the students such as, online as well as offline verification and forwarding of applications for scholarships and fellowships to various funding agencies, issue of required documents for the bank loan, etc.

During the year 2017-18, the University constituted a committee to conduct the National Level Entrance Examinations of the University (TUEE) for admission to various programmes of study offered by the University. They conducted Online Entrance Examinations tests during 26-28 May, 2017 at 18 different Centres across the country. The Centres were located at Agartala, Bengaluru, Bhubaneswar, Chennai, Delhi, Dibrugarh, Guwahati, Hyderabad, Imphal, Jorhat, Kolkata, Lucknow, Mumbai, Patna, Shillong, Silchar, Siliguri and Tezpur.

The Committee conducted online Entrance Examinations for all the programmes of study offered by the University, except MBA and BTech programmes (admission to MBA was through CAT/MAT and BTech programme through JEE Main). PhD students were admitted twice in the year. The TUEE qualified candidates were short listed for PI and based on the performance in PI the candidates were admitted to the PhD programme in the Autumn Semester (starting from 25 July, 2017) and in the Spring Semester, 2018 (starting from 16 January, 2018), JRF qualified candidates were only interviewed and admitted as there was no Entrance Examinations in the Spring Semester.

The University offered 75 programmes (including 05 programmes under CODL) of different levels such as Certificate, diploma, PG Diploma, UG, PG and Ph.D. in the academic year 2017-18. The programmes of study offered during the year are given in the tabular form at Annexure –I.

The candidates selected based on Entrance Examinations were admitted during 15 – 24 July, 2017. The vacant seats of reserved categories were filled up (if not all) by lowering the cut off marks of the Entrance examinations and also by conducting special admission tests. The students who could not produce the pass certificates/mark sheets of the qualifying examinations during admission were admitted provisionally and allowed to submit the documents by 15 November 2017.

During the year, a total of 1612 candidates (including students of CODL) were admitted to various programmes of study in the Autumn semester, 2017. With this, the total strength of the students on the campus went to 4216 (as on 31. 12.2017). Male female ratio of the students was 57:43. Reservation of seats for admission of the reserved categories candidates were strictly adhered to the GOI rules.

As per the academic calendar, the Semester End Examinations for the Spring Semester was conducted during the period from 22.05.2017 to 02.06.2017 and the Examinations for the Autumn Semester was conducted during 01.12.2017 to 11.12.2017. Results of the Spring Semester End Examinations were declared on 15 June 2017 (for the out going batches of students) and on 30 June 2017 (for the continuing batches of students). The results of Autumn Semester were declared on 29 December 2017.

The 14<sup>th</sup> Convocation of the University was held on 7.4.2017 where 964 students (who passed in the year 2016) were awarded with their degrees/diplomas. In the same year, the 15<sup>th</sup> Convocation was also held on 21.12.2017 and a total of 1066 students (who passed in the year 2017) were awarded their degrees/diplomas. 28 toppers of the UG/PG programmes (who passed in the year 2016) were awarded Gold medals in the 14<sup>th</sup> Convocation. Similarly, 35 toppers of the 2017 batch were awarded Gold medals in the 15<sup>th</sup> Convocation. The Best Graduate Award and the Best Postgraduate Award were also presented with Gold medals in the said Convocations.

**Annexure –I: List of Programmes offered during 2017 at a glance**

SI No.	Department/ centre	SI No.	Name of the programme
1.	Physics	1.	MSc in Physics
		2.	Integrated MSc in Physics
		3.	Integrated BSc BEd. (Physics major)
		4.	MSc in Nano Science and Technology
		5.	PhD
2.	Chemical Sciences	6.	MSc in Chemistry
		7.	MTech. in Polymer Science & Technology
		8.	Integrated MSc in Chemistry
		9.	Integrated B.Sc.B.Ed. (Chemistry major)
		10.	PhD
3.	Mathematical Science	11.	MSc in Mathematics
		12.	Integrated MSc in Mathematics
		13.	Integrated BSc BEd (Mathematics major)
		14.	PhD
4.	Molecular Biology and Biotechnology	15.	MSc in Molecular Biology and Biotechnology
		16.	Integrated M.Sc. in Bioscience & Bioinformatics
		17.	PhD
5.	Environmental Science	18.	MSc in Environmental Science
		19.	PhD
6.	English and Foreign Languages	20.	MA in English
		21.	MA in Linguistics & Language Technology
		22.	MA in Linguistics & Endangered Language
		23.	Integrated MA in English
		24.	Integrated BA BEd (English major)
		25.	Certificate in Chinese
		26.	PhD
7.	Cultural Studies	27.	MA in Cultural Studies
		28.	PhD
8.	Commerce	29.	Integrated MCom (Hons)
		30.	MCom
9.	Mass Communication and Journalism	31.	MA in Mass Communication and Journalism
		32.	MA in Communication for Development
		33.	PhD
10.	Hindi	34.	MA in Hindi
		35.	PG Diploma in Translation
		36.	PhD
11.	Sociology	37.	MA in Sociology
		38.	PhD
12.	Social Work	39.	MA in Social Work
13.	Education	40.	MA in Education
		41.	BEd
		42.	PhD
14.	Business Administration	43.	Master of Business Administration
		44.	Master of Tourism and Travel Management
		45.	PhD
15.	Computer Science and Engineering	46.	Master of Computer Application
		47.	MTech in Information Technology
		48.	BTech in CSE
		49.	PhD
16.	ECE	50.	MTech in Electronics Design & Technology
		51.	MTech in Bioelectronics
		52.	BTech in ECE
		53.	PhD

17.	Mechanical Engineering	54.	MTech in Mechanical Engineering
		55.	BTech in ME
		56.	PhD
18.	Food Engineering & Technology	57.	MTech in Food Engineering & Technology
		58.	BTech in FET
		59.	BVoc in Food Processing
		60.	PhD
19.	Energy	61.	MTech in Energy Technology
		62.	BVoc in Renewable Energy Management
		63.	PhD
20.	Civil Engineering	64.	B.Tech in Civil Engineering
		65.	PhD
21.	Electrical Engineering	66.	BTech Electrical Engineering
22.	Centre for Inclusive Development	67.	PG Diploma in Child Right & Governance
23.	Centre for Women's Studies	68.	PG Diploma in Women's Studies
24.	Community College	69.	Diploma in Paralegal Practice
25.	Centre for Assamese Studies	70.	PhD
26.	Centre for Open and Distance Learning	71.	MSc in Mathematics
		72.	MA in Mass Communication
		73.	PG Diploma in Human Resource Development
		74.	PG Diploma in Environmental & Disaster Management
		75.	PG Diploma in Renewable Energy and Energy Management

## RESEARCH AND DEVELOPMENT PROFILE

The office of the Dean, R&D facilitates the implementation and smooth creation of extramural research projects funded by the various Government and non-Government funding agencies like UGC, DST, DBT, DeitY, AICTE, DAE, DRDO, DRL, ICMR, ICAR, UNICEF, Ministry of Earth Science, Ministry of Food Processing Industries, MNRE, ONGC and others. This office takes the responsibility of advertisement and appointment of project staff; permits conduct of field trips/visits as required by the project staff and PIs and/or Co-PIs; grants permission to attend workshops/seminars/symposiums/ conferences as well as to visit different research laboratories by using the project grant. In addition to management of extramural research projects sanction to individual PI, this office also manages the Departmental and institutional research projects such as UGC-SAP, UGC-BSR start up grants, DST-FIST and DBT funded schemes such as Establishment of Institutional Level Biotech Hub. Dean R&D also conducts the Tezpur University Ethical Committee, Tezpur University Animal Ethical Committee, Tezpur University Biosafety Committee, and Bioinformatics Infrastructure Facility meetings. This office has also been involved in implementation of projects approved by ONGC-CPBT, an example of Academy-Industry collaboration at Tezpur University.

It may be mentioned that the Dean R&D keeps the account of R&D activities of the University, liaisons between the researchers of the University and the funding agencies, facilitates R&D activities and also contributes towards creating a conducive atmosphere for research activities. During the year 2017-2018 this office has forwarded several research proposals for consideration of approval to the funding agencies. At present a total of 209 externally funded research projects are ongoing of which 194 are major research projects and 15 are minor research projects with a financial outlay of Rs. 7800.60 lakhs. During the year 2017-18, 39 new projects were sanctioned. The ongoing research projects include 16 international collaborative projects of which 5 projects are under Indo-UK, 2 with Indo-Russian, 1 with Indo-Brazil, 2 with Nottingham University, 2 with Indo-Japan, 1 with CEFIPRA (Indo-French), 1 with Indo-German, 1 with Indo-Hungary and 1 with Indo-ASEAN. During this period, eight departments were funded under UGC-SAP of which 3 departments are supported by DRS-I and 5 departments are supported by DRS-II. The faculty members have published several research papers in peer-reviewed national and international journals. Further, these projects have augmented the research skills of the project staff and have created trained manpower to cater to the need of the society.

The office also facilitates consultancy projects of faculty as per the TU guidelines. Total amount earned through consultancy projects during 2017-2018 was approximately INR 13.98 lakh. This amount was earned as consultancy fee by individual faculty as well as by the departments of various Schools.

The office is also entrusted with the collection/ deposition and maintenance of records of analytical service charge for sophisticated instruments housed at Sophisticated Analytical Instruments Facility and various departments. During the year of report, approximately INR 13.81 lakh was collected as analytical service charge from applicants within the University as well as other Universities, research institutes and industries.

## **THE PERSONNEL OF THE OFFICE OF THE DEAN**

### **Dean, Research & Development**

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G Das  
MTS



# STUDENTS PROFILE

The office of the Dean Students' Welfare strives to provide all possible opportunities and facilities for the all-round development of personality and leadership qualities as well as developing interest in sports/games among the students. The University has a multi-talented student community actively involved in sports, cultural, literary and other extra-curricular activities.

## STUDENTS DISCIPLINE

The office of the Dean Students' Welfare also looks after the matters of students' discipline. Like the previous years, the Anti-Ragging committees, Anti Ragging squads continued their constant vigil to keep the University "Ragging Free". We are happy to inform that in this period of the report too, the University has no incidence of disruption of academic activities due to students' unrest involving the administration and faculty members. This was also possible because of the active and highly dedicated grievance redressal mechanism which is in place and available both online as well as offline.

## STUDENTS' ACTIVITIES

The student community of the university is quite active in pursuing sports, cultural, literary and other extra-curricular activities. A brief note on the cultural and sports activities is as follows:

The cultural section of the university is quite resourceful and very proactive in nurturing the talents of the students by providing the best facilities. Music practice room is available at the students' activity centre. Kalaguru bishnu prasad rabha auditorium, community hall, chandra prabha saikiani bhawan are some of the facilities for practice and performance. There are different instruments like guitar, drum set, synthesizer, dhol, bor dhol, kobi dhol, madol, doba, pepa, bahi, gogona, kham, khol etc. Available for the use of the interested students.

## SPORTS ACTIVITIES

For encouraging the students to take up sports and games along with their studies, the University has put in place some good facilities and support system. They are as follows :

- Football ground with floodlights facility
- One 400 meter track cum cricket field with floodlights facility
- Two Basketball courts with floodlights facility
- Two Volleyball courts with floodlights facility
- One Tennis court with floodlights facility
- One Indoor Stadium (Badminton Court with YY Yonex Synthetic Mat)
- A gymnasium with world class Weider product, USA and Afton product
- One Swimming Pool

## IN HOUSE CULTURAL PROGRAMMES

Dates	Events	Invited Guests
May 7, 2017	Celebration of Birth Anniversary of Kaviguru Rabindranath Tagore	Performances by students
May 17, 2017	Staging of a play, 'Surjyasta'	Performances by students
June 19, 2017	Celebration of Rabha Divas	Nrityacharjya Padmashree Jatindra Nath Goswami
August 7, 2017	Death anniversary of Kaviguru Rabindranath Tagore	Performances by students
August 16, 2017	General Fresher's	Performances by students
August 15, 2017	Celebration of Independence Day	Performance by Students
August 23, 2017	Tithi of Srimanta Sankardeva	Mayur Bora, Noted Scholar & Performances by students
September 9, 2017	Yeh India Ka Time Hai, MoHRD initiative event	Voodoo Child band performance & Manthan among TU students
October 28, 2017	Staging of a one act play 'Era Sutir Dhou'	Students of Tezpur University
5 November, 2017	Tribute to Dr Bhupen Hazarika	Renowned instrumentalist Shri Kamal Katakai
17 January, 2018	Shilpi Divas Celebration	Mr Hemanta Baruah, President Tezpur Sahitya Sabha
21 January 2018	Foundation Day Cultural Programme	Performance by students
26 January 2018	Republic Day Celebration	Performance by students
23-25 February 2018	Annual Meet	Performance by the Lagori band from Mumbai

## ACHIEVEMENTS OF TEZPUR UNIVERSITY STUDENTS IN INTER UNIVERSITY YOUTH FESTIVALS

### ❖ 33<sup>rd</sup> INTER UNIVERSITY EAST-ZONE YOUTH FESTIVAL 2018 Gauhati University, Guwahati January 5-9, 2018

- Western Vocal Solo: Gold
- Folk Orchestra: Silver
- Indian Group Song: Silver
- Western Group Song : Bronze
- Classical Instrumental (Non-Percussion): 4<sup>th</sup> position
- Quiz : Silver
- Debate: 4<sup>th</sup> Position.
- One Act Play: Bronze
- Classical Dance: Bronze

#### **Best Music Team**

### ❖ 33<sup>rd</sup> INTER UNIVERSITY NATIONAL YOUTH FESTIVAL 2018 Ranchi University, February 16-20, 2018

- Classical Dance: Gold
  - Western Solo Song: Silver
  - Group Song Indian: Silver
  - Folk Orchestra: Silver
  - Western Group Song: Bronze
- Best Cultural Procession Award

## Annual Meet 2017-2018

The Annual Meet 2017-2018 of Tezpur University is organized by the Students Council during February 23-25, 2018. There are both group and individual competitions. The group competitions are either Inter-Departmental or Inter-Hostel. Some of the major events are Dances, Drama, Song, Literary, Debate, Photography, Fine Arts, Wall Magazine, Cultural procession etc.

### Best Performers Annual Meet 2017 -2018

Cultural/Literary/Visual Arts

Event	Position	Names of Winners
Music	Best Singer	ROCKTUPAL DUARAH
Skit	Best Actor	ANKAN PHUKAN
	Best Actress	SUMPEE BORAH
One Act Play	Best Comedian	SAIBALKRISHNA SARMAH
	Best Script Writer	AKASHDEEP DEKA
	Best Supporting Actor	BAHNIMAN BARUAH
	Best Supporting Actress	SHASOTI BORAH
	Best Director	MADHURJYA HAZARIKA
	Best Actor	ANIRBAN PATGIRI,
	Best Actress	ANINDITA APURBA PHUKAN

### SPORTS ACTIVITY

The 21<sup>st</sup> Annual Meet, 2017-18 of Tezpur University was started in the month of August, 2017 with Football, Cricket, Archery, Volleyball, Basketball, Badminton, Table Tennis, Chess, Kho Kho, Kabaddi, Carrom, Lawn Tennis Competitions. Finally, the concluding session was held from 23<sup>rd</sup> to 25<sup>th</sup> February, 2018 with Track & Field events, Weightlifting, Powerlifting, Best Physique, Arm Wrestling, Tug of War, Cycling and Half Marathon along with March Past Competitions.

The Vice Chancellor, Prof. Vinod Kumar Jain lighted the ceremonial lamp followed by hoisting of the University flag. Earlier the Sports Officer, Mr. R.R Singh handed over the torch to Professor Jain, which was carried by the Sports Officer along with the captains of the winning teams, Outdoor and Indoor Games Secretary.

Mr. Anup Chowdhury, International Player and Sports Organizer, Guwahati graced the occasion as Chief Guest and was felicitated by the University fraternity on this occasion. Mr. Manoj Kumar Deka, Deputy Commissioner, Sonitpur District attended the ceremony as Guest of Honour.

Prof. Vinod Kumar Jain took salute of the march past contingent, where teams from all hostels of the University participated. The oath was administered by the Professor D. Deka, Dean, Students Welfare, Tezpur University.

TU team participated in the various events

Year	Date	Event	Venue	AIU/Others	Achievement
2017	1 <sup>st</sup> October, 2017 to 4 <sup>th</sup> October, 2017	AIU East Zone Badminton Tournament	KIIT University, Bhubaneswar	East Zone	Both Boys' and Girls' Team played up to Quarter Final
2017	1 <sup>st</sup> October, 2017 to 4 <sup>th</sup> October, 2017	AIU Inter Zonal Badminton Tournament	KIIT University, Bhubaneswar	Inter Zonal	Participated
2017	27 <sup>th</sup> November, 2017 to 3 <sup>rd</sup> December, 2017	AIU East Zone Football Tournament	Rajiv Gandhi University, Itanagar	East Zone	Played up to 2 <sup>nd</sup> Round
2017	16 <sup>th</sup> December, 2017 to 17 <sup>th</sup> December, 2017	45 <sup>th</sup> Assam State Body Building Championship	Sivasagar	State	Participated
2017	20 <sup>th</sup> December, 2017 to 21 <sup>st</sup> December, 2017	Sonitpur District Iron Games Competition	Tezpur	District	Participated
2017	22 <sup>nd</sup> December, 2017 to 24 <sup>th</sup> December	5 <sup>th</sup> Assam State Power Lifting Championship	Gogamukh, Dhemaji	State	Participated
2018	6 <sup>th</sup> January, 2018 to 8 <sup>th</sup> January, 2018	All Assam Light Weight Lifting Competition	Guwahati	State	One student secured 4 <sup>th</sup> position

**Overall performers of 21<sup>st</sup> Annual Meet 2017-18 (Sports)**

Sl. No.	Events	Best Player
1	Football (M)	BOLURAM MOGOR
2	Cricket (M)	BHASKAR JYOTI SAIKIA
3	Volleyball (M)	KUNJAN SAIKIA
4	Volleyball (W)	MOMITA SHOH
5	Basketball (W)	MOMITA SHOH
6	Basketball (M)	DULAL SAIKIA
7	Badminton	HOMEN LAHAN
8	Best Athlete (Man)	RAKTIM RANJAN SAIKIA
9	Best Athlete (Woman)	KREENAYAN BORO
10	Best Archer (Male)	PRINCE MISHRA
11	Best Archer (Female)	KREENAYAN BORO
12	Champion of the Champion 2017-2018 MEN	PRANJIT SHARMA
13	Champion of the Champion 2017-2018 Women	KREENAYAN BORO

14	Strong Man, 2017-2018	RANJEET
15	Strong Women, 2017-2018	KREENAYAN BORO
16	Best Lifter (Male)	RANJEET
17	Best Lifter (Female)	SUMAN LAHKAR
18	MR TEZPUR UNIVERSITY 2017-2018	RAJAT SHUBRO BOSE
19	Best Commander Men (March Past)	PRANAV RAWANI
20	Best Commander Women (March Past)	ANINDITA DUTTA
21	Central Commander (Men)	SUROJIT NATH
22	Central Commander (Women)	SEEMA RANI DAS

#### Team Winners of 21<sup>st</sup> Annual Meet 2017-18 (Sports)

Sl. No.	Events	Winning Team
1	Football (Men)	Nilachal Mens' Hostel
2.	Basketball (Men)	Charaideo Mens' Hostel
3.	Basketball (Women)	Pobitora Madam Curie Womens' Hostel
4.	Volleyball (Men)	Nilachal Mens' Hostel
5.	Volleyball (Women)	Pobitora Madam Curie Womens' Hostel
6.	Cricket (Men)	Saraighat C.V Raman Mens' Hostel
7.	March Past (Men)	Nilachal Mens' Hostel
8.	March Past (Women)	Pragjyotika Womens' Hostel

#### THE PERSONNEL OF THE OFFICE OF THE DEAN OF STUDENTS' WELFARE

##### Dean, Students' Welfare

D Deka, PhD (Tezpur)  
Professor, Dept. of Energy  
Email: dhanapati@tezu.ernet.in

##### Associate Dean, Students' Welfare (Sports)

M Mandal, PhD (IGIB, CSIR, Delhi)  
Associate Professor, Dept. of MBBT  
Email: mandal@tezu.ernet.in

##### Associate Dean, Students' Welfare (Culture)

Juri Gogoi Konwer, PhD (Dibrugarh)  
Assistant Professor, Dept. of Cultural Studies  
Email: jgkon@tezu.ernet.in

##### OFFICERS AND STAFF

R R Singh  
Assistant Director of Physical Education  
Email: rsingh@tezu.ernet.in

Bhupali Kashyap, PhD (Tezpur)  
Cultural Officer

D Tamuli

Gymnasium Instructor

S J Bora  
Office Assistant (Outsourced)

U Bharali  
Multi-Tasking Staff (MTS)

J Damai  
Multi-Tasking Staff (MTS)

S Ali  
Multi-Tasking Staff (MTS)

In the period of report, Mr. R Pal was engaged as a Cricket Coach (Contractual), Mr. Y. Raju Singh as a Football Coach (Contractual) and Mr. A Baruah as a Badminton Coach (Contractual).

## TRAINING AND PLACEMENT ACTIVITIES

Apart from imparting quality education to its students and scholars, Tezpur University also guides them in shaping their careers and makes all out efforts to facilitate their employment during their studentship. To take care of this important aspect, the University has created the Training and Placement Cell which acts as the interface between the students of the University and the recruiting organizations. It establishes linkages with various recruiting organizations and facilitates placement events on campus as well as off campus. The Cell also organizes appropriately designed grooming sessions before the actual placements activities take place.

The Cell which is manned by a group of professionals with the active participation of students, has been making all possible efforts to bring reputed recruiters including MNCs, PSUs and government organizations to TU for holding recruitment events for its students.

For operational convenience, two groups of officials – one for the engineering students and the other for the non-engineering students – are taking care of training and placement related activities of the University. The following are such activities/events organized during 2017-18:

### A: TRAINING AND PLACEMENT (NON-ENGINEERING)

#### Pre-Placement Grooming Sessions

1. Two days Pre-placement Grooming workshop for MBA and MTTM students by Mr Litan Bhowmik on 26th and 27th June 2017.
1. One day Employability skill development workshop on “Effective Group Discussion and Interview Techniques” for the final year School of Humanities & Social Sciences and School of Science students by Mr Litan Bhowmik on 28th August 2018.
2. An interactive session by Mr. Rajneesh Bhardwaj, DGM-HR, Dalmia Cement on “How to prepare for campus placements” on 1st September 2017.
3. A skill-building workshop about Functions of Sales & Distribution channel in FMCGs for Management students by Mr. Purba Jyoti Sharma, Regional Sales Manager of North-East Region, Nestle on 18th September 2017.
4. Workshop on Interview Facing Skills & making a best impression on Recruiters for final year Mass communication & Journalism students by Mrs. Anuradha Ghosh, Soft skill Trainer on 3<sup>rd</sup> February 2018 .

#### NOTABLE PLACEMENT

During the year under report, 92% of our MBA and 89% of our MTTM graduates of 2018 passing out batch were placed across companies, sectors and industries. We could also improve the placement scenario of the School of Humanities and Social Sciences and the School of Sciences. During the year, 33 companies participated in our placement process. The organizations recruited our students across verticals and offered roles as Subject Matter Expert, Development Associate, Content Writing & Editing, Analytics, Social Media Analytics, Copywriting, Client Servicing, Marketing, Branding, Relationship Management, Business Development, Banking, Consultancy, Retail Operations, Organizational Development, Human Resources, Industrial Relations, E-Commerce, Project Management, Creatives, etc.

Name of the Organisation	No. of students Placed	Discipline
Concept Education	2	B.Tech/M.Tech/ M.Sc
Teach for India	3	All final year students
Nestle India	4	MBA
Marico	1	MBA
Mahindra Finance	1	MBA
Everest Industries	2	MBA/ B.Tech
Xenium Holidays	3	MTTM
DHL	1	MBA
Kotak Mahindra	1	MBA
Colgatepalmolive	2	MBA
Berger Paints	1	MBA/ B.Tech
ICICI Bank	8	MBA
AMUL	2	MBA
Eenadu TV	6	MA-MCJ
Reliance Trend	0	MBA
ICICI Predentials	1	All final year students
Easemy trip	6	MTTM
Azimpremji Foundation	1	All final year students
Gandhi Fellowship	21	All final year students
QuaQua Experiences	5	All final year students
ITC	1	MBA
ASOMI Finance Pvt Ltd	4	MBA
PRADAN	2	MA/M.Sc
Jungle Travels India	2	MTTM
OYO Rooms	0	MBA/MTTM
Satin Creditcare Network	1	MBA
Flipkart Logistics	2	MBA
POSOCO	1	MA MCJ
Drishti	1	MA C4D
Gumbi Software	11	MA/M.Sc
Fin-Advisors Consulting	1	MBA
Parle Products	0	MBA
Oil India	2	M.Sc/B.Tech
BCPL	2	MBA/B.Tech
Asian Paints	0	MBA/ M.Sc
Uflex	1	M.Tech
Havells (CRI)	3	M.Sc-MBBT



## B: TRAINING AND PLACEMENT (ENGINEERING)

During the year under report, the students of the School of Engineering participated in the final placement process of 30 organizations held on-campus as well as off-campus (pool campus events). Some of the prominent brands where our students were placed are Oil India Limited, Power Grid Corporation Limited, Cummins India Limited, Boston Consulting group, Simplex Infrastructure Ltd., Zaloni Technologies, Wipro Limited, Concepts Educations, Teach for India, Software AG, Kovid Research Labs, Reverie Language Technologies, Automovill Technologies, UDM Global Solution, Trip Born, Nestle India Limited, Vimta Lab, Unibourne Foods, ITC Foods, Patanjali Ayurved Limited, Regalix India Pvt. Ltd., Qua Qua Experience Pvt. Ltd., Inature, Parking Rhino, Karma Lab Pvt. Ltd., Kalpataru Power Transmission Pvt. Ltd., Onyconinfra, etc.

### Pre-Placement Grooming Programmes

- A three-day Pre-placement grooming programme for the *school of Engineering* students by Mr Litan Bhowmick was delivered from 14<sup>th</sup> to 16<sup>th</sup> Oct 2017.
- A three-day programme on “Mock Interview and group discussion” for the *school of Engineering* students by Mr Litan Bhowmik was conducted from 28<sup>th</sup> to 30<sup>th</sup> Oct 2017.
- An eighteen-day training programme on “Java programming” was conducted by Mr Bhargav Choudhury from 12<sup>th</sup> to 29<sup>th</sup> Dec 2017.
- An eight-day training programme on Ansys structure was conducted by Mr. Raju Govindharajan from 15<sup>th</sup> to 22<sup>nd</sup> Dec 2017.
- A fifteen-day AICTE Sponsored ICT EETP training was organized for the *School of Engineering* students by T&P Cell from 15<sup>th</sup> to 29<sup>th</sup> Dec 2017.
- An interactive session by Mr. Narendra Vashisht, CGM-HR, Oil India Limited, on “expectation from freshers” on 21<sup>st</sup> Dec 2017.
- An eight-day MATLAB training programme was delivered by Mr Bikramjit Goswami from 22<sup>nd</sup> to 29<sup>th</sup> Dec 2017.
- An eight-day training programme on Ansys Fluent (CFD) was delivered by Mr Raju Govindharajan from 22<sup>nd</sup> to 29<sup>th</sup> Dec 2017.
- An eight-day training programme on “Microsoft Project Planning” was delivered by Mr Joy Mukherjee from 22<sup>nd</sup> to 29<sup>th</sup> Dec 2017.
- An Interactive Session by Shri Utpal Bora, CMD Oil India Limited, on “prospects of Engineers in OIL” on 21<sup>st</sup> January 2018.
- A five-day training programme of total 12.5 hours was delivered by Dr. Sanjit Maitra on “R programming” during the duration of 14<sup>th</sup> to 28<sup>th</sup> Feb 2018.
- A five-day training programme was delivered by Mr Dhanesh Kasinathan on “Python programming” from 17<sup>th</sup> to 21<sup>st</sup> Feb 2018.
- An interactive session was delivered by Mr Ghananil Phukan, Android & Tools Engg Manager, Intel on “What Intel expects from Engineers” on 18<sup>th</sup> Feb 2018.
- An interactive session was delivered by Mr. Dipak Narayan Basu, Director, Simplex Infrastructures Limited, on “Industry requirement from today’s Civil Engineers” on 20<sup>th</sup> Feb 2018.
- An interactive session was delivered by Mr Praveen Kumar, Director, Ekagga Technology, on “How to develop programming skills” on 22<sup>nd</sup> Feb 2018.

## NOTABLE PLACEMENT

Sl. No	Organization Name	No of Offers	Discipline
1	Oil India Limited	03	B-Tech ME
2	Power Grid Corporation India Ltd	03	B-Tech Electrical, Civil
3	Boston Consulting Group	01	B-Tech CSE
4	Wipro Limited	05	B-Tech CSE & ECE
5	Cummins India Limited	12	B-Tech Mech & M-Tech Mech/ECE/Energy
6	Simplex Infrastructure Ltd.	05	B-Tech Civil Engg.
7	Concept Education	02	B-Tech, PG Physics, Chemistry, Match
8	Teach for India	01	Any PG, UG
9	Software AG	04	MCA
10	Kovid Research Labs	03	MCA
11	Reverie Language Technologies	04	MCA
12	PY Technologies	02	MCA
13	Automovill Technologies	02	MCA
14	UDM Global Solution	02	MCA
15	Trip born	01	B-Tech CSE, MCA, M-Tech IT
16	Nestle India Limited	02	B-Tech FET
17	Vimta Lab	05	B-Tech & M-Tech FET
18	Unibourne Foods	01	B-Tech & M-Tech FET
19	ITC Foods	01	B-Tech ME, B-Tech FET
20	Zaloni Technologies	04	B-Tech & M-Tech (CSE)
21	Gandhi Fellowship	04	Any PG, UG
22	Patanjali Ayurved Limited	17	B-Tech ME, EE, ECE, FET
23	Regalix India Pvt. Ltd.	03	B-Tech ECE
24	Qua Qua Experience Pvt. Ltd.	01	Any PG, UG
25	ICICI Prudential Life Insurance Co. Ltd.	05	Any PG, UG
26	INATURE	02	M-Tech IT
27	Parking Rhino	02	MCA
28	Karmaa Lab Pvt. Ltd.	01	B-Tech CSE
29	Kalpataru Power Transmission Pvt. Ltd.	02	B-Tech Civil Engg.
30	Onyconinfra	04	B-Tech Civil Engg. Mechanical

## DISTINGUISHED VISITORS

1. Shri Utpal Bora, CMD, Oil India Limited
2. Shri Dipak Narayan Basu, Director, Simplex Infrastructures Limited
3. Shri Narendra Vashisht, CGM-HR, Oil India Limited
4. Shri Praveen Kumar, Director, Ekagga Technology & Services Pvt Ltd.
5. Shri Rajneesh Bhardwaj, DGM-HR, Dalmia Cement, Guwahati
6. Shri Purba Jyoti Sharma, Regional Sales Manager of North-East Region, Nestle.
7. Shri Prabakar Boruah, Unit HR Head, Dalmia Cement, Guwahati
8. Shri G.S Prasad Sarma, Zonal HR Manager, Mahindra Finance, Kolkatta
9. Shri Mehul Bhati, Divisional Sales HR Manager at Marico Limited, Kolkatta
10. Smt. Nilima Sil, Manager-Gandhi Fellowship Programme, Piramal Foundation
11. Shri Sunil Naik, Director – HR, DHL, Mumbai
12. Shri Apurba Misra, Zonal Manager, GCMMF Ltd, Guwahati
13. Shri Subhra Jyoti Bharali, CMD, ASOMI Finance Pvt Ltd, Guwahati
14. Shri M.P. Singh, Chief General Manager – Personnel, Oil India Ltd, Noida
15. Shri S. Dutta, GM- Chemical, Oil India Ltd, Dulaijan
16. Er. Pankaj R. Maru, National Coordinator (NHIS-National Trust), Ministry of Social Justice & Empowerment, Govt. of India, New Delhi.

## OFFICERS / STAFF

### NON ENGINEERING

R K Doley, PhD (IIT Guwahati)  
Director, Centre for Inclusive Development  
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Training & Placement Officer  
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M Baruah, BTech (Amravati)  
Office Assistant  
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M Saikia  
Multi Tasking Staff

### ENGINEERING

S C Deka, PhD (HAU)  
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# **THE STATUTORY BODIES**

**The Board of Management**

**The Planning Board**

**The Academic Council**

**The Finance Committee**

**The Building Committee**

**The Board of Management**  
(01-04-2017 to 31-03-2018)

<b>Vice-Chancellor</b>	<b>Chairman</b>
<b>Pro Vice Chancellor</b>	Member
<b>Dr. A Nath</b> Assistant Professor, Dept. of Chemistry GC College, Silchar, Assam	Member
<b>Dr. T David Singh</b> Assistant Professor, Dept. of Chemistry Dept. of Basic Science and Humanities NIT Manipur, Imphal – 795 004	Member
<b>Shri O R Shallam</b> Professor & Head (Retd.) Dept. of History, KNG College, Jowai Meghalaya – 793150	Member
<b>Shri B S Nanda</b> Associate Professor Dept. of Political Science Charuchandra College, Kolkata West Bengal – 700029	Member
<b>Ms. Geeta Upadhayay</b> Chandmari, Tezpur-784001	Member
<b>Prof. Charu Lata Mahanta</b> Dean, School of Engineering	Member
<b>Prof. Nashreen S Islam</b> Department of Chemical Science	Member
<b>Dr. G A Ahmed</b> Department of Physics	Member
<b>Shri S I Singh</b> Department of Computer Science and Engineering	Member
<b>Finance Officer</b>	Permanent Invitee
<b>Controller of Examinations</b>	Permanent Invitee
<b>Alumni representative</b> Dr. H Deka, CIPET, Guwahati, Assam Dr. Mousumi Barthakur, GNRC, Six Mile, Guwahati	Special Invitee Special Invitee
<b>Student Representative</b> M Hazarika, Research Scholar C Borah, BTech Student	Special Invitee Special Invitee
<b>Registrar</b>	<b>Secretary</b>

**The Planning Board**  
(01-04-2017 to 31-03-2018)

<b>Vice-Chancellor</b>	Ex-Officio Chairman
<b>Pro Vice Chancellor</b>	Ex-Officio Member
<b>Dean, School of Humanities and Social Sciences</b>	Ex-Officio Member
<b>Dean, School of Sciences</b>	Ex-Officio Member
<b>Dean, School of Management Sciences</b>	Ex-Officio Member
<b>Dean, School of Engineering</b>	Ex-Officio Member
<b>Dean, Students' welfare</b>	Ex-Officio Member
<b>Dean, Research and Development</b>	Ex-Officio Member
<b>Dean, Planning &amp; Development</b>	Special Invitee
<b>Dean, Academic Affairs</b>	Special Invitee

**Six teachers nominated by the Academic Council**

**Prof M M Sarmah** Member  
Department of English and Foreign Languages

**Prof R C Deka** Member  
Department of Chemical Sciences

**Dr. R R Haque** Member  
Department of Environmental Sciences

**Dr G A Ahmed** Member  
Department of Physics

**Dr. D Datta** Member  
Department of Mechanical Engineering

**Dr. Heera Borpujari** Member  
Department of Business Administration

**One Representative of MHRD**  
**Joint Secretary** (Central University)  
Ministry of Human Resource Development  
Department of Higher Education, New Delhi Member

**One Representative of UGC**

**Prof. (Mrs.) Paula Banerjee** Member  
Department of South and South Asian Studies  
Calcutta University, Kolkata - 700027

**One Representative of NEC**

Director (HRD & E)  
NEC, Nongrim Hill, Shillong-793003

Member

**One Representative of State Govt. of Assam**

Commissioner and Secretary  
Department of Higher Education, Govt. of Assam  
Dispur, Guwahati-781006

Member

**Two Nominees by the Board of Management**

Prof. Suranjan Das  
Vice-Chancellor  
Jadavpur University  
Kolkata, West Bengal, Midnapore-700032

Member

**Sri V K Verma**

Executive Director (HR&A)  
Oil India Limited (OIL)  
Duliajan-786602, Assam

Member

**Controller of Examinations**

Permanent Invitee

**Finance Officer**

Permanent Invitee

**Librarian**

Permanent Invitee

**Registrar**

Ex-officio Secretary

**THE ACADEMIC COUNCIL  
(01-04-2017 to 31-03-2018)**

<b>Vice Chancellor</b>	E-officio Chairman
<b>Pro Vice Chancellor</b>	Ex-officio Member
<b>Deans of Schools</b>	
<b>Dean</b> , School of Management Sciences	Ex officio Member
<b>Dean</b> , School of Humanities and Social Sciences	Ex officio Member
<b>Dean</b> , School of Engineering	Ex officio Member
<b>Dean</b> , School of Sciences	Ex officio Member
<b>Dean</b> , Students' Welfare	Ex officio Member
<b>Dean</b> , Research and development	Ex officio Member
<b>Dean</b> , Academic Affairs	Special Invitee
<b>Two Professors nominated by the Vice Chancellor</b>	
<b>Prof. M K Sarmah</b> Department of Business Administration	Member
<b>Prof. Nashreen S Islam</b> Department of Chemical Sciences	Member
<b>All Heads of Departments / Centres</b>	
Head, Department of English and Foreign Languages	Ex officio Member
Head, Department of Cultural Studies	Ex officio Member
Head, Department of Social Work	Ex officio Member
Head, Department of Mass Communication and Journalism	Ex officio Member
Head, Department of Education	Ex officio Member
Head, Department of Social Work	Ex officio Member
Head, Department of Hindi	Ex officio Member
Head, Department of Business Administration	Ex officio Member
Head, Department of Mathematical Sciences	Ex officio Member
Head, Department of Physics	Ex officio Member
Head, Department of Chemical Sciences	Ex officio Member
Head, Department of Molecular Biology and Bio Technology	Ex officio Member
Head, Department of Environmental Science	Ex officio Member



Head, Department of Computer Science and Engineering	Ex officio Member
Head, Department of Electronics & Communication Engineering	Ex officio Member
Head, Department of Food Engineering & Technology	Ex officio Member
Head, Department of Energy	Ex officio Member
Head, Department of Civil Engineering	Ex officio Member
Head, Department of Electrical Engineering	Ex officio Member
Head, Department of Commerce	Ex officio Member
Head, Department of Law	Ex officio Member
Head, Computer Centre	Ex officio Member
Head, Centre for Disaster Management	Ex officio Member
Head, Women Studies Centre	Ex officio Member
Head, Assamese Studies Centre	Ex officio Member
Head, Centre for Open and Distance Learning	Ex officio Member
Head, Centre for Inclusive Development	Ex officio Member

**Two Associate Professors Nominated by the Vice Chancellor**

**Dr. S Saharia** Member  
Department of Computer Science and Engineering

**Dr. T R Sarma** Member  
Department of Business Administration

**Two Assistant Professors Nominated by the Vice Chancellor**

**Dr. Ng K Francis** Member  
Department of Physics

**Dr. Rathijit Chakraborty** Member  
Department of English and Foreign Languages

**Three Nominees of the Board of Management**

**Prof. I B S Passi**, Professor (Emeritus) Member  
INSA Senior Scientist and  
Honorary Professor, IISER Mohali  
Punjab University, Chandigarh-160014

**Prof. B Boruah**, Professor (Philosophy) Member  
School of Humanities and Social Sciences  
MS 611, IIT, Delhi  
Hauz Khas, New Delhi-110016

<p><b>Prof. D J Saikia</b> TIFR Pune Pune University Campus, Pune 411 007 Maharashtra</p>	Member
<p><b>One Representative of UGC</b> <b>Dr. (Ms.) Santosh Satya</b> Professor Center for Rural Development and Technology New Delhi-110016</p>	Member
<p><b>One Representative of MHRD</b> Mr. VVR Shastri Former Chairman and Managing Director Bharat Electronics Limited Bangalore, Karnataka</p>	Member (till 21.05.2017)
<p><b>One Representative of NEC</b> Director (HRD &amp; E) North Eastern Council (NEC) Shillong-793003</p>	Member
<p><b>One Representative of State Govt. of Assam</b></p>	
<p><b>Commissioner &amp; Secretary / Principal Secretary In-charge</b> Ex-officio member Department of Higher Education Govt. of Assam, Guwahati-781006</p>	
Controller of Examinations	Ex-officio Member
Librarian	Ex-officio Member
Registrar	Ex-officio Secretary

**The Finance Committee**  
**(01-04-2017 to 31-03-2018)**

<b>Vice Chancellor</b>	Chairman
<b>Pro Vice-Chancellor</b>	Member
<b>Joint Secretary and Financial Advisor, MHRD</b> or his/her nominee from Finance Bureau of MHRD Not below the rank of Deputy Secretary	Member
<b>Joint Secretary (CU&amp;L) of MHRD</b> or his/her nominee not below the rank of Joint Secretary to the Govt. of India	Member
<b>Joint Secretary (CU), UGC</b> or any other Joint Secretary level officer nominated by the Chairman, UGC	Member
<b>Mrs. Rupshikha Saikia Borah</b> Director (Finance) Oil India Limited Noida, Uttar Pradesh	Member (till 24.11.2017)
<b>Mr. S Vasum, IAAS</b> Director (Finance) NEEPCO Ltd., Shillong-793003	Member (w.e.f. 31.01.2018)
<b>Sri D K Barthakur</b> Vice President, SITA, Assam Assam Secretariat, Dispur, Guwahati, Assam	Member
<b>Prof S S Sarkar</b> Dean, School of Management Sciences Tezpur University	Member (till 12.06.2017)
<b>Prof. Charu Lata Mahanta</b> Dean, School of Engineering	Member (w.e.f. 13.06.2017)
<b>Finance Officer</b>	Ex officio Secretary

**The Building Committee**  
(01.04.2017 to 31.03.2018)

<b>Vice Chancellor</b>	Ex officio Chairman
<b>Pro Vice Chancellor</b>	Member
<b>Prof. Chandana Goswami</b> Dean, School of Management Sciences	Member
A representative of the User Department	Member (case-to-case basis)
<b>Prof. D K Bhattacharyya</b> Dean, Academic Affairs	Member
<b>Prof. M Bhuyan</b> Department of Electronics and Communication Engineering	Member
<b>Finance Officer</b> Tezpur University	Ex officio Member
<b>Head, Department of Civil Engineering</b> Tezpur University	Ex officio Member
<b>Chief Engineer, PWD (Bld), Assam</b> or his/her nominee who is not below the rank of Supdt. Engineer	Ex officio Member
<b>Sri B K Das</b> Secretary (Retd), PWD (Blds & NHW) Assam	Member
<b>Superintendent Engineer (Electric)</b> PWD (Elect), Guwahati Electric Division Guwahati, Assam	Ex officio Member
<b>Superintendent Engineer (PHE)</b> Tezpur Circle, Assam	Ex officio Member
<b>Executive Engineer</b> Tezpur University	Ex officio Member
<b>Smti Parmita Kakati</b> Head, Dept. of Architecture PCPS Girls Polytechnic College Guwahati, Assam	Member
<b>Mr. D Saikia</b> Sr. Architect, PWD, Assam	Member
<b>Assistant Horticulturist</b> Tezpur University	Ex officio Member
<b>Registrar</b> Tezpur University	Ex officio Member 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**

**Teaching Learning Centre**

**Community College**

# **School of Engineering**

**Department of Civil Engineering**

**Department of Computer Science and Engineering**

**Department of Electrical Engineering**

**Department of Electronics and Communication Engineering**

**Department of Energy**

**Department of Food Engineering and Technology**

**Department of Mechanical Engineering**

# SCHOOL OF ENGINEERING

The School of Engineering (SoE) of Tezpur University was established in the year 2006 with the introduction of BTech programmes in three disciplines. The seven constituents Departments (Departments of Civil Engineering, Computer Science and Engineering, Electronics and Communication Engineering, Electrical Engineering, Energy, Food Engineering and Technology, and Mechanical Engineering) of the School are now offering BTech programmes in six disciplines, viz., Computer Science and Engineering, Electronics and Communication Engineering, Mechanical Engineering, Food Engineering and Technology, Civil Engineering, and Electrical Engineering. Six Master of Technology programmes and a MCA programme are also being offered by the Departments under the School. Except the Department of Electrical Engineering, all other departments also offer PhD programmes. This school strives to produce skilled professionals at UG, PG as well as Doctoral levels. The Departments are actively pursuing externally funded research projects and both faculty and students are engaged in developing innovative technologies.

The School has been proactive in strengthening the teaching learning experience of the students in order to enhance the knowledge and employability of its graduates. The School has judiciously used the fund received from AICTE-NEQIP grant in developing and augmenting class room and laboratory facilities and enhancing faculty quality so that the overall learning process is able to keep pace with the changing global scenario of technical education.

During the period, several significant works were performed and important events were organized in the School as mentioned below in brief:

- Submission of application to AICTE for extension of approval of existing courses and approval of new courses of Engineering, MBA and MCA.  
**The AICTE approved existing courses are:**  
MTech in Bioelectronics, Electronics Design and Technology, Energy Technology, Food Engineering and Technology, Information Technology, and Mechanical Engineering,  
BTech in Civil Engineering, Computer Science and Engineering, Electrical Engineering, Electronics and Communication Engineering, Food Engineering and Technology, Mechanical Engineering, and MCA.  
**New course approved by AICTE:** MTech in Civil Engineering (to be implemented from 2018-19).
- Implementation of Institutional Development activities against the Third Instalment of AICTE-NEQIP grant for the School of Engineering (2014-2017) amounting to Rs. 189.22 Lakh.
- Creation of common facilities and Smart class room with a sitting capacity of 180 students in Lecture Hall 1 & 2, Dean's building.
- Creation of infrastructure for independent Language Lab, creation of labs for non engineering first year labs, enhancement of Books in Central Library of common requirements of first year students.
- Provisional 02 year NBA Accreditation for BTech programmes is extended up to 03 years. Preparation for permanent accreditation of MTech and BTech programmes by NBA is underway.
- AICTE GATE link Scholarship  
114 MTech (I and II year) students received AICTE GATE linked Scholarship.
- Organization of Faculty Development programme, Seminar and workshops by all the departments with support from AICTE NEQIP grant.
- As part of Faculty and Staff Development Scheme of AICTE-NEQIP, 22 faculty members availed the facility to attend conferences and workshop within India with travel, accommodation and registration support.

- 03 QIP scholars completed pre registration visit for the academic year 2017-18 for formal joining in the academic year 2018-19. Further,03 QIP scholars are selected for carrying out pre registration visit in the academic year 2018-19.
- Admission under Defence Quota  
06 students admitted under Defence Quota in the academic year 2017-18.
- Admission under PMSSS J&K  
04 students admitted under PMSSS J&K in the academic year 2017-18.

#### **THE PERSONNEL OF THE OFFICE OF THE DEAN**

##### **Dean, School of Engineering**

Charu Lata Mahanta, PhD (CFTRI, Mysuru)  
Professor, Dept. of Food Engineering and Technology  
E-mail: charu@tezu.ernet.in

##### **Office Staff**

JC Das, Diploma (SCTE, Assam)  
Sr Technical Assistant  
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UDC  
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D Mahanta  
MTS



## School of Engineering

# DEPARTMENT OF CIVIL ENGINEERING

### THE DEPARTMENT

The Department of Civil Engineering of Tezpur University was established in the year 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 five batches of graduate Civil Engineers. The department is funded by AICTE-NEQIP with which the department has established well equipped laboratories. The department is planning to start MTech programme from the year 2018. 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
MTech in Civil Engineering	18
PhD	Intake variable 1 in the last academic year

### Major facilities and equipment available

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

### Major research findings/research and development activities

Principal Investigator	Description of the Project
BK Narzary	Performance Evaluation of E-Waste Modified Soil and Bituminous Mixture
KU Ahamad	Development of Eutrophication Model for Rural water Bodies of Assam, India
R Buragohain	Rationalization of Mountainous Catchments using Geophysical Attributes
UK Das	A Study on Application of Bamboo as Reinforcement in Construction of Low Cost Building Wall
	Study on behaviour of Geocell-Sand Mattress under Monolithic and Repeated Vertical Loading
	Slope Stabilization for Landslide Hazard Mitigation in Guwahati City

### Research projects, ongoing and new

Project Title	Funding Agency	Amount (in INR)	Duration	Principal Investigator
Development of Eutrophication Model for Rural water Bodies of Assam, India	DST SERB	24.00 Lakh	2017-20	KU Ahamad
A Study On Application of Bamboo as Reinforcement in Construction of Low Cost Building Wall	AICTE- AQIS-UBA	5.00 Lakh	2015-18	UK Das

### PUBLICATIONS

#### In International and National Journals

Ahamad KU, Singh R, Baruah I, Choudhury H, and Sharma MR. Equilibrium and Kinetics Modeling of Fluoride Adsorption onto Activated Alumina, Alum and Brick Powder. *Groundwater for Sustainable Development*, DOI: <https://doi.org/10.1016/j.gsd.2018.06.005>, 2018.

Bhagowati B and Ahamad KU. A Review on Lake Eutrophication Dynamics and Recent Developments in Lake Modeling. *Ecohydrology & Hydrobiology*, DOI: <https://doi.org/10.1016/j.ecohyd.2018.03.002>, 2018.

Chakraborty A and Goswami D. Slope Stability Prediction using Artificial Neural Network (ANN). *International Journal of Engineering and Computer Science*, 6:6, DOI: 10.18535/ijecs/v6i6.49, 2017.

Chakraborty A and Goswami D. Prediction of Slope Stability using Multiple Linear Regression (MLR) and Artificial Neural Network (ANN). *Arabian Journal of Geosciences*, 10:385, DOI 10.1007/s12517-017-3167-x, 2017.

Chakraborty A and Goswami D. Two Dimensional (2D) Slope-Stability Analysis- A review. *International Journal for Research in Applied Science & Engineering Technology*, 6:11, 2018.

Hussain I, Bora AJ, Sarma D, Ahamad KU and Nath P. Design of a Smartphone Platform Compact Optical System Operational Both in Visible and Near Infrared Spectral Regime. *IEEE Sensors Journal*, 18:12, DOI: 10.1109/JSEN.2018.2832848, 2018.

Narzary BK and Ahamad KU. Estimating Elastic Modulus of California Bearing Ratio Test Sample Using Finite Element Model. *Construction and Building Materials*, 175, DOI: <https://doi.org/10.1016/j.conbuildmat.2018.04.228>, 2018.

Saikia A, Baruah D, Das K, Rabha HJ, Dutta A, and Saharia A. Predicting Compaction Characteristics of Fine-Grained Soils in Terms of Atterberg Limits. *International Journal of Geosynthetics and Ground Engineering*, 3:18, DOI 10.1007/s40891-017-0096-4, 2017.

#### Conference proceedings

Ahamad KU, Removal of Arsenic from Drinking Water Using Low-cost Adsorbent. In proceedings of Two-day National Conference on Advances in Civil & Infrastructure Engineering-2018, Tezpur University, Assam, February 16-17, 2018.

Ahamad KU, Das S, Das A and Pandey S. Evaluation of a Microbial Fuel Cell Under Different Working Conditions. In proceedings of Two-day National Conference on Advances in Civil & Infrastructure Engineering-2018, Tezpur University, Assam, February 16-17, 2018.

Ahamad KU, Bhagowati B and Talukdar B. Recent Advances in Lake Eutrophication Modelling: A Review. In proceedings of Two-day National Conference on Advances in Civil & Infrastructure Engineering-2018, Tezpur University, Assam, February 16-17, 2018.

Ahamad KU, Goswami S, Swargiary M and Das P. Synthesis of an Efficacious Adsorbent and its Assessment in Removal of Iron and Fluoride from Water. In proceedings of Two-day National Conference on Advances in Civil & Infrastructure Engineering-2018, Tezpur University, Assam, February 16-17, 2018.

Bharadwaj K and Hazarika K. Vibration Reduction of Steel 3D Framed Building Considering Soil Flexibility. In proceedings of Two-day National Conference on Advances in Civil & Infrastructure Engineering-2018, Tezpur University, Assam, February 16-17, 2018.

Bharadwaj K and Hazarika K. A study on the Properties of Bituminous Mix Using Various Waste Products as Filler Materials. In proceedings of Two-day National Conference on Advances in Civil & Infrastructure Engineering-2018, Tezpur University, Assam, February 16-17, 2018.

Buragohain R, Baruah KK, Saikia S, Chakravarty P, Gogoi MP, Ray R and Yadav AK. Estimation of Potential Flood Volume in Sub-Catchments of Guwahati Metropolitan City. In proceedings of Two-day National Conference on Advances in Civil & Infrastructure Engineering-2018, Tezpur University, Assam, February 16-17, 2018.

Chakraborty A and Goswami A. Slope Stability Prediction Using Fuzzy Logic. In proceedings of Two-day National Conference on Advances in Civil & Infrastructure Engineering-2018, Tezpur University, Assam, February 16-17, 2018.

Chakraborty A, Bhattacharya A, Sarma AP, Sarmah L, Das AJ and Islam A. Estimation of Shear Parameters of Soil from Compaction Parameters using Artificial Neural Network. In proceedings of Two-day National Conference on Advances in Civil & Infrastructure Engineering-2018, Tezpur University, Assam, February 16-17, 2018.

Chakraborty A, Kumar S, Borgohain C, Roy AK and Kaman S. Effect of fine content on Engineering Properties of Soil. In proceedings of Two-day National Conference on Advances in Civil & Infrastructure Engineering-2018, Tezpur University, Assam, February 16-17, 2018.

Das UK and Talukdar B. A Study on the Effects of Grain Size and Moisture Content on Shear Properties of Cohesionless Soil. In proceedings of Two-day National Conference on Advances in Civil & Infrastructure Engineering-2018, Tezpur University, Assam, February 16-17, 2018.

Deka S, Ahmed M, Kumar A, Saikia S and Gogoi N. Use of Paper Mill Waste as Subgrade in Rural Road Construction. In proceedings of Two-day National Conference on Advances in Civil & Infrastructure Engineering-2018, Tezpur University, Assam, February 16-17, 2018.

Deka S, Choudhury SH, Sarma MK and Mandal S. Effects of addition of some admixtures on Engineering Properties of Brahmaputra River Sediment. In proceedings of Two-day National Conference on Advances in Civil & Infrastructure Engineering-2018, Tezpur University, Assam, February 16-17, 2018.

Doley C and Das UK. Effect of Geocell Geometry on the Performance of Model Square Footing Resting on Reinforced Sand Bed Under Static Loading. In proceedings of Two-day National Conference on Advances in Civil & Infrastructure Engineering-2018, Tezpur University, Assam, February 16-17, 2018.

Narzary BK, Lahkar N, Bordoloi A, Hussain SY and Kalita T. Equivalent modulus of Subgrade Reaction for the Design of Runway Rigid Pavement. In proceedings of Two-day National Conference on Advances in Civil & Infrastructure Engineering-2018, Tezpur University, Assam, February 16-17, 2018.

Narzary BK and Ahamad KU. Back-calculation Approach of Determining Elastic Modulus of California Bearing Ratio (CBR) Test Soil Sample. In proceedings of Two-day National Conference on Advances in Civil & Infrastructure Engineering-2018, Tezpur University, Assam, February 16-17, 2018.

Narzary BK, Barbhuiya NH and Phukon S. Incorporation of Tyre Pressure and Contact Radius Factors in Design of Flexible Pavement. In proceedings of Two-day National Conference on Advances in Civil & Infrastructure Engineering-2018, Tezpur University, Assam, February 16-17, 2018.

Saikia A, Sharmah R, Gogoi A, and Das Manoj. Use of Brick Powder as an Admixture in Fine-grained soils. In proceedings of Two-day National Conference on Advances in Civil & Infrastructure Engineering-2018, Tezpur University, Assam, February 16-17, 2018.

Saikia S, Nath K, Kausar H, Singh AP, Baruah D and Das UK. A Study on Feasibility of Bamboo as Reinforcement Material and Waste Material as Coarse Aggregate in Construction of Low Cost Lightweight Concrete Slab. In proceedings of Two-day National Conference on Advances in Civil & Infrastructure Engineering-2018, Tezpur University, Assam, February 16-17, 2018.

Sharma AK and Das UK. Fluctuations in Ground Water Table and Its Effects on the Stability of Slopes of Greater Guwahati Region. In proceedings of Two-day National Conference on Advances in Civil & Infrastructure Engineering-2018, Tezpur University, Assam, February 16-17, 2018.

Sonowal DB, Banerjee S, Sarkar G, Bhushan AC, Tatarwal R and Bharadwaj K. Influence of Chemical Admixtures in the Behaviour of Concrete. In proceedings of Two-day National Conference on Advances in Civil & Infrastructure Engineering-2018, Tezpur University, Assam, February 16-17, 2018.

Sonowal DB, Patel G, Kumari B, Rajpoot D, Ranjeet and Bharadwaj K. Seismic Analysis of G+5 RCC Residential Apartment (A comparative study between the Indian Standard Code Based on Equivalent Static and Dynamic Approach). In proceedings of Two-day National Conference on Advances in Civil & Infrastructure Engineering-2018, Tezpur University, Assam, February 16-17, 2018.

#### **SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**

AJ Saikia attended the AICTE Sponsored Faculty Development Programme on "Machine Intelligence and Internet of Things", Tezpur University, February 19 – 23, 2018.

DB Sonowal attended the AICTE sponsored QIP short term course on "Wind Resistant Design of Structures", IIT Roorkee, July 17 – 21, 2017.

DB Sonowal attended the GIAN Course on "Recent Advances in Structural Dynamics for Protection of Bridges Against Extreme Hazards", IIT BHU, November 1 – 5, 2017.

K Bharadwaj attended MHRD-Sponsored Induction Training of Faculty-I, Tezpur University, November 23 – December 22, 2017.

R Buragohain attended MHRD-Sponsored Induction Training of Faculty-I, Tezpur University, November 23 – December 22, 2017.

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

AICTE-NEQIP Sponsored Two Day National Conference on Advances in Civil and Infrastructure Engineering, February 16–17, 2018.

#### **DISTINGUISHED VISITORS TO THE DEPARTMENT**

Prof A Das, IIT Kanpur  
Prof AK Sharma, IIT Guwahati  
Dr AK Maurya, IIT Guwahati  
Dr D Goswami, Assam Engineering College  
Prof JPathak, Assam Engineering College

#### **NUMBER OF STUDENTS WHO PASSED NET-JRF/GATE**

GATE – 21

#### **NOTABLE PLACEMENT**

Onycon Infrastructure – 05  
Dalmia Cement – 03

#### **THE FACULTY OF THE DEPARTMENT**

##### **Professor**

UK Das, PhD (Gauhati)  
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J Baruah, Diploma  
Technical Assistant  
E-mail: jahnu@tezu.ernet.in

**Office Staff**

PN Chauhan  
LDC

L Bhuyan  
MTS

## *School of Engineering*

# DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### THE DEPARTMENT

The vision of the department is to be a dedicated centre 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:

- Computer and Network Security
- Biomimetic & Cognitive Robotics
- Bioinformatics
- Machine learning and Soft computing
- Big Data Analytics
- Mobile and Wireless Networking
- Image Processing & Pattern Recognition
- Information Retrieval Systems
- Natural Language Processing
- Speech Processing
- Workflow analysis
- Computer Vision
- Algorithms and Optimization Techniques
- Software Defined Networking and Cloud Computing

### Academic programmes and student intake

Programme	Student Intake
B Tech in Computer Science & Engineering	60
MTech in Information Technology	30
Masters of Computer Application (MCA)	45
PhD	08 (2017-2018)

### 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)
- Bench Mark Lan Trainer/I-Security

- Ibm X3550 M3 Server

**Major research findings/research and development activities**

Principal Investigator	Salient Research Findings
SS Satapathy	Web Portal Lunched for R Solanacearum F1C1 genome

**Research projects, ongoing and new**

Project Title	Funding Agency	Amount (in INR )	Duration	Principal Investigator
e-Varaha: Information System for Safe Pork Production in North Eastern India	Media Lab Asia, ITRA, MeitY, Govt of India	26.10 Lakh	2016 - 2018	N Sarma SSaharia
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	DK Bhattacharyya
Center of Excellence on Machine Learning and Big Data Analysis	MHRD	400.00 Lakh	2014 - 2020	DK Bhattacharyya
High Performance Computing Centre( By installing Super Computer "ParamShevak")	DeitY	120.00 Lakh	2015-2020	DK Bhattacharyya
Big Data Analytics- Bioinformatics, Network Security and Robotics	UGC SAP (DRS-II)	77.00 Lakh	2015 - 2020	DK Bhattacharyya
Implementation of Distributed Honeynet System at North East to Collect, Distribute and Analyze live Cyber-attack data	C-DAC Mohali	181.00 Lakh	2015 - 2018	N Sarma
Integrating Genome scale metabolic analysis of model plant pathogen <i>Ralstoniasolanacearum</i> with RNAseq and fluxomics	DBT, Govt. of India	30.78 Lakh	2016 - 2019	SS Satapathy

**PUBLICATIONS**

**In International and National Journals**

Bhardwaj K and Patra S. An Unsupervised Technique for Optimal Feature Selection in Attribute Profiles for Spectral-Spatial Classification of Hyperspectral Images. *ISPRS Journal of Photogrammetry and Remote Sensing*, 138:139-150, 2018.

Borah S and Borah B. Evaluation Metrics used in 3D Mesh Watermarking: A Study. *International Journal of Security and Its Applications*, 11(11):41-52, 2017.

Boro D, Bhattacharyya DK. DyProSD: ADynamic Protocol Specific Defense for High-Rate Ddos Flooding Attacks. *Microsystem Technologies, Springer Berlin Heidelberg*, 23(3): 593-611, 2017.



Chutia D, Bhattacharyya DK, Sarma J, RajuPNL. An Effective Ensemble Classification Framework Using Random Forests and A Correlation Based Feature Selection Technique. *Transactions in GIS*, 21(6):1165-1178, 2017.

Das Dand Bhattacharyya DK. Defeating Cyber Attacks Due to Script Injection. *International Journal of Network Security*, 20(2):225-234, 2018.

Das D, Sharma U and Bhattacharyya DK. Defeating SQLInjection Attack in Authentication Security: An Experimental Study. *International Journal of Information Science(Online)*, pp 1-22. Springer Berlin Heidelberg, DOI: 10.1007/s10207-017-0393-x, 2017.

Deb S, Mahanta P, Bhattacharyya DK and Dutta M. Subspace Module Extraction from MI-Based Co-Expression Network. *International Journal of Bioinformatics Research and Applications*, 14(3):207-234, 2018.

Goswami R, Bhattacharyya DK and Dutta M. Materialized View Selection Using Evolutionary Algorithm for Speeding up Big Data Query Processing. *Journal of Intelligent Information Systems*, 49(3):407-433, 2017.

Haque M, Sarmah R and Bhattacharyya DK. A Common Neighbor Based Technique to Detect Protein Complexes in PPI Networks, *Journal of Genetic Engineering and Biotechnology*, 16(1):227-238, 2018.

Hoque N, Kashyap H and Bhattacharyya DK. Real-Time Ddos Attack Detection Using FPGA. *Computer Communications*, 110:48-58, 2017.

Kalita S, Karmakar A, and Hazarika SM, Efficient Extraction of Spatial Relations for Extended Objects Vis-À-Vis Human Activity Recognition in Video, *Journal of Applied Intelligence*, 48(1):204-219, 2018.

Keretsu S and Sarmah R. Identification of Protein Complexes in Protein-Protein Interaction Networks by Core-Attachment Approach Incorporating Gene Expression Profile. *International Journal of Bioinformatics Research and Applications*, 13(4):313-327, 2017.

Mandal K, Sarmah R and Bhattacharyya DK. Biomarker Identification for Cancer Disease Using Bi-clustering Approach: An Empirical Study. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, DOI: 10.1109/TCBB.2018.2820695, 2018.

Nagi S, Bhattacharyya DK, Kalita JK. Complex Detection From PPI Data Using Ensemble Method. *Network Modeling Analysis in Health Informatics and Bioinformatics*, 6(1):3, 2017.

Nath A and Sarma N. A Distributed Solution for Cooperative Spectrum Sensing Scheduling for Multiband Cognitive Radio Networks, *Journal of Network and Computer Applications*, 94:69-77, 2017.

Nath S and Sharma U. Incorporating Dialectal Features in Synthesized Speech using Voice Conversion Techniques. *International Journal of Computer Applications*, 180(19):0975-8887, 2018.

Patra S, Bhardwaj K and Bruzzone L. A Spectral-Spatial Multicriteria Active Learning Technique for Hyperspectral Image Classification. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 10(12):5213-5227, 2017.

Roy A and Sarma N. Factors affecting MAC Protocol Performance in Underwater Wireless Sensor Networks. *International Journal of Computer Applications*, 169(5):36-41, 2017.

Sharma P, Bhattacharyya DK, Kalita JK. Detecting Protein Complexes Based on a Combination of Topological and Biological Properties in Protein-Protein Interaction Network. *Journal of Genetic Engineering and Biotechnology*, 16(1):217-226, 2018.

Sharma P, Bhattacharyya DK and Kalita JK. Protein Complex Finding and Ranking: An Application to Alzheimer's Disease. *Journal of Biosciences*, 42(3):383-396, 2017.

Sharma P, Bhattacharyya DK, Kalita JK. Disease Biomarker Identification from Gene Network Modules for Metastasized Breast Cancer, *Scientific Reports*, 7(1):1072, 2017.

Yarnagula HK, Deka SK and Sarma N. A Cross-Layer Based Location-Aware Forwarding Using Distributed TDMA MAC for Ad-Hoc Cognitive Radio Networks. *Journal of Wireless Personal Communications* 95(4):4517-4534, 2017.

#### **Conference proceedings**

Borah S and Borah B. Quantization Index Modulation (QIM) Based Watermarking Techniques for 3D Meshes. In proceedings of the Fourth International Conference on Image Information Processing (ICIIP), IEEE, pp. 1-6, December 2017.

Buragohain M and Sarma N, PKHSN: A Pairing Based Key Management Scheme For Heterogeneous Sensor Networks. In proceedings of the 10th International Conference on Communication Systems & Networks (COMSNETS), Bengaluru, India, January 3-7, 2018.

Chauhan P, Sharma M, Deka SK and Sarma N. Utility Aware Cooperative Spectrum Sensing Using Coalitional Game Theory. In proceedings of the International Conference on Computing and Communication Systems, Lecture Notes in Networks and Systems, vol 24, pp. 167-175, Springer, Singapore, March 2018.

Chowdhury HA, Bhattacharyya DK. mRMR+: An Effective Feature Selection Algorithm for Classification. In proceedings of the 7<sup>th</sup> International Conference on Pattern Recognition and Machine Intelligence, PReMI'2017, ISI Kolkata, INDIA, December 5-8, 2017.

Das A, and Bhardwaj K, and Patra S. A Spectral-Spatial Multi-Criteria Active Learning Technique for Hyperspectral Image Classification. In proceedings of the 4<sup>th</sup> International Conference on Recent Advances in Information Technology (RAIT 2018), IEEE, March 15, 2018.

Deka SK, Chauhan P and Sarma N. Dynamic Threshold based Cooperative Spectrum Sensing using Coalitional Game for CRNs. In proceedings of the 5th International Conference on Signal Processing and Integrated Networks (SPIN 2018), Noida, India, February 22-23, 2018.

Devi M, Sarma N and Deka SK, A General Framework for Spectrum Assignment in Cognitive Radio Networks. In proceedings of the 11<sup>th</sup> International Conference on Advanced computing & Communication Technology (ICACCT 2018), Panipat, India, February 17-18, 2018.

Devi M, Sarma N, Deka SK and Chauhan P, Sequential Bidding Auction Mechanism for Spectrum Sharing in Cognitive Radio Networks. In proceedings of the 11th IEEE International Conference on Advanced Networks and Telecommunications Systems (ANTS 2017), Bhubaneswar, India, December 17-21, 2017.

Devi M, Sarma N and Deka SK, Spectrum Allocation in Cognitive Radio Network- A Centralized Approach. In proceedings of the First International Conference on Advanced Computational and Communication Paradigms (ICACCP 2017), Sikkim, India, September 8-10, 2017.

Hoque N and Bhattacharyya DK. HLR\_DDoS: A Low-Rate and High-Rate DDoS Attack Detection Method Using alpha-Divergence. In proceedings of the International Conference on Computing and Communication Systems, Springer, Singapore, 2018.

Medhi N, Saikia DK and Barman KD. ProTE: An Open Flow Based Traffic Engineering Mechanism for Data Center Networks. In proceedings of the International Conference on Advances in Computing, Communications and Informatics (ICACCI), Udipi, pp. 149-154, doi: 10.1109/ICACCI.2017.8125832, 2017.

Rahman N and Borah B. A Spell Correction Method for Query-Based Text Summarization. In proceedings of the International Conference on Computing and Communication Systems, Springer, Singapore, pp. 337-345, 2018.

Sharma M, Chauhan P and Sarma N. Probability of Detection Analysis in Fading and Nonfading Scenario Using Cooperative Sensing Technique. In proceedings of the Int'l Conference on Computing and Communication Systems, Lecture Notes in Networks and Systems, vol 24, pp. 197-205, Springer, Singapore, March 2018.

Sharma P and Bhattacharyya DK. DCRS: A Multi-Objective Protein Complex Finding Method. In proceedings of the International Conference on Computing and Communication Systems. Springer, Singapore, 2018.

Shil S, Chauhan P, Deka SK and Sarma N, Efficient Proactive Channel Switching in Cognitive Radio Networks. In proceedings of the First Conference on Information and Communication Technology (CICT-2017). Gwalior, India, Nov 3-5, 2017.

Sultan NH, Barbhuiya FA and Sarma N, SCAuth: Selective User Authorization for a Cloud Environment. In proceedings of the Sixth IEEE International Conference on Cloud Computing in Emerging Markets (CCEM), Bangalore, India, November 1-3, 2017.

Sultan NH, Barbhuiya FA and Sarma N, A Universal User Revocation Scheme with Key-Escrow Resistance for Ciphertext-Policy Attribute-Based Access Control Systems. In proceedings of the 10th International Conference on Security of Information And Networks (SIN 2017), Jaipur, India, October 13-15, 2017.

## **Books**

Bhuyan MH, Bhattacharyya DK and Kalita JK. Network Traffic Anomaly Detection and Prevention: Concepts, Techniques, and Tools, Springer, 2017.

#### **Book chapters**

Devi M and Saharia S. An Empirical Analysis of Three Moments on Sattriya Dance Single-Hand Gestures Dataset. In: Advances in Electronics, Communication and Computing. Lecture Notes in Electrical Engineering (Eds Kalam A, Das S, Sharma K), vol 443, pp293-310, Springer, Singapore, 2018.

Rahman N and Borah B. A Method for Semantic Relatedness Based Query Focused Text Summarization, In: Pattern Recognition and Machine Intelligence, PReMI 2017. Lecture Notes in Computer Science (Eds Shankar B, Ghosh K, Mandal D, Ray S, Zhang D and Pal S), vol 10597, pp 387-393, Springer, Cham 2017.

Tariang E and Medhi N. Data Center Traffic Engineering: Multipath Routing with QoS Guarantee. In: Advances in Communication, Devices and Networking. Lecture Notes in Electrical Engineering (Eds Bera R, Sarkar S, Chakraborty S), vol 462, Springer, Singapore, Print ISBN 978-981-10-7900-9, 2018.

#### **SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**

A Karmakar attended Faculty Development Programme on Algorithms and Applications, Tezpur University, 26-30 December, 2017.

A Karmakar attended Faculty Development Programme on Machine Intelligence and Internet of Things (IoT), Tezpur University, 19-23 February, 2018.

A Karmakar attended Workshop on Knowing Cyber Attack - Adopting Honey net sponsored by Deity, Govt. of India, Tezpur University, March 6 - 7, 2018.

D Boro attended Workshop on Knowing Cyber Attack - Adopting Honey net sponsored by Deity, Govt. of India, Tezpur University, March 6 - 7, 2018.

M Devi attended Workshop on Knowing Cyber Attack - Adopting Honey net sponsored by Deity, Govt. of India, Tezpur University, March 6 - 7, 2018.

N Medhi attended Workshop on Knowing Cyber Attack - Adopting Honey net sponsored by Deity, Govt. of India, Tezpur University, March 6 - 7, 2018.

R Sarmah attended Workshop on Knowing Cyber Attack - Adopting Honey net sponsored by Deity, Govt. of India, Tezpur University, March 6 - 7, 2018

S Nath attended Workshop on Knowing Cyber Attack - Adopting Honey net sponsored by Deity, Govt. of India, Tezpur University, March 6 - 7, 2018.

S Deka attended Workshop on Knowing Cyber Attack - Adopting Honey net sponsored by Deity, Govt. of India, Tezpur University, March 6 - 7, 2018.

S Kalita attended Workshop on Knowing Cyber Attack - Adopting Honey net sponsored by Deity, Govt. of India, Tezpur University, March 6 - 7, 2018.

SS Satapathy attended International Seminar cum Workshop on Computer Aided Drug Design for Human Pathogens, Tezpur University, India, February 12-17, 2018.

SS Satapathy attended SMBE satellite meeting on Evolution of microbes in natural and experimental populations- synthesis and synergies, Borgos resort, Kaziranga National Park, Assam, India, December 14-16, 2017.

#### **TALKS BY THE FACULTY ABROAD AND IN INDIA**

A Karmakar delivered an invited talk on Algorithms and Applications in the Faculty Development Programme on Algorithms and Applications, Tezpur University, 26-30 December, 2017.

B Borah delivered an invited talk on Introduction to Neural Networks and Deep Learning in Faculty Development Programme on Machine Intelligence and Internet of Things (IoT), Tezpur University, February 19 - 23, 2018.

DK Bhattacharyya delivered an Invited Talk on Big Bioinformatics Data Analytics in Faculty Development Programme organized by Department of CSE on 19th February, 2018.

DK Bhattacharyya delivered an Invited Talk on Innovations in Technical Institutions in a National Workshop organized by GIMT, Guwahati, January 2018.

DK Bhattacharyya delivered Inaugural speech on Technology-led Innovation in a Faculty Development Programme organized by Department of CSE, Tezpur University on 26th December, 2017.

DK Bhattacharyya delivered Inaugural speech on Innovation to Meet India's Challenges in a Faculty Development Programme organized by Department of FET, TU on 20th November, 2017.

DK Bhattacharyya delivered an Inaugural speech talk on Ethical Research in a National Conference titled ASET'17 organized by GIMT, Tezpur, Assam, India on November 10, 2017.

DK Bhattacharyya delivered a talk on Big Data Analytics in Bioinformatics at ISI, NE Centre, India on October 9, 2017

DK Bhattacharyya delivered Keynote Speech in the Inaugural Session of State-level FDP organized on Application of ICT in Teaching at Golaghat, India on June 6, 2017.

DK Bhattacharyya delivered Inaugural Speech on IoT in Urban Development in ISSUE 2017, an Int'l Conference held at TU during June 23-24, 2017.

N Sarma delivered an invited lecture, Internet for Education in a State-level Faculty Development Programme on Application of Information & Communication Technology (ICT) in teaching, organized by Golaghat Commerce College, Golaghat, Assam, June 10, 2017.

N Sarma delivered an invited talk, on E-resources and use of ICT for Teaching Learning in A Faculty Induction Programme by organized by IQAC, Tezpur University, September 22, 2017.

N Sarma delivered an invited talk, on Using Digital Tools in Teaching in Induction Training of Faculty, organized by Teaching Learning Centre, Tezpur University, December 1, 2017.

N Sarma delivered an invited talk, on Developing and Using Digital Tools in Teaching in Short Term Programme on Developing Teaching Competencies of Teachers in Higher Education, organized by L.T.K. College, Azad, Lakhimpur, December 3, 2017.

N Sarma delivered an invited talk, on Distributed Algorithms in AICTE Sponsored Faculty Development Programme on Algorithms in Applications, organized by Tezpur University, December 26, 2017.

N Sarma delivered an invited talk, on Open Online Resources for Higher Education in Short Term Programme on Innovative Practices in Teaching Learning Process, organized by BH College, Howly, February 28, 2018.

U Sharma delivered an invited talk on fundamentals of computers and programming in the State Level Faculty Development Programme on Application of Information and Communication Technology (ICT) in Teaching, at Golaghat Commerce College, 10 June, 2017.

U Sharma delivered an invited talk on National Academic Governance: UGC, NAAC and NIRF in the Induction Programme for Faculties of Universities / Colleges / Institutes, organised by the Teaching Learning Centre, Tezpur University, 30 November, 2017.

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

Two-Day Workshop on "Knowing Cyber Attack - Adopting Honey net" sponsored by Deity, Govt. of India, March 6 - 7, 2018.

Faculty Development Programme on "Machine Intelligence and Internet of Things (IoT)", sponsored by AICTE NEQIP, February 19 - 23, 2018.

Faculty Development Programme On "Algorithms in Applications", sponsored by AICTE NEQIP, December 26 - 30, 2017.

5 days course on "When Good Algorithms Yield Bad Software", sponsored by GIAN, MHRD Govt. of India, November 20 - 24, 2017.

Internet of Things (IoT) Five Days Advanced Training Program, jointly organized by Dept. of CSE, TU and C-DAC Pune June 12-16, 2017.

#### **DISTINGUISHED VISITORS TO THE DEPARTMENT**

Prof D Medhi, University of Missouri, Kansas City

Prof ELLeiss, University of Houston, USA

Dr MHejmadi, Department of Biology & Biochemistry, University of Bath, UK

DrS Paul, Research Associate, University of Luxembourg

Mr A Agarwal, GE Health Care

MrDRChowdhury, KOViD Labs.  
Mr P Das, GE Health Care  
MsRasikaSaikia, Manager, Learning &Development, Google  
Mr SSikdar, IBM Technologies  
Mr T Das, Manager, Learning & Development, Google

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

Department of Computer Science and Engineering is selected for setting up MHRD's Center of Excellence based on Machine Learning and Big Data Analysis, for the period 2014-2020.

Department of Computer Science and Engineering is selected for UGC SAP DRS-II in the area of Big Data Analytics- Bioinformatics, Network Security and Robotics for the period 2015-2020.

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

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 have High Performance Computing Center (Super Computer "ParamShevak") to carry out collaborative research.

**NUMBER OF STUDENTS WHO PASSED NET-JRF/GATE**

GATE-21  
NET-02

**NOTABLE PLACEMENT**

Amazon India  
Intel Technology India Pvt Ltd  
Wipro Technologies  
Tech Mahindra  
Zaloni Technologies

**THE FACULTY OF THE DEPARTMENT**

**Professors**

DK Saikia, PhD (IIT Kharagpur)

**Pro Vice-Chancellor**

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## ***School of Engineering***

# **DEPARTMENT OF ELECTRICAL ENGINEERING**

### **THE DEPARTMENT**

The Electrical Engineering department started in 2014 under the School of Engineering with the BTech program. The prime motive of the department is to impart quality education, training and research at the undergraduate level in forefront areas of Electrical Engineering and its allied technologies with an aim of producing engineers with sound basic and applied knowledge in electrical engineering. The key areas of faculty expertise of the department include Electrical Energy, Power System Engineering, Electrical Machines, Control and Instrumentation. The faculties of the department also have a special interest in areas like Power Electronics, Nonlinear Analysis-Theory, Methods & Applications, Fractional Order Chaotic Systems, Converter and Inverter Topologies, Sensor Technologies, Renewable Energy Management, Bio-electronics and Neuro Engineering.

### **Academic programmes Student intake**

<b>Programme</b>	<b>Student Intake</b>
BTech in Electrical Engineering	30

### **Major facilities and equipment available**

The Department has a Power System Laboratory and Electrical Machines Laboratory (sponsored under AICTE NEQIP). Complete experimental setup for studying of Control of Electrical Machines is available where; experiments on speed control of DC machine, Transformer tests, and synchronous machine tests can be performed.

### **PUBLICATIONS**

#### **In International and National Journals**

Borah M, Roy P and Roy BK. Enhanced Performance in Trajectory Tracking of a Ball and Plate System using Fractional Order Controller. *IETE Journal of Research*, 64(1), 2018.

Borah M and Roy BK. An enhanced multi-wing fractional-order chaotic system with coexisting attractors and switching hybrid synchronisation with its nonautonomous counterpart, *Chaos, Solitons and Fractals*, 102,2017.

Borah M and Roy BK. Dynamics of the Fractional-order Chaotic PMSG, its Stabilisation using Predictive Control and Circuit Validation, *IET Electric Power Applications*, 11(5), 2017.

Siddiqui A, Mahboob MR and Islam T. A Passive Wireless Tag with Digital Readout Unit for Wide Range Humidity Measurement. *IEEE Transaction on Instrumentation and Measurement*, 66 (5), 2017.

#### **SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**

BJ Saharia attended a national Conference on Non-Conventional Energy: Harvesting Technology and Its Challenges, November 10-11, 2017, Assam Engineering College, Jalukbari, Assam.

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

Faculty Development Program, Recent Advancements in Electrical Engineering, January 29– February 2, 2018.

#### **DISTINGUISHED VISITORS TO THE DEPARTMENT**

Mr BC Borah, Asst. General Manager, SLDC, AEGCL, Kahilipara.

Prof Chitralkha Mahanta, IIT Guwahati

Prof MK Bhuyan, IIT Guwahati

Dr Shabari Nath, IIT Guwahati

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

BJ Saharia awarded the best paper award for the paper titled "Control and Energy Management of a Hybrid PV-Microhyrdo Power generation system – A conceptual framework", in the National Conference on Non-Conventional Energy: Harvesting Technology and Its Challenges (NCEHTC-2017) during November 17-18 2017 at Assam Engineering College.

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

Field trip has been carried out to Power Grids  $\pm$  800kV HVDC Project, Niz Baghmari, Biswanath Chariali on March 10, 2018.

**NUMBER OF STUDENTS WHO PASSED NET-JRF/GATE:** GATE: 05

#### **NOTABLE PLACEMENT**

Total 04 Placements out of which 02 students got placed in Power Grid Corporation of India.

#### **THE FACULTY OF THE DEPARTMENT**

##### **Professors**

J C Dutta, PhD (Jadavpur)

##### **Head of the Department**

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##### **Assistant Professors**

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*Specialization/Areas of Interest:* Sensors and Sensing Technology; Electronics Instrumentation; Wireless Sensor

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*Specialization/Areas of Interest:* Multilevel Inverters, Vehicle-to-Grid Interconnection,

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BJ Saharia, MTech (NIT Agartala)

*Specialization/Areas of Interest:* Power Electronic converters for Renewable Energy Applications, Hybrid PV-Wind Energy System Modeling and Optimization

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## **DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**

### **THE DEPARTMENT**

Established in 1997, the Department of Electronics and Communication Engineering is one of the oldest departments in the University. Starting with an MTech programme in Electronics Design and Technology, the department has subsequently introduced another M. Tech. programme in Bioelectronics under the Teaching and Research in Interdisciplinary and Emerging Areas scheme of the University Grants Commission. The department expanded its academic activities to undergraduate programmes, first with a BTech programme in Electronics and Communication Engineering in 2006 followed by another BTech programme in Electrical Engineering in 2014 (which, since September 2016, is being offered under the newly formed department of Electrical Engineering). In addition, the department offers PhD programme in different areas including Signal & Image Processing, Bioelectronics, Biosensors, Microwave Engineering, Communication Engineering and Microelectronics. At present, the department has a student strength of about 400.

### **Academic programmes and Student intake**

<b>Programme</b>	<b>Student Intake</b>
MTech in Electronics Design and Technology	28
MTech in Bioelectronics	15
BTech in Electronics and Communication Engineering	60
PhD	Intake variable 02 in the last Academic year

### **Major facilities and equipment available**

Microfabrication Facility  
National MEMS Design Center

### **MAJOR RESEARCH FINDINGS**

<b>Principal Investigator</b>	<b>Salient research findings</b>
P PSahu	Design and development of sensor for Meat/ Fish quality monitoring
P PSahu	Design and development of compact Quantum entanglement device
P PSahu & S Maity	Si-ZnO photo detector with growth of densely packed and aligned hexagonal nano-rods
S Maity	Circularly polarized microstrip patch antenna at ISM band with miniature structure using fractal geometry for biomedical application

### Research projects, ongoing and new

Project Title	Funding Agency	Amount (in INR)	Duration	Principal Investigator
Visvesvaraya Young Faculty Research Grant	Visvesvaraya Ph.D. Scheme, MeitY-Gol	25.00 Lakh	2018 - 23	B Deka
Development of Parallel Processing Embedded Hardware for Super-resolution of Diffusion weighted and Spectroscopic Magnetic Resonance Images	AICTE (RPS)	16.47 Lakh	2017- 20	B Deka
Development of a Real-time Image Super-resolution System using Parallel Processing Hardware for Remote Sensing Applications	ISRO (RESPOND)	25.79Lakh	2017-20	B Deka
Si/ZnO/ZnMgO/PEDOT: PSS/P3HT:PC61 BM hybrid bulk heterojunction (BHJ) architecture based organic solar cell: efficiency enhancement approach through the optical structure modification	DST-SERB	19.00 Lakh	2017-20	S Maity

### PUBLICATIONS

#### In International and National Journals

Datta S, and Deka B. Magnetic Resonance Image Reconstruction using Fast Interpolated Compressed Sensing. *Journal of Optics*, 47(2), 2017.

Deka B, Datta S, and Handique S. Wavelet Tree Support Detection for Compressed Sensing MRI Reconstruction. *IEEE Signal Processing Letters*, 25(5), 2018.

Gogoi N, and Sahu PP. All-optical tunable power splitter based on a surface plasmonic two-mode interference waveguide. *Applied Optics*, 57 (10), 2018.

Kakoty P, Bhuyan M, and Das K. Effect of Annealing and Operating Substrate Temperature on Methanol Gas Sensing Properties of SnO<sub>2</sub> Thin Films. *Sensors & Transducers*, 211(4), 2017.

Maity S, Barman KR, and Bhattacharjee S. Silicon based technology: Circularly polarized microstrip patch antenna at ISM band with miniature structure using fractal geometry for biomedical application. *Microwave and Optical Technology Letters*, 60(1), 2017.

Maity S, Muchahary D, and Sahu P. Enhancing responsivity and detectivity of Si-ZnO photo detector with growth of densely packed and aligned hexagonal nano-rods. *IEEE Transactions on Nanotechnology*, 16(5), 2017.

Maity S, Kartik V, Sahu PP, Swain PK, Bhunia CT, and Debnath S. Unavoidable front contact model of Si solar cell through general and effective medium approximation approach. *Sadhana*, 48, 2017.

Maity S, Karyik V, Sahu PP, Sawin PK, Bhunia CT, and Debnath S. Unavoidable front contact model of Si solar cell through a generalized effective medium approximation approach. *Sādhanā*, 43 (3), 31, 2018.

Maity S, Muchahary D, and Sahu PP. Enhancing Responsivity and Detectivity of Si-ZnO Photodetector With Growth of Densely Packed and Aligned Hexagonal Nanorods. *IEEE Transactions on Nanotechnology*, 16 (6), pp 939-945, 2017.

Muchahary D, and Maity S. High-Efficiency thin film ZnMgO/ZnO solar cell simulation approach: temperature dependency, BSF and efficient small signal analysis. *Superlattices and Microstructures*, DOI: 10.1016/j.spmi.2017.05.012, 2017.

Muchahary D, Maity S, and Bhunia CT. Back Surface Field (BSF) approach: Surface and interface defect states optimization of high efficient Si-ZnO based heterojunction solar cell. *Journal of Renewable and Sustainable Energy*, 9, 2017.

Sarkar A, Maity S, and Joseph AM. Methane-Sensing Performance Enhancement in Graphene Oxide/Mg:ZnO Heterostructure Devices. *IEEE Journal of Electronics Material*, 46(10), 2017.

Sarkar A, Maity S, Bhunia CT and Sahu PP. Responsivity optimization of methane gas sensor through the modification of hexagonal nanorod and reduction of defect states. *Superlattices and Microstructures*, 102, pp 459-469, 2017.

Singh K, Malakar R, Narzary R, Kakoty P, and Mondal B. Hydrogen Sensing Properties of Pure and Composites of ZnO and SnO<sub>2</sub> Particles: Understanding Sensing Mechanism. *Sensor Letters*, 15(9), 2017.

#### **Book Chapters**

Datta S and Deka B. Multi-channel, Multi-slice, and Multi-contrast Compressed Sensing MRI Using Weighted Forest Sparsity and Joint TV Regularization Priors. In: *Soft Computing for Problem Solving (SoCProS 2017)*, *Advances in Intelligent Systems and Computing* (Eds Bansal JC, Das KN, Nagar A, Deep K and Ojha AK), pp 1-12, Springer, 2018.

Deka, B and Datta S. Weighted Wavelet Tree Sparsity Regularization for Compressed Sensing Magnetic Resonance Image Reconstruction. In: *Advances in Electronics, Communication and Computing, Lecture Notes in Electrical Engineering* (Eds Kalam A, Das S and Sharma K), pp 449-457, Springer, 2017.

Kalita M and Deka B. Random-valued Impulse Denoising using a Fast L1-Minimization based Image inpainting Technique. In: *Advances in Electronics, Communication and Computing, Lecture Notes in Electrical Engineering* (Eds Kalam A, Das S and Sharma K), pp 633-642, Springer, 2017.

Maity S. Use of Nanostructured Materials in soft tissue Engineering, In: *Nanobiomaterials: Nanostructured materials for biomedical applications* (Ed Narayan R), Woodhead Publishing, Elsevier, 2017.

Mullah HU and Deka B. A Fast Satellite Image Super-Resolution Technique Using Multicore Processing. In: *Hybrid Intelligent Systems (HIS 2017)*, *Advances in Intelligent Systems and Computing* (Eds Abraham A, Muhuri P, Muda A and Gandhi N), pp 51-60, Springer, 2018.

Sahu PP. High K Material processing in CMOS VLSI technology. In: *High K dielectric materials for advanced MOSFET* (Eds Maity N, Maity R and Baishya S), Apple Academy Press (USA and Canada) and CRC Press (in press).

#### **SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**

##### **International and National**

B Deka attended the 17<sup>th</sup> International Conference on Hybrid Intelligent Systems (HIS) 2017, South Asian University, December 13-16, 2017.

B Deka attended the 7<sup>th</sup> International Conference Soft Computing for Problem Solving (SocProS) 2017, Indian Institute of Technology Bhubaneswar, December 23-24, 2017.

#### **NUMBER OF STUDENTS WHO PASSED NET-JRF/GATE**

GATE: 02

#### **NOTABLE PLACEMENT**

Cummins India- 01

ICICI Bank- 01

Qua Qua- 01

Wipro Technologies- 01

Patanjali Ayurved Limited- 01

Regalix India Pvt Ltd- 03

#### **THE FACULTY OF THE DEPARTMENT**

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## DEPARTMENT OF ENERGY

### THE DEPARTMENT

The Department of Energy disseminates knowledge of technologies relevant to the energy sector. It is expected that this sector will witness continuous growth in the coming years, requiring both manpower and innovation. The department was established in 1996 and currently offers Vocational, Masters as well as Research program in multiple important areas of energy viz; solar energy, wind energy, hydro energy, energy conservation and management, biomass and combustion, energy and climate. Technological knowledge and development in these areas can benefit both the urban and rural households of India. Special emphasis is laid upon choosing research areas in renewable energy, which have good potential for the North East region of India. It is expected that the students from the Department of Energy become future leaders and innovators in the field of renewable energy.

### Academic programmes and student intake

Programme	Student Intake
MTech in Energy Technology	28
PhD	Intake variable 10 in the Academic year 2017-2018
BVoc in Renewable Energy Management	18

### Major facilities and equipment available

- 1 kW Solar Photo Voltaic Plant
- Solar Thermal Training System
- Laboratory Heat Exchanger for parallel and counter flow
- Duel fuel engine test rig
- Biodiesel production unit
- Cloud and Pour Point Apparatus suitable for biodiesel samples
- Biomass Gasifier (Model CTC-150, 5kW)
- PEM Fuel Cell Kit
- Spin coating unit
- NI Virtual Bench
- Solar PV Grid Tied Training System
- Smoke Point Apparatus
- Vertical tubular furnace
- Semi-Automatic Flash & Fire Point Apparatus
- Micro Hydro Power Generating Equipment
- Computerized Diesel Engine Test Rig
- Petrol Engine Test Rig

- Exhaust Gas Analyzer
- Automatic Bomb Calorimeter
- Oxidation Stability Apparatus
- Licensed Software Facility (MATLAB, PV Syst, ANSYS, Design Expert)

**Major research findings/research and development activities**

Principal Investigator	Salient Research Findings
B K Kakati	<p><b>Biomass derived graphene cathode catalyst for Polymer Electrolyte Fuel Cells.</b></p> <p>One pot synthesis of nitrogen and sulphur co-doped biomass derived graphene based cathode catalyst for polymer electrolyte fuel cells.</p> <p><b>Oxygen reduction reaction catalyst for potential application in polymer electrolyte fuel cells</b></p> <ul style="list-style-type: none"> <li>• Synthesis of novel dual doped 'biomass derived graphene' based oxygen reduction catalyst</li> <li>• Potential application in polymer electrolyte fuel cells.</li> </ul>
D C Baruah	<p><b>Instrumented solar hot air generator (ISHAG) for optimum thermal load in tea processing</b></p> <p>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> <p><b>Rural hybrid Energy Enterprise Systems</b></p> <ul style="list-style-type: none"> <li>• Assessment and mapping of energy resource availability in selected rural sectors.</li> <li>• Analysis of existing energy consumption pattern and future projected energy demand.</li> <li>• Characterization of potential energy resources and their assessment in anaerobic digestion and gasification feedstock.</li> </ul> <p><b>Development of a fuel efficient all-purpose biomass stove</b></p> <ul style="list-style-type: none"> <li>• Performance and development of an improved cookstove.</li> <li>• Performance testing with different biomass feedstock.</li> </ul>
D Deka	<ul style="list-style-type: none"> <li>• Biodiesel production from locally available oil seeds.</li> <li>• Development of heterogeneous renewable catalysts for biodiesel production and valorization of wastes.</li> <li>• Microemulsion based hybrid Biofuel using locally available vegetable oil.</li> <li>• Catalytic Transformation of microalgae into fuel and chemicals.</li> </ul>
N Sarmah	<p><b>Development and validation of a spectral dependence optical thermal electrical model to evaluate the performance of high concentrating photovoltaic module</b></p> <ul style="list-style-type: none"> <li>• Evaluating the performance of refractive type HCPV module</li> </ul>

	<p>using MATLAB.</p> <ul style="list-style-type: none"> <li>• Comparison of the developed model with the previously reported models of HCPV system.</li> <li>• Experimental validation of the developed model.</li> </ul>
P K Choudhury	<p><b>Development of a test set-up for solar thermal collector as working fluid and design a microcontroller based mechanism for controlling the collector output</b></p> <ul style="list-style-type: none"> <li>• A test solar thermal collector with air as medium has been constructed.</li> <li>• The collector output is measured and controlled using a microcontroller based mechanism.</li> </ul>
R Kataki	<p><b>Biochar application for sustainable soil management and mitigation of GHG emission</b></p> <ul style="list-style-type: none"> <li>• Biochar application is found to improve crop yield with an overall improvement in the soil physico-chemical characteristics.</li> <li>• Biochar has been found to be effective in heavy metal removal.</li> </ul>
S Mahapatra	<p><b>Biomass Gasification</b></p> <ul style="list-style-type: none"> <li>• The work focuses on the experiments and mathematical modeling towards establishing the effect of air mass flux on the propagation rate, bed temperature, gas composition and related aspects under the sub-stoichiometric operating conditions in downdraft packed bed configuration.</li> </ul> <p><b>Climate Responsive Buildings and Thermal comfort</b></p> <ul style="list-style-type: none"> <li>• Climatic classification of entire northeast region into three bioclimatic zones (<i>warm and humid, cool and humid and cold and cloudy</i>), thermal performance analysis of the vernacular buildings of the region.</li> <li>• The study also focused to develop adaptive thermal comfort models and energy performance analysis the buildings of different climatic zones.</li> </ul> <p><b>Decentralized Energy Systems</b></p> <ul style="list-style-type: none"> <li>• Decentralized power system is also relevant to North-Eastern States of India, particularly for isolated sites that are located far off from the existing grid supply. The agro-residue and bamboo based biomass gasification technology systems can be replicable and sustainable model for generation of electricity from locally available resources at the village level.</li> </ul>
V Verma	<p><b>Performance analysis of a solar PV/T system for waste heat recovery</b></p> <ul style="list-style-type: none"> <li>• Optimize, fabricate and performance analysis of the experimental set-up.</li> <li>• Validation of the experimental set-up.</li> </ul>

	<b>Study of Desiccant Coated Heat Exchanger</b> <ul style="list-style-type: none"> <li>• Optimize the influence factor by Taguchi Method.</li> <li>• Absorption and Regeneration rate of desiccant material.</li> </ul>
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#### Research projects, ongoing and new

Project Title	Funding Agency	Amount (in INR )	Duration	Principal Investigator
One-pot synthesis of Nitrogen and Sulphur co-doped biomass derived graphenebased cathode catalyst for Polymer Electrolyte Fuel Cells	SERB-DST	36.0 Lakh	2016 -2019	B Kakati
Synthesis of novel dual doped biomass derived graphene based Oxygen Reduction Reaction catalyst for potential application in Polymer Electrolyte Fuel Cells	UGC	6.00 Lakh	2016 - 2018	B Kakati
Indo-Brazil International Collaborative Research Project Integrated Biorefinery Approach towards production of sustainable fuel and chemicals fromAlgal biobased systems	DBT	100.46Lakh	2016 -2019	D Deka
Indo-Hungary International Collaborative Research Project Biochemicals and biofuels from lignocellulosic biomass by Green catalyticprocesses	DST	34.42 Lakh	2016 - 2019	D Deka
Upgradation of lab and library facilities of the Department of Energy	MNRE	50 Lakh	2017 -2018	D.Deka
Rural Hybrid Energy Enterprise Systems	RCUK-DST	198 Lakh	2013-2018	DC Baruah
Bioenergy from waste: exploring the multiplier benefits to poor communities of medium-scale technology innervations	HEFCE Newton fund	30.65 Lakh	2017 - 2018	DC Baruah
Enhancing Food Security in Rural India	EPSRC	3.00 Lakh	2017 - 2018	DC Baruah
INDIA-UK Center for education and Research in clean energy(IUCERCE)	DST	74.50 Lakh	2017 -2018	N Sarmah
Development and validation of a spectrum dependence integrated optical-thermal-electrical model to evaluate the performance of high concentrating photovoltaic module	UGC	6.00 Lakh	2015 - 2017	N Sarmah

#### PUBLICATIONS

##### In International and National Journals

Barman M, Mahapatra S, Palit D, Chaudhury MK. Performance and impact evaluation of solar home lighting systems on the rural livelihood in Assam, India. *Energy for Sustainable Development*, 38: 10-20. 2017.

Baruah D, Baruah DC, Hazarika MK. Artificial neural network based modeling of biomass gasification in fixed bed downdraft gasifiers. *Biomass and Bioenergy*, 98: 264-271, 2017.

Basumatary V, Saikia R, Narzari R, Bordoloi N, Gogoi L, Sut D, Kataki R. Tea factory waste as a feedstock for thermo-chemical conversion to biofuel and biomaterial. *Materials Today Proceedings* [In press], 2017.

Borah M J, Devi A, Saikia R A and Deka D. Biodiesel production from waste cooking oil catalyzed by in-situated TiO<sub>2</sub> on reduced graphene oxide nanocomposite. *Energy*, 158: 881-889, 2018.

Borah S, Bhattacharyya B, Deka J, Borah A, Devi A, Deka D, Mishra S, Raidongia K and Gogoi N. Enhanced catalytic activity and near room temperature gas sensing properties of SnO<sub>2</sub> nanoclusters@mesoporous Sn(IV) organophosphonate composite. *Dalton Trans.*, 46: 8664-8672, 2017.

Bordoloi N, Dey MD, Mukherjee R and Kataki R. Adsorption of Methylene blue and Rhodamine B by using biochar derived from Pongamiaglabra seed cover. *Water Science and Technology*, 77(3): 638-646, 2018.

Bordoloi N, Goswami R, Kumar M, and Kataki R. Biosorption of Co (II) from aqueous solution using algal biochar: Kinetics and isotherm studies. *Bioresource Technology*, 244: 1465-1469, 2017.

Choudhury PK, Baruah DC. Solar air heater for residential space heating. *Energy Ecology and Environment*, 2(6):387-403, 2017.

Choudhury PK. and Baruah DC. Solar air heater for residential space heating, *Energy, Ecology and Environment*, 2 (6): 387-403, 2017.

Chutia S, Narzari, R, Bordoloi N, Saikia R, Gogoi L, Sut D, Kataki R. Pyrolysis of Dried Black Liquor Solids and Characterization of the Bio-Char and Bio-Oil. *Materials Today Proceedings* [In press], 2017.

Das K, Hiloidhari M, Baruah DC, and Nonhebel S, Impact of Time Expenditure on Household Preferences for Cooking Fuels. *Energy*, 151: 309-316, 2018.

Das SK, Mahapatra S, Lahan H. Aluminium-ion Batteries: Developments and Challenges. *Journal of Materials Chemistry A*, 5: 6347-6367, 2017.

Devi A, Das V and Deka D. Evaluation of the effectiveness of potato peel extract as a natural antioxidant on biodiesel oxidation stability. *Industrial Crops & Products*, 123: 454-460, 2018.

Gogoi D, Bordoloi N, Narzari R, Saikia R, Goswami R, Kataki R. Effect of torrefaction on yield and quality of pyrolytic products of Arecanut Husk: an agro-processing wastes. *Bioresource Technology*, 242: 36-44, 2017.

Gohain M, Devi A and Deka D. Musa balbisiana Colla peel as highly effective renewable heterogeneous base catalyst for biodiesel production. *Industrial Crops & Products*, 109: 8-18, 2017.

Hazarika K. and Choudhury PK. Automatic monitoring of solar photovoltaic (SPV) module, *Materials Today: Proceeding*. 4 (14): 12606-12609, 2017.

Hiloidhari M, Araújo K, Kumari S, Baruah DC, Ramachandra TV, Kataki R and Thakur IS. Bioelectricity from sugarcane bagasse co-generation in India—An assessment of resource potential, policies and market mobilization opportunity for the case of Uttar Pradesh. *Journal of Cleaner Production*, 182:1012-1023, 2018.

Hiloidhari M, Baruah DC, Singh A, Katak S, Medhi K, Kumari S, Ramachandra TV, Jenkins B.M, Thakur IS. Emerging role of Geographical Information System (GIS), Life Cycle Assessment (LCA) and spatial LCA (GIS-LCA) in sustainable bioenergy planning. *Bioresource Technology*, 242: 218-226, 2017.

Hiloidhari M, Kumari S, Araújo K, Baruah DC, Ramachandra TV, Katak R and Thakur IS. Bioelectricity from bagasse cogeneration— An overview of the status, prospects and policy mechanisms for Uttar Pradesh, India. *Journal of Cleaner Production*, 182:1012-1023, 2018.

Katak S, Hazarika S, Baruah DC. Investigation on by-products of bioenergy systems (anaerobic digestion and gasification) as potential crop nutrient using FTIR, XRD, SEM analysis and phyto-toxicity test. *Journal of Environmental Management*, 196: 201-216, 2017.

Katak S, Hazarika S, Baruah DC. Assessment of by-products of Bioenergy systems (Anaerobic Digestion and Gasification) as potential crop nutrient. *Waste Management*, 59: 102-117, 2017.

Kumari D, Goswami R, Kumar M, Mazumder P, Katak R, and Shim J. Removal of Cr(VI) ions from the aqueous solution through nanoscale zero-valent iron (nZVI) Magnetite Corn Cob Silica (MCCS): A bio-waste based water purification perspective. *Groundwater for Sustainable Development*, <https://doi.org/10.1016/j.gsd.2017.12.007> [In press], 2018.

Narzari R, Bordoloi N, Sarma B, Gogoi L, Gogoi N, Borkotoki B, Katak R. Fabrication of bio-carbons obtained from valorization of biowaste and evaluation of its physicochemical properties. *Bioresource Technology*, 242: 324-328, 2017.

Novodárszki G, Onyestyák G, Barthos R, Wellisch AF, Thakur AJ, Deka D &Valyon J. Guerbet alkylation of acetone by ethanol and reduction of product alkylate to alkane over tandem nickel/Mg, Alhydrotalcite and nickel molybdate/c-alumina catalyst systems. *Reac.Kinet. Mech. Cat.*, 121: 69-81, 2017.

Onyestyak G, Novodárszki G, Wellisch AF, Valyon J, Thakur A J and Deka D. Co and Ni catalysts loaded on typical well-ordered micro- and mesoporous supports for acetic acid reduction. *Reac. KinetMech Cat.*, 121(1): 109–119, 2017.

Onyestyak G, Novodárszki G, Wellisch A F, Valyon J, Thakur A J and Deka D. Guerbet self-coupling for ethanol valorization over activated carbon supported catalysts. *Reac.Kinet. Mech. Cat.*, 121(1): 31–41, 2017.

Patowary D, Baruah DC. Effect of combined chemical and thermal pretreatments on biogas production from lignocellulosic biomasses. *Industrial Crops & Products*, 124: 735-746, 2018.

Patowary R, Baruah DC, Thermoelectric conversion of waste heat from IC engine driven vehicles: A review of its application, issues and solutions, *International Journal of Energy Research*, 42(8):2595-2614, 2018.

Rajbongshi R, Borgohain D, Mahapatra S. Optimization of PV-biomass-diesel and grid base hybrid energy systems for rural electrification by using HOMER. *Energy*, 126: 461-464, 2017.

Saikia R, Baruah B, Kalita D, Pant KK, Gogoi N, and Katak R. Pyrolysis and Kinetic Analyses of a Perennial Grass (*Saccharumravannae* L.) from North-East India: Optimization through Response Surface Methodology and Product Characterization. *Bioresource Technology*, 253: 304-314, 2018.



Saikia R, Bordoloi N, Goswami R, Kumar M, and Kataki R. Removal of arsenic and fluoride from aqueous solution by biomass based activated biochar: Optimization through response surface methodology, *Journal of Environmental Chemical Engineering*, 5(6): 5528-5539, 2017.

Sarma B, Gogoi N, Farooq M, Borkotoki B, Kataki R, and Garg A. Soil organic carbon dynamics in wheat - green gram crop rotation amended with vermicompost and biochar in combination with inorganic fertilizers: A comparative study. *Journal of Cleaner Production*, 201: 471-480, 2018.

Sarma B, Borkotoki B, Gogoi N, Kataki R. Responses of Soil Enzymes and Carbon Mineralization to Applied Organic Amendments: A Short-term Study in Acidic Sandy Loam Soil. *Journal of the Indian Society of Soil Science*, 65(3): 283-289, 2017.

Sharma B, Borkotoki B, Gogoi N, Narzari R, Kataki R. Organic amendments: Effect on carbon mineralization and crop productivity in acidic soil. *Journal of Cleaner Production*, 152: 157- 166, 2017.

Sivasakthivel T, Philippe M, Murugesan K, Verma V, Pingfang H. Experimental thermal performance analysis of ground heat exchangers for space heating and cooling applications. *Renewable Energy*, 113:1168 – 1181, 2017.

Snehesh S, Mukunda HS, Mahapatra S, Dasappa S. Fischer-Tropsch route for the conversion of biomass to liquid fuels - Technical and economic analysis. *Energy*, 130: 182-191, 2017.

Upadhaya K, Watham T, Bordoloi N, Kataki R. Trees as sources of livelihood and fuel wood: A case study of an eastern Himalayan village. *Energy Sources (Part A)*, 39(4): 398-405, 2017.

Verma V and Murugesan K. Experimental study of solar assisted ground source heat pump system for short term space heating operation from morning to evening. *Journal of Mechanical Science and technology*, 32: 391 – 398, 2018.

#### **Conference proceedings**

Choudhury ND, Bichitra B, Kataki, R. Pyrolytic Characterization and Kinetic Analysis of Camellia sinensis (Tea) Seed Deoiled Cake. In Proceedings of the Second International Conference on Recent Advances in Bioenergy Research, Springer Proceedings in Energy, S. Kumar et al. (eds). Springer Nature, 2018.

TripathiP, Mahapatra S and DasappaS, Estimation and Characterization of Tar from an Open top Downdraft Gasifier. In Proceedings of International Conference on Advances in Energy Research (ICAER), IIT Bombay, Mumbai, December 2017.

#### **Books and Book Chapters**

Buragohain S., Patowary D, Kataki S, Brahma B, Sarma G.D, Patowary R, West H, Clarke M, Baruah DC. 2018. Feasibility Study on Implementing Kitchen Waste-Based Biogas Plant at Tezpur University, Assam. In Ghosh S. (eds) Utilization and Management of Bioresources. Springer.

Kataki R, Bordoloi N, Saikia R, Sut D, Narzari R, Gogoi L and Bhuyan N. 2018. Wastes valorization to Fuel and chemicals through Pyrolysis: Technology, Feedstock, Products, and Economic Analysis. In Singhania RR, Agarwal RA, Kumar RP, Sukumaran RK (eds). Waste to Wealth. Springer.

Kataki S, West H, Clarke M, Baruah DC. 2018. In Ghosh S. (eds) Utilization and Management of Bioresources. Springer.

Kataki S, Baruah DC, Prospects and Issues of Phosphorus Recovery as Struvite from Waste Streams 2018. In Hussain C. (eds). Handbook of Environmental Materials Management. Springer.

Kataki, R, HiloidhariM, Bordoloi N and Sut D. 2017. 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.

Konwar LJ, Mikkola JP, Bordoloi N, Saikia R, Chutia RS and Kataki R. 2018. Side-streams from bioenergy and biorefinery complexes as a resource for circular bio-economy. In Pandey A, Bhaskar T, Venkata Mohan S, Khanal S, and Lee D-J (eds). Waste Biorefinery: Potential and Perspectives. Elsevier.

Saikia K, Roy P, Patowary D, Kataki S, Medhi H, Das P, West H, Clarke, M, Baruah DC. 2018. By-Products of Bioenergy Systems (Anaerobic Digestion and Gasification): Generation and Prospects of Utilization. In Ghosh S. (eds) Utilization and Management of Bioresources. Springer.

#### **SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**

##### **International and National**

A Kumar, R Choudhary, R Narzari and R Kataki presented a paper, Rheological Evaluation of Asphalt Binders Containing Pyrolytic Biochar, in the 17th Annual International Conference on Pavement Engineering, Asphalt Technology and Infrastructure, organized by Liverpool John Moores University, Liverpool, United Kingdom, February 21-22, 2018.

AK Shukla, G Tripathi and DC Baruah, A study on energy consumption and cooling load estimation of a building in a warm and humid climate, International Conference on Energy Options for Tomorrow: Technology to Sustainability (ICEOT), Kolkata, India, April 17-19, 2017.

B Terang and DC Baruah, A review on solar thermal based vapor absorption refrigeration system at National Conference on Non-Conventional Energy: Harvesting Technology and Its Challenges, Guwahati, India, November 17-18, 2017.

BJ Dutta, B Brahma and DC Baruah, Design, development and testing of a Solar Hot Air Generator using locally available materials for drying of agricultural products. National Conference on Non-Conventional Energy: Harvesting Technology and Its Challenges, Guwahati, India (2017), November 17-18, 2017.

D Sut, R Narzari, N Bhuyan and R Kataki, presented a paper, Biodiesel production from Micheliachampaca oil: Process optimization, kinetic modelling and rheological behaviour study, in an International Conference on Emerging Trends in Biotechnology for Waste Conversion (ETBWC-2017), organised by CSIR-NEERI, and BRSI, Nagpur, Maharashtra, October 8-10, 2017.

Devi A, Das VK and Deka D. Smart bioactive compounds: Their synthesis and potential application in biodiesel oxidation stability enhancement paper presented by Anuchaya Devi as Invited speaker in the 3<sup>rd</sup> International Conference on Chemical Engineering held in Chicago, Illinois, USA October 2-4, 2017.

G Tripathi, AK Shukla and DC Baruah, Assessment of refrigeration load for a solar cold storage system in Tezpur, Assam, India, International Conference on Energy Options for Tomorrow: Technology to Sustainability (ICEOT), Kolkata, India, April 17-19, 2017.

P Bezbaruah, R Patowary, D Borah and DC Baruah, Thermohydraulic Performance of Packed Bed Solar Air Heater at 6th International Conference on Advances in Energy Research (ICAER) 2017, IIT Bombay. 2017, December 12-14, 2017.

PK Choudhury, BR Tamuli, T Gogoi, G Baruah, DC Baruah, Development of a multipoint temperature measurement system for low temperature application, International Conference on Energy Options for Tomorrow: Technology to Sustainability (ICEOT), Kolkata, India, April 17-19, 2017.

R Narzari, N Bordoloi, D Sut, B Baruah, M Poddar and R Kataki, presented a paper, Fabrication and characterization of magnetic biochar from Lantana camara through pyrolysis for Chromium (VI) removal, in an International Conference on Emerging Trends in Biotechnology for Waste Conversion (ETBWC-2017), organised by CSIR-NEERI, and BRSI, Nagpur, Maharashtra, October 8-10, 2017.

R Patowary and DC Baruah, Feasibility study of TEG integrated cookstove for electrical power generation at International Conference on Energy Options for Tomorrow: Technology to Sustainability (ICEOT), Kolkata, India, April 17-19, 2017,

R Saikia and R Kataki, presented a paper, Perennial grass (*SaccharumSponteneum L.*) from North-East India: candidacy for alternate renewable fuel and biomaterial, in National Conference on Renewable Energy Technology Utilization for Rural Development (NCRETURD-2017), organised by Department of Energy Engineering, North-Eastern Hill University, Shillong, Meghalaya, February 27 – March 1, 2017.

UK Chetia, N Sarmah and R Kataki, presented a paper, Performance study of Static and Tracking PV Systems at Tezpur University Campus, in National Conference on Renewable Energy Technology Utilization for Rural Development (NCRETURD-2017), organised by Department Of Energy Engineering, North-Eastern Hill University, Shillong, Meghalaya, February 27- March 1, 2017.

#### **TALKS BY THE FACULTY ABROAD AND IN INDIA**

D C Baruah delivered talk onThermoelectric Conversion of Waste heat from IC engine driven vehicles in the three day National Conference on Recent Advances in Science and Technology (NCRASST-2018) at Assam Science Technology University (ASTU), Guwahati during March 15-17, 2018.

D C Baruah delivered talk onTalk on Intellectual Property Rights in the two day National Seminar on the theme “Role and Importance of Research in Technical Education” at the GirijanandaChowdhury Institute of Management & Technology campus, Guwahati. during January 18-19, 2018.

D Deka delivered a lecture onLignocellulosic biomass is an environmentally benign substitute for fossil carbon sources in the production of fuel, chemicals and carbon-based productsas a visiting scientist to the institute at Institute of Materials and Environmental Chemistry Research Centre for Natural Sciences, Hungarian Academy of Sciences, Budapest on June 14, 2017.

D Deka delivered a lecture on “Towards Selective Biobased Materials: Potential as catalyst and Additive for production of quality Biofuel” as Invited Speaker in Bioprocessing India 2017 organized by IIT Guwahati, Assam, India, held on December 9-11, 2017.

R Kataki delivered an invited lecture, in a Faculty Development Programme organized by the Department of Energy, Tezpur University, February 20, 2018.

R Kataki delivered an invited lecture, in a National Seminar organized by the Departments of Chemical Engineering and Mechanical Engineering, Assam Engineering College, Guwahati, November 17-18, 2017.

R Kataki delivered an invited lecture, Sustainable Development Goals of UNO, in a workshop organized by the District Administration, Sonitpur District, Tezpur at the Office of the Dy. Commissioner, Sonitpur, Tezpur, November 14, 2017.

R Kataki delivered an invited lecture on biomass inventorization and thermo-chemical conversion for biofuels and biomaterials, in a National Conference on Renewable Energy Technology Utilization for Rural Development (NCRETURD-2017), organised by Department Of Energy Engineering, North-Eastern Hill University, Shillong, February 27 – March 1, 2017.

S Mahapatra delivered an invited talk on “Solar Energy Technologies”, at Entrepreneurship Development Program on Solar PV Rooftop, Organized by National Power Training Institute at Tezpur University, March 12, 2018.

S Mahapatra delivered an invited talk on “Biomass Gasification Technologies”, at Faculty Development Program on Advances in Renewable Energy Technologies and Systems at Tezpur University, February 20, 2018.

S Mahapatra delivered an invited talk on “Decentralized Energy Systems and HOMER Simulation Tool”, at Faculty Development Program on Advances in Renewable Energy Technologies and Systems at Tezpur University, February 21, 2018.

S Mahapatra delivered an invited talk on “Biomass Gasification in an open top downdraft Gasifier”, at National Exhibition and Conference on New and Renewable Energy (NECONRE-2017), Department of Electrical and Electronics Engineering, Assam Don Bosco University, Guwahati, October 7, 2017.

S Mahapatra delivered an invited talk on “Climate responsive Buildings in North East India”, at National Conference on Renewable Energy Technology Utilization for Rural Development and Trade Show (NCRETURD 2017), Department of Energy Engineering, North Eastern Hill University, Shillong, February 28, 2017.

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

R Kataki was a member of the National Organizing Committee, ISEES 2<sup>nd</sup> International Conference on Sustainable Energy and Environmental Challenges (SEEC2018), Indian Institute of Science, Bangalore, January 1-4, 2018.

Entrepreneurship Development Programme on "Solar PV Rooftop" sponsored by National Institute of Solar Energy under US India Bilateral Partnership to Advance Clean Energy Deployment (PACE-D) TA Program, organized by Department of Energy in association with National Power Training Institute, Guwahati, March 12-16, 2018.

Faculty Development Programme on "Advances in Renewable Energy Technologies and Systems" sponsored by AICTE-NEQIP, New Delhi, Organized by Department of Energy in collaboration with Teaching Learning Centre, Tezpur University, February 19-24, 2018.

#### **DISTINGUISHED VISITORS TO THE DEPARTMENT**

Ms Benigina Leiss, Board Member, Centre for Energy Economics, University of Texas

Mr Gyula Novodarszki, Scientist, Research Centre for Natural Sciences, Hungarian Academy of Sciences, Budapest, Hungary

Dr Narayan Chandra Talukdar, Director, Institute of Advanced Study in Science and Technology, Guwahati, Assam

Dr. Paramod Kumar Sharma, Principal Scientist, IARI, New Delhi

Prof Parimal Parikh, Professor SVNIT, Surat

Dr Robert Barthos, Research Centre for Natural Sciences, Hungarian Academy of Sciences, Budapest, Hungary

Mr Sushanta Dutta, Global Director, Mesto Minerals, USA

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

Under the UKRC-DST sponsored research project “(Rural Hybrid Energy Enterprise Systems (RHEES)”, PI Prof. D.C. Baruah, an outreach programme is being undertaken in Jhawani 3 village of Bihaguri Developmental Block, Sonitpur, Assam. The village is an adopted village of Tezpur University, where group of students from University is volunteering themselves in imparting school level education to children of the village for the socio-economic growth of the village.

#### **THE FACULTY OF THE DEPARTMENT**

##### **Professors**

D C Baruah, PhD (PAU, Punjab)

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##### **Head of the Department**

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##### **Associate Professor**

S Mahapatra, PhD (IISc)

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**Assistant Professors**

P K Choudhury, PhD (Tezpur)

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

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B K Kakati, PhD (IIT, Guwahati)

*Specialization/Areas of Interest:* Fuel cells and hydrogen technology, Electrochemical energy systems, Graphene nanotechnology, Chemical recovery of precious metal catalysts

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N Sarmah, PhD (Heriot-Watt, Edinburgh)

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MTS

## DEPARTMENT OF FOOD ENGINEERING AND TECHNOLOGY

### THE DEPARTMENT

The Department of Food Engineering and Technology at Tezpur University is one of the six constituent departments under the School of Engineering. The vision of the Department is to create skilled human resources well versed in engineering aspects of food processing to cater the needs of the rapidly growing food processing sector. Therefore, the department is serving to provide knowledge and skills for better preservation, processing and value addition to agro-products; also to promote research and development for product and process and assurance of high level of hygiene and safety of processed food through food safety laws and regulations for supporting a competitive, modern and safe food market for the consumers. This department earlier known as Department of Food Processing Technology started in 2006 with the two-year MSc programme in Food Processing Technology. The department is currently offering BTech, BVoc, MTech and PhD programmes. 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 Food Quality Control Laboratory for testing food and tea samples. The Department is having several ongoing projects sponsored by various funding agencies like UGC, MoFPI, DST, DBT, DRDO, ICAR, AICTE, MSME, ASTEC etc. The main objectives of the scientific research and development works of the department are to contribute to the national food industry, its engineering and technology development.

### Academic programmes and Student intake

Academic Programme	Student Intake
BTech in in Food Engineering & Technology	38
MTech in Food Engineering & Technology	18
BVoc in Food Processing	50
PhD In Food Engineering & Technology	Intake variable 8 for the current Academic year

### Major facilities and equipment available

Name of the Equipment	Purpose / Details
Milk Pasteuriser Unit (GOMA Engineering)	Pasteurization of milk
Hunter Color Spectrophotometer (Hunter Lab, USA)	Colour measurement of samples
Texture Analyser (Newport, Australia)	Texture analysis of samples
Rapid Viscosity Analyser (Stable Micro System)	Starch studies
Freeze Dryer (Labtech&Lyolab)	Lyophilization
Falling Number Apparatus (Perten, Australia)	Amylase enzyme study
Automatic Solvent Extraction System (Pelican)	Fats and oils analysis
Automatic Fibre Extraction System (Pelican)	Crude fiber analysis
FTIR (Perkin Elmer)	Analysis of functional groups

HPLC (Waters)	Analysis of biomolecules
Modified atmospheric packaging unit (Vacstar)	Practical classes related to packaging
DSC-TGA (Netzsch)	Quality analysis
Encapsulator (Buchi)	Encapsulation of biomolecules
Gas pycnometer (Porous Materials Inc.)	Measuring density
Fermenter (Sartorius)	Fermentation studies
Atomic absorption spectrophotometer (Thermo Scientific)	Analysis of elements
Soxhlet apparatus (Pelican Equipments)	Fat analysis
Kjeldahl apparatus (Pelican Equipments)	Protein analysis
GC – MS system (Perkin Elmer)	Biomolecules analysis
Supercritical fluid extraction system (Waters)	Extraction of biomolecules
Rheometer (Anton Paar)	Rheological studies
PCR (Eppendorf)	Amplification of DNA

#### Major research findings/ research and development activities

Principal Investigator	Salient Research Findings
AB Das	<ul style="list-style-type: none"> <li>Development of Continuous Jaggery making machine.</li> </ul>
LS Badwaik	<ul style="list-style-type: none"> <li>Developed of sweet lime pomace based biodegradable container.</li> <li>Essential oil from sweet lime (Citrus limetta) peel was extracted through application of Vacuum-assisted solvent free microwave extraction.</li> </ul>
NRS Hulle	<ul style="list-style-type: none"> <li>Standardization of process for microfiltration of potato processing waste water.</li> <li>Improvement of drying process of bhutjolokia using different pre-treatments.</li> </ul>
P Mishra	<ul style="list-style-type: none"> <li>Developed microbial fuel cell based biosensors for determination of toxicity in water</li> <li>Developed biodegradable packaging film from kitchen wastes.</li> </ul>
RK Duary	<ul style="list-style-type: none"> <li>Conjugated functionalized starch along with folic and ascorbic acid has been formulated.</li> <li>Conjugation of Cellulose Nanofibres (Banana Peel) and Soy Protein Hydrolysates in Development of Pickering Emulsion Based Encapsulating System.</li> <li>Development of functional pasta using mahua.</li> </ul>
SC Deka	<ul style="list-style-type: none"> <li>Dietary fibre from culinary banana flower was extracted using ultrasound-assisted extraction (UAE) and was optimized in order to improve the yield and physicochemical properties of dietary fibre.</li> <li>Ultrasound-assisted extracted dietary fibre from culinary banana flower as matrices for anthocyanin extracted from the culinary banana bract.</li> </ul>

#### Research projects, ongoing and new

SI No	Project Title	Funding Agency	Amount (in INR)	Duration	Principal Investigator
1	Electric field based novel techniques for pilot scale processing of juice and pulp from	ICAR	168.28Lakh	2018-2021	B Srivastava



	potential fruits of NE region				
2	In vivo hypocholesterolemic effect of bioconjugates of starch nanoparticles with gamma-oryzanol and tocotrienols extracted from rice bran.	DBT	80.00Lakh	2016-2018	CharuLataMahanta
3	Development of functional carambola juice incorporated with anthocyanins from bran of pigments rice varieties of Assam	ASTEC	2.65Lakh	2016-2018	CharuLataMahanta
4	Development of active packaging film from food processing wastes	ICAR	31.00 Lakh	2016-2018	LSBadwaik
5	Development of Enzyme based biosensor through sol-gel techniques for debittering of grapefruit and mosambi juice	SERB-DST	26.6Lakh	2018-2020	P Mishra
6	Usability of smart phone to evaluate the efficiency of polyaniline based sensor for indication of freshness of fish fillets during chemical spoilage	LSRB-DRDO	23.0Lakh	2018-2021	P Mishra
7	Effect of pre-treatments on drying characteristics and oleoresin content of BhutJolokia ( <i>Capsicum chinensis</i> )	UGC	10.00Lakh	2018-2020	NSHulle
8	Comparative metagenome of human gut of North and North-eastern region of India	DBT	64.70Lakh	2014-2018	RK Duary
9	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	32.74 Lakh	2016-2019	RKDuary
10	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	RKDuary
11	Value addition of banana flower using green technologies to develop combat food	DRDO, New Delhi	22.73557Lakh	2018-2020	SC Deka
12	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	SCDeka
13	Value addition of banana ( <i>Musa. sp</i> ) and creating small scale enterprises of Meghalaya tribal community through minimal processing technology	DBT	71.85Lakh	2018-2021	RK Duary (As Co-PI)

## PUBLICATIONS

### In International and National Journals

Baite TN and Das AB. Extraction of glycyrrhizin from licorice using single screw extruder: process kinetics and stimulus response modeling. *Separation Science and Technology*, 53(3), 2017.

Basantarani L and Das AB. Effect of thermal pre-treatments on physical, phytochemical and antioxidant properties of black rice pasta. *Journal of Food Process Engineering*, 40(5), 2017.

Borah PK, Rappolt M, Duary RK and Sarkar A. Effects of folic acid esterification on the hierarchical structure of amylopectin corn starch. *Food Hydrocolloids* (In Press). doi: 10.1016/j.foodhyd.2018.03.028, 2018.

Das AB, Goud VV and Das C. Extraction and characterization of phenolic content from purple and black rice (*Oryza sativa* L) bran and its antioxidant activity. *Journal of Food Measurement and Characterization*, 12(1), 2018.

Das P, Borah PP and Badwaik LS. Transformation of Chicken Feather Keratin and Pomelo Peel Pectin into Biodegradable Composite Film. *Journal of Polymers and the Environment*, doi: 10.1007/s10924-017-1109-z, 2017.

Kalita D, Bhattacharya S and Srivastava B. Predicting enzymatic starch hydrolysis mechanism during paddy malting by Vibrational spectroscopy and multivariate calibration analysis. *Food Chemistry*, doi: <https://doi.org/10.1016/j.foodchem.2018.03.094>, 2018.

Kalita D, Saikia S, Gautam G, Mukhopadhyay R and Mahanta CL. Characteristics of synbiotic spray dried powder of litchi juice with *Lactobacillus plantarum* and different carrier materials. *LWT- Food Science and Technology*, 87, 2018.

Patra F, Duary RK, Ganguly S and Das A. Engineered Probiotics and Pharmabiotics: application in therapeutics and prophylaxis. *Indian Journal of Dairy Science*, 70(2),2017.

Saxena J, Makroo HA, Bhattacharya S and Srivastava B. Kinetics of the inactivation of polyphenol oxidase and formation of reducing sugars in sugarcane Juice during ohmic and conventional heating. *Journal of Food Process Engineering*, accepted, doi: <https://doi.org/10.1111/jfpe.12671>,2017.

Seth D, Mishra HN, and Deka SC. Effect of microencapsulation using extrusion technique on viability of bacterial cells during spray drying of sweetened yoghurt. *International Journal of Biological Macromolecules*, 103, 2017.

Seth D, Mishra HN, and Deka, SC. Functional and reconstitution properties of spray-dried sweetened yogurt powder as influenced by processing conditions. *International Journal of Food Properties*, 20(7), 2017.

Seth D, Mishra HN, and Deka SC. Effect of hydrocolloids on the physico-chemical and rheological properties of reconstituted sweetened yoghurt powder. *Journal of the Science of Food and Agriculture*, 98(5), 2018.

### **Conference proceedings**

Begum YA and Deka, SC. Properties of dietary fibre obtained from culinary banana flower using conventional and ultrasound-assisted extraction methods. In 26th ICFoST Indian Convention of Food Scientists and Technologists Food and Nutrition Challenges: Role of Food Science and Technology, CSIR-Indian Institute of Chemical Technology, Hyderabad, December 7-9, 2017.

Devi MB &Deka SC. Nutritional Assessment of Euryale Ferox Seed. In Proceedings of the Indo-Japan Bilateral Symposium on Future Perspectives of Bioresource Utilization In North East India (IJBS 17), IIT Guwahati, February1-4, 2018.

Mangang KCS and Deka SC. Evaluation of bacterial strains with probiotic potential isolated from traditional starter, hamei. In the Indo-Japan Bilateral Symposium on Future Perspective of Bioresource Utilization "In North-East India" IIT Guwahati,February 1 - 4, 2018.

Singamayum Khurshida S and Deka SC. Developing and characterizing cassava flour and its modified starch cultivar of Manipur, India. In proceedings of the 26th Indian convention of Food Scientist and Technologists (ICFoST) on the theme "Food and nutrition challenges: Role of Food Science and Technology", CSIR-IICT, Hyderabad, December 7-9, 2017.

Swami Hulle NR, Samanta R and Rao PS. Effect of High pressure processing on polyphenoloxidase (PPO), peroxidase (POD) and aloin content in aloe vera (*Aloe barbadensis* Miller) juice. In proceedings of the 3<sup>rd</sup> International Conference on Food Properties, Sharjah, UAE, January 22-24, 2018.

Seth D, Jha A, and Deka SC. Rheology of freeze dried and spray dried sweetened yoghurt. In proceedings of the 3<sup>rd</sup> International Conference on Food Properties, Sharjah, UAE, January 22-24, 2018.

#### **Book Chapters**

Khawas P and Deka SC. Modification of culinary banana resistant starch and its application. In: Innovative Food Science and Emerging Technologies, Apple Academic Press, Inc., USA, 2018.

Khawas P and Deka SC. Utilization and value addition of culinary banana: The potential food for health. In: Innovative Food Science and Emerging Technologies, Apple Academic Press, Inc., USA, 2018.

Mishra P and Badwaik LS. Cakes – From Beginning to End on All Counts. In: A Baker's Essential Handbook: A Complete Guide to the Baking Industry, L. B. Associates (Pvt) Ltd, India, pp 85-94 (ISBN-13-978-93-81760-02-4), 2017.

Pourhashemi A, Deka SC and Haghi AK. Research Methods and Applications in Chemical and Biological Engineering. Apple Academic Press: USA, 2019.

Saha J and Deka SC. Green Leaf Protein Concentrate and Its Application in Extruded Food Products, In: Innovative Food Science and Emerging Technologies, Apple Academic Press, Inc., USA, 2018.

Samy D, Das AB and Deka SC. Value addition of underutilised crops of India by extrusion cooking technology, In: Innovative Food Science and Emerging Technologies, Apple Academic Press, Inc., USA, 2018.

Seth D, Mishra HN and Deka SC. Process Technology of Sweetened Yoghurt Powder. In: Applied Food Science and Engineering with Industrial Applications, Apple Academic Press, 2018.

Shiby VK, Seth D, Routray W and Mishra HN. Dahi (Curd) Powder and Dahi Powder based Energy and Health Drink Mixes. In: Food Product and Process Innovations, Vol 1, 179, NIPA publ., New Delhi, 2018

Swami Hulle NR. Cakes – From Beginning to End on All Counts. In: A Baker's Essential Handbook: A Complete Guide to the Baking Industry, L. B. Associates (Pvt) Ltd, India, pp 57-65, 2017.

#### **SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**

AB Das attended and presented a paper in Indo-Japan Bilateral Symposium on Future Perspective of Bioresource Utilization in North-East India at Indian Institute of Technology, Guwahati, February 1-4, 2018.

D Seth participated and presented a paper in International Conference on Food Properties (ICFP) at Sharjah, UAE, January 22-24, 2018.

LS Badwaik attended and presented paper in Indo-Japan Bilateral Symposium on Future Perspective of Bioresource Utilization in North-East India at Indian Institute of Technology, Guwahati, February 1-4, 2018.

NR Swami Hulle attended and presented paper in the 3rd International Conference on Food Properties, Sharjah, UAE January 22-44, 2018.

Poonam Mishra attended Workshop on Outcome (CO/PO/PSO) based Curriculum at Tezpur University, June 19, 2018.

Poonam Mishra attended and presented a paper in an International conference, organized by Deen Dayal Upadhyaya College, Mirzapur, February 19 -20, 2018.

#### **TALKS BY THE FACULTY ABROAD AND IN INDIA**

A B Das delivered a talk in Industrial and business Trade Fair (UDYAM 2017) organized at Church Field Tezpur, December 16, 2017.

L S Badwaik delivered a talk in Industrial and business Trade Fair (UDYAM 2017) organized at Church Field Tezpur, December 16, 2017.

Poonam Mishra delivered a talk in Industrial and business Trade Fair (UDYAM 2017) organized at Church Field Tezpur, December 16, 2017.

S C Deka Delivered keynote address on "National Science Day" celebrated at A. D. P. College, Nagaon, Assam, February 28, 2018.

R K Duary delivered a lecture on "Milk based dietary interventions on gut microbiome affecting human health" under the theme "Functional Dairy Foods for Better Health" organized at Faculty of Dairy Technology, WBUAFSc, Mohanpur Campus, Nadia, West Bengal on 24th September, 2017.

R K Duary delivered a talk on "Bioactive Peptides from milk: Functionality and Health Benefit in Disease Management." at National Conference on Trends and Innovation in Food Processing: Prospects and Challenges, TIFPT 2017, 9th to 10th February, 2017 organized by Department of Food Engineering and Technology, Tezpur University.

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

Faculty Development Program, "Advances in Food Processing Technologies" November 20-25, 2017.

Skill Oriented Training Program on "Industrial Practices for Food Quality Assurance", February 22-26, 2018.

Finishing School on "Trends in Food and Bio Technology: Analytical approach", March 19-24, 2018.

Two-day workshop on ISO 22000 (Food Safety Management System) Internal Auditor, February 16-17, 2018

#### **DISTINGUISHED VISITORS TO THE DEPARTMENT**

B Chatterjee, Head R&D, Adani Wilmer Limited, Ahmedabad

K Mohanty, Dept. of Chemical Engineering, IIT Guwahati

M Das, Dept. of Agricultural & Food Engineering, IIT Kharagpur

N Singh, Vice President (R&D and QA), Haldiram Snacks Pvt. Ltd., New Delhi

P Goswami, Professor, IIT Guwahati

Sila Bhattacharya (Retd. Scientist), Grain Science & Technology Department, CFTRI, Mysore

S K Das, Dept. of Agricultural & Food Engineering, IIT Kharagpur

Soumya Chatterjee, Scientist & Head, Environmental Technology Division, Defence Research Laboratory, Tezpur

V Ravishankar Rai, Dept. of Microbiology, University of Mysore, Mysuru

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

D Seth received the Young Educator Award iCFP 2018 at the 3<sup>rd</sup> International Conference on Food Properties held at Sharjah, UAE during Jan 22-24, 2018

NS Hulle received the Young Scientist iCFP 2018 Award at the 3<sup>rd</sup> International Conference on Food Properties held at Sharjah, UAE during Jan 22-24, 2018

RK Duary has been awarded the DBT Overseas Fellowship for the year 2017-18 to UK (Quadrum Institute) for a period of one year starting from January 2019.

Certificate of appreciation of Academic achievement during 25<sup>th</sup> Foundation Day (Silver Jubilee celebration) of Tezpur University on 21st January, 2018 has been given to the Team members of FQCL of the Department.

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

Two-Day industry academic interaction with Adani Wilmer Limited, Ahmedabad and Haldiram Snacks Pvt. Ltd., New Delhi, during January 24-26, 2018.

One-day industry academic interaction with SM Group Pvt. Ltd., Guwahati during February 12, 2018.

#### **NUMBER OF STUDENTS WHO PASSED NET-JRF/GATE**

NET: 4

GATE: 12

#### **NOTABLE PLACEMENT**

Nestle India Ltd.

Emami Group

ITC Foods Division

Pratanjali Pvt. India Ltd.

#### **THE FACULTY OF THE DEPARTMENT**

##### **Professors**

Charu Lata Mahanta, PhD (CFTRI, Mysore)

##### **Dean, School of Engineering**

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

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S C Deka, PhD (HAU, Hissar)

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

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**Associate Professors**

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

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B Srivastava, PhD (IIT Kharagpur)

**Head of the Department**

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

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**Assistant Professors**

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A B Das, MS (IIT Kharagpur)

*Specialization/Areas of Interest:* Food Processing, Food Engineering

E-mail: amittu@tezu.ernet.in

N R S Hulle, PhD (IIT Kharagpur)

Specialization/Areas of Interest: Food process technology, non-thermal processing, product development

E-mail: nishant@tezu.ernet.in

S Chakraborty, MTech (Tezpur)

Specialization/Areas of Interest: Food Engineering

E-mail: souravc@tezu.ernet.in

**Adjunct faculty**

S Bhattacharya PhD (IIT Kharagpur)

Specialization/Areas of Interest: Food engineering, modeling

E-mail: subendu1111@yahoo.co.in

**Technical staff**

D Kalita, PhD (Tezpur)

Technical Officer

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A J Das, PhD (Tezpur)

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L Kalita, Diploma (SCTE, Assam)

Technician

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Swdwmsri Mushahary

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**Office Staff**

S Baruah

Assistant

A Keot

MTS





## DEPARTMENT OF MECHANICAL ENGINEERING

### THE DEPARTMENT

The Mechanical Engineering (ME) department at Tezpur University was established in 2006. The department aims at producing skilled human resources with a strong foundation in ME for the heavy engineering and manufacturing industry. Another mission of the department is to train scholars in handling ME as well as interdisciplinary problems exploiting their domain knowledge and using latest technologies. There are 16 regular faculty members with various specializations and 11 technical staff members in the department. Presently the department is offering BTech, MTech (Specialization: Applied Mechanics and Thermo-Fluids Engineering) and PhD programmes in Mechanical Engineering. The department has various laboratories with state of the art facilities and one central workshop with all kinds of machineries. Both the BTech and MTech programmes offered in the department are AICTE approved. The BTech programme in Mechanical Engineering is provisionally accredited by NBA with effective from 2016 to 2018. The department is planning to start a new MTech specialization in Machine Design from 2018-2019. The department has the vision to emerge as a centre of excellence producing quality engineers and conducting cutting-edge research.

### Academic programmes and student intake

Programme	Student Intake
BTech in Mechanical Engineering	60
MTech in Mechanical Engineering (Specialization: Applied Mechanics and Thermo-Fluids Engineering)	18
PhD	Intake variable 01 in the academic year 2017-2018

### Major facilities and equipment available

#### Central Workshop

- All Geared Precision Lathe
- CNC Lathe Machine
- CNC Milling Machine
- Universal Milling Machine
- HMT High Speed Precision Lathe

#### Fluid Mechanics Lab

- Bernoulli's theorem demo module
- Pelton turbine
- Propeller turbine

**Turbo-machinery Lab**

- Pelton turbine
- Propeller turbine

**Strength of Material Lab**

- Universal testing machine
- Inverted metallurgical microscope with accessories and interface software

**Theory of Machine Lab**

- Static and Dynamic balancing
- Sound level meter with sound level calibrator

**Vibration Lab**

- Universal vibration apparatus
- Sound level meter with sound level calibrator

**CAD Lab**

- ANSYS academic teaching
- Pro-E software

**Metrology Lab****IC Engine and Automobile Lab**

- Diesel Engine test set up VCR
- AVL Smoke meter with accessories
- Variable compression ratio petrol engine
- Computerised single cylinder petrol engine test rig

**Thermal and Heat Transfer Lab**

- Vapour compression refrigeration test rig
- Air conditioning test rig
- Vapour absorption refrigeration test rig
- Cooling tower test rig
- Stefan Boltzmann apparatus
- Heat pipe demonstration
- Concentric tube heat exchanger apparatus
- Double pipe heat exchanger
- Dropwise and filmwise condensation apparatus
- Emissivity measurement apparatus

- Critical heat flux apparatus
- Heat transfer in natural convection apparatus
- Shell and tube heat exchanger apparatus
- VCR petrol engine

### Major research findings/research and development activities

Principal Investigator	Description of the Project
PP Dutta <sup>1</sup>	<ul style="list-style-type: none"> <li>• Design and Development of a Green Fuel Power Vehicle.</li> <li>• Design and development of waste heat recovery coil type heat exchanger.</li> </ul>
S Banerjee	<p>Processing and Mechanical Property Evaluation of Micro-alloyed 2219 Al Alloys.</p> <ul style="list-style-type: none"> <li>• Melting and casting of the Al-Cu alloys micro-alloyed with Cd.</li> <li>• Composition analysis of the alloys by ICP technique and verified by iodometric (titration) analysis.</li> <li>• Mechanical characterization (Hardness and impact) has been carried out for homogenized and peak-aged alloys.</li> </ul>
S Kashyap	<p>Utilization of the calcium carbonate (CaCO<sub>3</sub>) obtained in the fabrication and study of mechanical properties of calcium carbonate based Polyethylene composites and optimization of their manufacturing parameters using multi-objective evolutionary algorithms.</p> <ul style="list-style-type: none"> <li>• Utilization of an industrial waste to develop polymeric composites.</li> <li>• Increasing the commercial viability of both industrial waste and composites.</li> </ul>

<sup>1</sup>Partha Pratim Dutta, <sup>2</sup>Polash Pratim Dutta

### Research projects, ongoing and new

Project Title	Funding Agency	Amount (in INR)	Duration	Principal Investigator
Processing and Mechanical Property Evaluation of Micro-alloyed 2219 Al Alloys.	DST	18.38 Lakh	2013-2017	S Banerjee

### PUBLICATIONS

#### In International and National Journals

BardalaiM, and Mahanta DK. Characterisation of Pyrolysis Oil Derived from Teak Tree Saw Dust and Rice Husk. *Journal of Engineering Science and Technology*,13(1), 2018.

BardalaiM, and Mahanta DK. Characterisation of Biochar Produced by Pyrolysis from *Areca Catechu* Dust. *Materials Today: Proceedings*,5(1), 2018.

Das R, SinghK, AkayB, and Gogoi TK. Application of Artificial Bee Colony Algorithm for Maximizing Heat Transfer in a Perforated Fin. *IMEchE, Part E: Journal of Process Mechanical Engineering*, 232:38-48, 2018.

- Deka D, and Datta D. Multi-objective Optimization of the Scheduling of a Heat Exchanger Network under Milk Fouling. *Knowledge-Based Systems*, 121:71-82, 2017.
- Deka A and Datta D. D-spline Curve Based Optimum Profile of Annular Fins Using Multi-objective Genetic Algorithm. *Journal of Thermal Stresses*, 40(6):733-746, 2017.
- Deka A and Datta D. Multi-objective Optimization of Annular Fin Array with B-Spline Curve Based Fin Profiles. *Journal of Thermal Stresses*, 41(2):247-261, 2018.
- Dutta PP<sup>2</sup>, Dixit US and Kalita K.A Strategy for Achieving Accurate Bending by Multi-pass Laser Line Heating. *International Journal of Mechatronics and Manufacturing Systems*, 10 (4):277–298, 2017.
- Dutta PP<sup>2</sup>, Kalita K and Dixit US and Liao H. Magnetic-Force-Assisted Straightening of Bent Mild Steel Strips by Laser Irradiation. *Laser in Manufacturing and Material Processing*, 4(4):206–226, 2017.
- Gohain BN and Kirtania S. Evaluation of Axial Young's Modulus of CNT-Based Composites Using Square, Hexagonal and Cylindrical Representative Volume Elements. *ADBU Journal of Engineering and Technology*, 6(1), 2017.
- Haloj P. Effects of Solar Radiation and Waste Heat in Configured Circular Pipes. *International Journal of Engineering Technology Science and Research*, 4(10):764–774, 2017.
- Kalita Z, Datta D and Palubeckis G. Bi-objective Corridor Allocation Problem Using a Permutation-Based Genetic Algorithm Hybridized with a Local Search Technique. *Soft Computing*, doi: <https://doi.org/10.1007/s00500-017-2807-0>, 2017.
- Kamal SM, Dixit US, Roy A, Liu Q and Silberschmidt VV. Comparison of Plane-Stress, Generalized-Plane-Strain and 3D FEM Elastic-Plastic Analyses of Thick-Walled Cylinders Subjected to Radial Thermal Gradient. *International Journal of Mechanical Sciences*, 131-132:744–752, 2017.
- Kashyap S, Islam J and Datta D. A study of Industrial Lime Sludge Waste as Filler in Hybrid Polymeric Composites. *IOP Conference Series: Materials Science and Engineering*, 377, doi:10.1088/1757-899X/377/1/012019, 2018.
- Kashyap S and Datta D. Evaluation of Stearic Acid Modified Industrial Lime Sludge Waste as filler in High Density Polyethylene Composites. *Journal of Polymer Engineering*, 38(4):333-341, 2017.
- Kashyap S and Datta D. Industrial Lime Sludge Waste-HDPE Composites - A Study of Their Mechanical, Thermal and Morphological Properties. *Journal of Thermoplastic Composite Materials*, doi: <https://doi.org/10.1177/0892705717738289>, 2017.
- Saikia N and Bardalai M Thermal Analysis and Kinetic Parameters Determination of Biomass Using Differential Thermal Gravimetric Analysis in N<sub>2</sub> Atmosphere. *Materials Today: Proceedings*, 5(1), 2018.
- Steiner NPJ, Datta D, Steiner MTA, Canciglieri Jr O, Figueira JR, Detto SP and Scarpin CT. A Multi-objective Genetic Algorithm-Based Approach for Location of Grain Silos in Parana State of Brazil. *Computers & Industrial Engineering*, 111:381-390, 2017.

### **Conference proceedings**

Banerjee S and Gogoi S, Optimizing the Hardness of 2219Al Alloy by Micro-alloying and Age-Hardening Treatment. In proceedings of an International Conference on Civil, Mechanical and Industrial Engineering (ICCMIE), Kolkata, West Bengal, February 26, 2018.

Basu DN and Bhuyan S. Numerical Analysis on Entropy Generation for Natural Convection Using Lattice Boltzmann Method. In Proceedings of the 24<sup>th</sup> National and 2<sup>nd</sup> International ISHMT-ASTFE Heat and Mass Transfer Conference (IHMTTC-2017), December 28–30, 2017.

Chaliha A, Sarkar A, Brahma S and Kirtania S. Comparative Study between Composite and Conventional Steel Shafts Using Finite Element Method. In Proceedings of a National Conference on Advances in Civil and Infrastructure Engineering, Tezpur University, India, February 16–17, 2018.

Fetene BN, Dutta PP<sup>2</sup>, Kalita K and Dixit US. Magnetic Force Assisted Laser Straightening of Mild Steel Strip. In Proceedings of a National Conference on Emerging Technologies, Contribution in Promoting Defense and Industry Capabilities, College of Engineering Campus, Bishofthu (DebreZeit), Ethiopia, July 21–22, 2017.

Halo P. Effects of Solar Radiation and Waste Heat in Configured Circular Pipes. In Proceedings of a 2-Day National Conference on Science, Technology & Environment: Prospects and Limitations in the 21<sup>st</sup> Century (NCSTEPL-2017), BBEC, Kokrajhar, Assam, October 30–31, 2017.

Kakati H, Dutta PP<sup>1</sup>, Sharma D and Sharma A. Heat transfer Studies of Corrugated Plate Heat Exchanger. In Proceeding of the 2<sup>nd</sup> Energy System Modelling and Optimization Conference, NIT Durgapur, December 11–13, 2017.

Kalita P and Dass AK. A Mach-Number-Gradient-Based Shock Switch for Accurate Computation of Inviscid Compressible Flows. In proceedings of the 12<sup>th</sup> International Conference on Mechanical Engineering, Dhaka, AIP Conference Proceedings, 1980, 040024 (2018), DOI: 10.1063/1.5044334

### **Books**

Datta D. *LaTeX in 24 Hours: A Practical Guide for Scientific Writing*. Cham (Switzerland): Springer International Publishing, 2017

### **Book Chapters**

Dutta PP<sup>1</sup> and Kumar A. Development and Performance Study of Solar Air Heater for Solar Drying Application. In: *Solar Drying Technology, Concept, Design, Modelling, Economics and Environment* (eds Prakash O and Kumar A), pp. 579–601, Springer, 2017.

Gogoi TK and Dixit US. Basics and Applications of Thermal Engineering. In: *Introduction to Mechanical Engineering* (ed Davim JP), pp. 137–178, Springer, 2018.

Kashyap S and Datta D. Wastes Valorization to Fuel and Chemicals through Pyrolysis: Technology, Feedstock, Products, and Economic Analysis. Accepted In: *Futuristic Composites*, Springer.

### **Other publications**

Mehta VK. The Other Ramps. *The Assam Tribune*, December 10, 2017.

## **SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**

### **International and National**

B Chowdhury attended the AICTE-NEQIP sponsored FDP on Recent Trends in Computational and Experimental Mechanics, Mechanical Engineering, SOE, TU, December 11-15, 2017.

B Chowdhury attended the AICTE approved two week equivalent FDP on Foundation Program in ICT for Education IIT Bombay(Online mode, Remote centre at Tezpur University), March 8– April12, 2018.

M Bardalai attended the Faculty Development Programme on Recent Trends in Computational and Experimental Mechanics, Tezpur University, December10-14, 2017.

M Bardalai attended the Programme on Best academic practices in Engineering College-A COEP case study, COE Pune, India, October10-14, 2017.

M Bardalai attended the AICTE approved two week equivalent FDP on Foundation Program in ICT for Education IIT Bombay(Online mode, Remote centre at Tezpur University), March 8– April12, 2018.

P Haloi attended the 2-DayNational Conference on Science, Technology & Environment: Prospects and Limitations in the 21<sup>st</sup>Century, BBEC, Kokrajhar, Assam, October30-31, 2017.

P Haloi attended the Faculty Development Programme on Foundation Program in ICT for Education, IIT Bombay(Online mode, Remote centre at Tezpur University), Aug 3–Sept 7, 2017.

P Haloi attended the one week STTP on Introduction to Coding Theory, NITTTR, Kolkata, July3-7, 2017.

P Haloi attended the AICTE-NEQIP sponsored Faculty Development Program on Recent Trends in Computational and Experimental Mechanics, Tezpur University, December11-15, 2017.

PP Dutta<sup>2</sup> attended the attended the SERB School on Noise and Vibration Control, IIT Guwahati, December4-8, 2017.

PKalita attended the Faculty Development Program on Foundation Program in ICT for Education- Equivalent to a two-week training program organized by IIT Bombay under the NMEICT, (Online mode, Remote centre at Tezpur University), August 3–September 7, 2017.

S Banerjee attended the Foundation program on ICT for education, IIT Bombay (Online mode, Remote centre at Tezpur University), March 8 – April 12, 2018.

S Banerjee attended theFaculty Development Programme onRecent trends in computational and experimental mechanics, Mechanical Engineering Department, Tezpur University, December11 – 15, 2017.

S Banerjee attended the Workshop on Drone and its applications, Asian Institute of Technology Thailand and Tezpur University, March16, 2018.

S Bhuyan attended the 24<sup>th</sup> National and 2<sup>nd</sup> International ISHMT-ASTFE Heat and Mass Transfer Conference (IHMTTC-2017), December28–30, 2017.

S Kashyap attended the National Conference on Advances in Civil and Infrastructure Engineering (ACIE-2018), Department of Civil Engineering, Tezpur University, Napaam, Assam, February16-17, 2018.

S Kashyap attended the 1<sup>st</sup> International Conference on Mechanical Materials and Renewable Energy (ICMMRE), Sikkim Manipal Institute of Technology (SMIT), Majitar, Sikkim, December8-10, 2017.

S Kashyap attended the National Conference on Advances in Science Engineering and Technology (ASET) 2017, Girijananda Institute of Management and Technology (GIMT), Tezpur, November10-11, 2017.

S Kirtania attended the two week AICTE approved FDP on Foundation Program in ICT for Education under the aegis of PanditMadan Mohan Malaviya National Mission for Teachers and Teaching (PMMMNMTT), MHRD, GOI. Indian Institute of Technology Bombay (Online mode, Remote centre at Tezpur University), August 3–September7, 2017.

S Kirtania attended the two week AICTE approved FDP on Pedagogy for Online and Blended Teaching-Learning Process under the aegis of Pandit Madan Mohan Malaviya National Mission for Teachers and Teaching (PMMMNMTT), MHRD, GOI. Indian Institute of Technology Bombay (Online mode, Remote centre at Tezpur University)September14–October 12, 2017.

SM Kamal attended Faculty Development Programme on Recent Trends in computational and experimental Mechanics, Department of Mechanical Engineering, Tezpur University, December11–15, 2017.

SM Kamal attended Faculty Development Programme (FDP101x) on Foundation Program in ICT for Education, IIT Bombay (Online mode, Remote centre at Tezpur University), August 3–September 7, 2017.

#### **TALKS BY THE FACULTY ABROAD AND IN INDIA**

D Datta delivered an invited lecture, Optimization and Food Processing, in an AICTE-NEQIP sponsored FDP on Advances in Food Processing Technologies, Tezpur University, India, November20-24, 2017.

D Datta delivered an invited lecture, Optimization and Annular Fin Design, in an AICTE-NEQIP sponsored FDP on Recent Trends in Computational and Experimental Mechanics, Tezpur University, India, December11-15, 2017.

D Datta delivered an invited lecture, Multi-Objective Optimization and Performance Metrics, in an AICTE-NEQIP sponsored FDP on Algorithms in Applications, Tezpur University, India, December 26-30, 2017.

PP Dutta<sup>1</sup> delivered an invited lecture, Electric Hybrid Vehicle, in an AICTE-NEQIP sponsored FDP on Recent Trends in Computational and Experimental Mechanics, Tezpur University, India, December11-15, 2017.

S Kirtania delivered 4 lectures (including two laboratory classes: hand on practice for modeling and analysis of structural component using ANSYS) in one week faculty development program on Recent Trends in Computational and Experimental Mechanics, Tezpur University, India, December11-15, 2017.

T K Gogoi delivered two lectures on Recent Trends in Energy Systems Modelling, Simulation and Optimization and Similarity Transformation and Numerical Solutions of Laminar Flow and Heat Transfer over aFlat Plate,in a faculty development program on Recent Trends in Thermo-Fluids Engineering (RTTFE-2018), NIT Arunachal Pradesh, India, March5-9, 2018.

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

Faculty development program, Recent Trends in Computational and Experimental Mechanics, sponsored by AICTE-NEQIP, Tezpur University, India, December11-15, 2017.

#### **DISTINGUISHED VISITORS TO THE DEPARTMENT**

Er A Deka, Senior Mechanical Engineer, Richardson Gratings, USA

Prof A Roy Chowdhury, IEST, Shibpur, India

Prof KSR Krishna Murthy, IIT Guwahati, India

Prof P Baruah, University of Florida, USA

Prof PB Baruah, Jorhat Engineering College, India

Dr P Mondal, IIT Guwahati, India  
Prof UK Saha, IIT Guwahati, India  
Mr U Bora, CMD, Oil India Limited, India

#### **NUMBER OF STUDENTS WHO PASSED NET-JRF/GATE**

GATE: 22  
GRE: 01  
CAT: 03

#### **NOTABLE PLACEMENT**

Oil India Limited: 03  
CUMMINS INDIA: 08  
ICICI Bank: 02  
Concept Education: 01  
Patanjali Ayurved Limited: 07

#### **THE FACULTY OF THE DEPARTMENT**

##### **Professors**

D Datta, PhD (IIT Kanpur)  
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T K Gogoi, PhD (Tezpur)  
*Specialization/Areas of interest*: Thermal Energy and Environment Engineering  
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##### **Associate Professor**

P P Dutta<sup>1</sup>, PhD (Tezpur)

##### **Head of the Department**

*Specialization/Areas of interest*: Energy Technology  
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##### **Assistant Professors**

Barnali Choudhury, ME (Gauhati)  
*Specialization/Areas of interest*: Thermal Engineering.  
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M Bardalai, PhD (Gauhati)  
*Specialization/Areas of interest*: Bioenergy, Heat Transfer  
E-mail: monojb@tezu.ernet.in

P Kalita, PhD (IIT Guwahati)  
*Specialization/Areas of interest*: Heat Power Engineering  
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*Specialization/Areas of interest:* Manufacturing / Production Engineering.

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*Specialization/Areas of interest:* Thermal Engineering.

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

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*Specialization/Areas of interest:* Machine Design

E-mail: sushen@tezu.ernet.in

SM Kamal, PhD (IIT Guwahati)

*Specialization/Areas of interest:* Plasticity, Autofrettage, Stress/Strain Analysis

E-mail: smkmech@tezu.ernet.in

VK Mehta, PhD (IIT Kanpur)

*Specialization/Areas of interest:* Robotics, Optimization.

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Zahnupriya Kalita, MEngg (AIT, Thailand)

*Specialization/Areas of interest:* Mechatronics

E-mail: zk@tezu.ernet.in

#### **Guest Faculty**

K Borah, PhD (IIT Guwahati)

*Specialization/Areas of interest:* Computational Magnetohydrodynamics and computational gas dynamics

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**Senior Technical Assistant**

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M Bania

MTS

# **School of Humanities and Social Sciences**

**Dean, School of Humanities and Social Sciences**

**Department of Cultural Studies**

**Department of Education**

**Department of English and Foreign Languages**

**Department of Hindi**

**Department of Law**

**Department of Mass Communication and Journalism**

**Department of Social Work**

**Department of Sociology**

**Centre for Assamese Studies**

**Centre for Endangered Languages**

**Chandraprabha Saikiani Centre for Women Studies**

**Dr. Ambedkar Chair**

**Srimanta Sankaradeva Chair**



## SCHOOL OF HUMANITIES AND SOCIAL SCIENCES

Though Tezpur University is sometimes thought of as an institution primarily dedicated to science and technology, the School of Humanities and Social Sciences has been an integral part of the university since its inception. In fact, the statutes Tezpur University make it a point to refer to the promotion and preservation of the culture of Assam and the northeast.

The School of Humanities and Social Sciences is committed to the objectives of a liberal education. Our best students learn to respect the views and experiences of others even as they learn to think creatively and analytically. Incidentally, educationists now realize that along with technological skills students need to possess the soft skills and knowledge traditionally associated with a liberal arts education.

Over the years the School has grown. It includes: the Department of English and Foreign Languages, the Department of Cultural Studies, the Department of Mass Communication and Journalism, the Department of Sociology, the Department of Hindi, the Department of Education, the Department of Law (this is a temporary arrangement till a School of Law is established), the Centre for Assamese Studies, the Centre for Inclusive Development, the Centre for Women's Studies, and the Centre for Endangered Languages. There is also the Centre for Potential for Excellence in Particular Areas in which the Departments of Cultural Studies has a crucial role, with Department of English and Foreign Languages and the Centre for Assamese Studies as partners. The research activities of the Departments of English and Foreign Languages, Cultural Studies, and Sociology are funded by UGC's SAP. There is a vibrant culture of organizing talks, seminars and workshops. Apart from the seminars and workshops organized by the various Departments and Centres, the Dean's office occasionally holds talks of an interdisciplinary nature. University of Texas (at Austin) Professor Toyin Falola's public lecture on "Rethinking African Cultures in an Age of Globalization" on August 1 2017 was one such. The digital archive created by Centre for Assamese Studies is particularly significant. It is an invaluable resource for anyone working in Assamese culture and literature. Another noteworthy event was the publication of learner's primers in Biate, Hrangkhoh, Khlema (Dima Hasao), Purum, Onaeme (Manipur), Liangmai and Yimchunger (Nagaland) by the Centre for Endangered Languages.

We continue to take student support seriously and students have been allotted faculty mentors. We also continue to give students' feedback due importance. In the coming year, incorporation of MOOCs in the teaching curricular will be a priority. In addition to using existing resources, some faculty members have begun to create their own online courses on an experimental basis with support from the Teaching and Learning Centre. Classrooms have been identified to be turned into smart classrooms. At the time of writing this report, the School of Humanities and Social Sciences in tandem with the rest of the university has begun preparations for the next cycle of NAAC assessment.

**THE PERSONNEL OF THE OFFICE OF THE DEAN**

**Dean, School of Humanities and Social Sciences**

P K Das, PhD (Gauhati)

Professor, Dept. of English and Foreign Languages

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**Office Staff**

A Bharali

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## **DEPARTMENT OF CULTURAL STUDIES**

### **THE DEPARTMENT**

The Department of Cultural Studies, Tezpur University is one of the oldest departments in India fully devoted to the pursuit of Cultural Studies. We approach culture from multiple vantage points, trying to understand how culture can be both a site for academic investigation as well as a tool for social change.

Founded in 1995, the Department of Cultural Studies engages with cultural products, practices and forms in all its dimensions, with a special focus on North East India. Students and faculty in the Department engage in exciting, interdisciplinary approaches to traditional fields of study. Further, 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 memory, cultural theory, transformation and transaction in translated literatures. A Cultural Interpretation Centre was set up in the Department of Cultural Studies in May 2017 under the aegis of Centre with Potential for Excellence in Particular Areas (CPEPA) granted by the University Grants Commission.

### **Academic programmes and Student intake:**

<b>Academic Programme</b>	<b>Student Intake</b>
MA in Cultural Studies	46
PhD	Intake variable, 03 in the Academic year, 2017 - 18

### **Major facilities and equipment available:**

- Cultural & Interpretation Centre
- Departmental Library
- Audio-Visual cum Seminar Hall

### **Major research findings/research and development activities:**

<b>Principal Investigator</b>	<b>Salient Research Findings</b>
D P Nath	1. Documenting different performing art traditions of North-East India 2. Documentation of marriage rituals of indigenous communities of North-East India 3. Documentation of traditional markets of North East India

**Research projects, ongoing and new:**

Project Title	Funding Agency	Amount (in INR)	Duration	Principal Investigator
Cultural Memory in North-East India: A Research and Documentation Program on Visual and Textual Narratives	UGC	230 lakh	5 years	D P Nath
Border trade at Pangsau: Transcending boundaries between India – Myanmar	MAKAIA S	3.08 lakh	2017-18	Juri Gogoi Konwar

**Publications****In International and National Journals**

Dowerah S and Nath D P. Cinematic Regimes of Otherness: India and Its North East, *Media Asia*, 44(2), 2017.

Konwar J G and Borah T. Indian Food Advertisements through a Gendered Lens, *Literary Insight*, 9(1), 2018.

Konwar J G and Konwar B K. Love: Neurotransmission Effect of Hormones, *Dream 2047*, 20(7), 2018.

Kandali M. The Patkai Tales: An interpenetration of folk/tribal/avant-garde art, *The Chitrolekha Journal of Art and Design*, 2(2), 2018.

**Conference proceedings**

Konwar J G and Namtham W. Retracing of Shared Culture: Tai Aitons of Assam and Tai Luangs of Maehongson, Thailand. In proceedings of the 13th International Conference on Thai Studies- Globalized Thailand Connectivity, Conflict and Conundrums of Thai Studies, Chiang mai, Thailand, July 15-18, 2017.

**Books and Book Chapters**

Baruah M. 2017. Baisnavia Dharar Bhakti Sangit Natir Angsagrahan. In P J Mahanta (Ed.). *Atit aru Bartaman*. Guwahati: Purbanchal Prakash.

Mahanta P J. (Ed.). 2017. *Asomor Vakti Sangeet.: Porompura aru Porivardhan*. Guwahati: Purbanchal Prakash.

Konwar J G. 2017. Mayamoria Vaishnav Sanskriti aru Jati Janajati Dumujat Moranhokol. In P J Mahanta (Ed.). *Asomor Vakti Sangeet.: Porompura aru Porivardhan*. Guwahati: Purbanchal Prakash.

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

D P Nath presented a joint paper (with P Hazarika), Appropriation of Jyotiprasad Agarwala: Iconisation of the



image of Rupkonwar, in a UGC sponsored National Seminar on Jyotiprasad Agarwala in Indian Context: Contemporary Society, Literature and Culture, organized by DHSK Commerce College, Dibrugarh, September 15 - 16, 2017.

D P Nath attended and presented a paper, Mob Violence and the Media in North East India in an International Seminar on Narratives of Violence and Terror in South Asia, at North Eastern Hills University, Shillong, November 16 -18, 2017.

Juri G Konwar attended a Convention on Tiwa Language, organized by Sahitya Akademi in collaboration with Tezpur University, at Tezpur University, Tezpur, September 22-23, 2017.

Juri G Konwar attended an International Conference on Ram in Asian Life, Literature and Art, Tezpur University, Tezpur, November 20-22, 2017.

Juri G Konwar attended a National Seminar on Women and Urbanity in North East India through the Lens of Cultural Memory at Tezpur University, Tezpur, December 1-2, 2017.

Juri G Konwar attended the 13th International Conference on Thai Studies, Chiang Mai University, Thailand, July 15-18, 2017.

Juri G Konwar attended the Workshop on Anthropology and Museums, Indian Museum, Kolkata, March 15-16, 2018.

Mandakini Baruah presented a paper on the Sense of Displacement in Assamese Literature, in a National Seminar on Sense of Displacement in Eastern Indian Literature organised by Sahitya Akademi and Kalinga Institute of Industrial Technology, Bhubaneswar, September 18-19, 2017.

Mandakini Baruah attended an AICTE approved Faculty Development Programme on Foundation Program in ICT for Education conducted by Indian Institute of Technology Bombay, Mumbai, March 8 - April 12, 2018.

Moushumi Kandali attended an International Conference on Ram in Asian Life, Literature and Art, organised by Ayodhya Research Centre in Collaboration with the Department of Hindi, Tezpur University, Tezpur, November 20 - 22, 2017.

Moushumi Kandali attended a National Conclave of Visual Art writers organised by National Lalit Kala Akademi, The National Academy of Art at Rabindra Bhawan, New Delhi, July 29 – 30, 2017.

Moushumi Kandali attended a National Conference on Tiwa Convention organised by Sahitya Akademi, National Academy of Letters, New Delhi at Tezpur University, Tezpur, September 22- 23, 2017.

Moushumi Kandali attended a National Seminar on Women and Urbanity in North East India through the Lenses of Cultural Memory organised by CEPEPA, Department of Cultural Studies, Tezpur University, Tezpur, November 27 - 28, 2017.

Hashik N K attended and presented a paper on Marginality and Home Cinema in an International Conference on The Politics of Difference organized by the Department of History, Assam University, Diphu in association with ICPR, India, September 22-23, 2017.

Hashik N K attended and presented a paper on Locating Panthalayani in the Transoceanic Trade in a National Seminar on Connecting Panthalayani: From Local to the Transoceanic, organized by S.A.R.B.T.M Government College, Koyilandy in association with the Department of Collegiate Education, Government of Kerala, Kerala, January 4-5, 2018.

## **TALKS BY THE FACULTY ABROAD AND IN INDIA**

D P Nath delivered an invited lecture, Discourse Analysis, Researching Subalternity in Humanities and Social Sciences, an ICSSR sponsored National Level 10 days Research Methodology Workshop, organized by Dr. Ambedkar Chair, Tezpur University, Tezpur, March 18 – 27, 2018.

Mandakini Baruah delivered an invited lecture, Sense of Displacement in Assamese Literature in a National Seminar on Sense of Displacement in Eastern Indian Literature, organized by Sahitya Akademi and Kalinga Institute of Industrial Technology, Bhubaneswar, September 18-19, 2017.

Moushumi Kandali delivered an invited talk in the National programme, Asmita: A programme for Indian women Writers, organized by Sahitya Academy, New Delhi and Dibrugarh University, at Dibrugarh University, Dibrugarh, August 7, 2017.

Moushumi Kandali delivered an invited lecture, The Art of Hemanta Misra on the Hemanta Misra Memorial Lecture, at the Vivekananda Institute of Culture, Guwahati, September 14, 2017.

Moushumi Kandali delivered an invited lecture, Creative Writing: The role of the Author as part of the Meet the Author Programme, organised by the Department of English of Handique Girls College, Guwahati, October 21, 2017.

Moushumi Kandali delivered an invited talk at an International Goa Arts and Literature Festival (GALF) 2017, The International Centre of Goa, Goa, December 7-10, 2017.

Moushumi Kandali delivered an invited lecture, Art Criticism at the 4 days Conference of Performance Art, organised by Prayas Adhyan Chakra, Bokakhat, December 25-28, 2017.

Moushumi Kandali delivered an invited talk, Feminism and Art, in a Cultural event on visual art, organized by Axomia Club, Tezpur, December 19, 2017.

Moushumi Kandali delivered an invited talk, Introducing Cultural Inputs in Curriculum Teaching, in a training program for the higher secondary teachers, organised by CCRT New Delhi at Tezpur, January 19 – 23, 2018.

Moushumi Kandali delivered an invited lecture at an International Brahmaputra Literary Festival 2018, organised by National Book Trust of India at Srimanta Sankardeva Kalakheta, Guwahati, February 9 - 11, 2018.

Moushumi Kandali delivered an invited lecture at the International Udaipur Literary Festival, organised by Indian Institute of Management, Udaipur, February 18, 2018.

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

National Seminar, Women and Urbanity in North-East India through the Lens of Cultural Memory, organised by Centre with Potential for Excellence in Particular Areas, November 27 - 28, 2017.

## **Distinguished visitors TO THE DEPARTMENT**

Mr. Anupam Sah, Head, Conservation CSMVS Museum, Mumbai

Ms. Deepika Sorabjee, Head, Culture Division, TATA Trust

Prof. Desmond Kharmawphlong, NEHU, Shillong

Dr. Deepirekha Kouli, Director, Directorate of Archaeology, Govt. of Assam

Dr. K. N Dixit, Former Director General, Archaeological Survey of India, New Delhi

Prof. Robin Dev Choudhury, Former Director General, National Museum, New Delhi

Dr. S S Biswas, Former Director General, National Museum, New Delhi

Mr. Y S Wunglenton, Director, Directorate of Archaeology, Museum of Assam

#### **OTHER IMPORTANT ACTIVITIES OF THE DEPARTMENT**

The Department of Cultural Studies, Tezpur University has set up a Cultural Interpretation Centre on 19<sup>th</sup> May 2017 under the aegis of the Centre with Potential for Excellence in Particular Areas (CPEPA) granted by the University Grants Commission.

#### **Activities under UGC's Centre with Potential for Excellence in Particular Areas in the Department:**

The Department has organized a Documentation Programme of, Archaeological Excavation Sites of Assam and Archiving of Visual Art (Phase-I): Modern Art in Dibrugarh, February 21 – 24, 2018.

Documentation Programme on, Archiving of Visual Arts from The Collection of Sri Nilpawan Baruah Guwahati and other artists of Assam February 16 – 19, 2018.

#### **Activities under UNICEF Project**

Block level training on adolescent Empowerment of Tea tribe Community of Nazira Block of Sivasagar district of Assam during October 22-26, 2017.

Block level training on adolescent Empowerment of Mishing Community of Desangmukh Block of Sivasagar district of Assam during November 3-7, 2017.

Block level training on adolescent Empowerment of Assamese Community of Hahchora village of Sivasagar Block of Sivasagar district of Assam during November 9-13, 2017.

#### **Number of Students who passed NET-JRF/GATE:**

NET - JRF : 01

#### **NOTABLE PLACEMENT:**

Smriti Misra, JOULES TO WATTS

#### **THE FACULTY OF THE DEPARTMENT**

##### **Professor**

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

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**Assistant Professors**

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  
Medical Anthropology

Email: jgkon@tezu.ernet.in

J V Das, PhD (Tezpur)

*Specialization/Areas of interest:* Media and Culture, Television Studies, Media and Globalization

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

Moushumi Kandali, PhD (Baroda)

*Specialization/Areas of interest:* Visual & Literary Culture, Contemporary Art & Culture of North-East India.

E-mail: moushumi@tezu.ernet.in

**THE STAFF OF THE DEPARTMENT**

Subhra Devi, PhD (National Museum Institute, Delhi)

*Specialization/Areas of interests:* Heritology and Heritage Studies, Museum Education, Preventive Conservation

E-mail: sd@tezu.ernet.in

A Dutta, BCom

Upper Division Clerk

E-mail: ashish@tezu.ernet.in

D Deka

Multi-Tasking Staff

E-mail: dipak@tezu.ernet.in

## **DEPARTMENT OF EDUCATION**

### **THE DEPARTMENT**

The Department of Education, Tezpur University was established in 2014 with an aim to prepare learners for a meaningful career in the field of education. Teacher Education Program assists students in developing knowledge, skills, and dispositions necessary to become effective and engaging teachers in an ever-changing society. The Department strives to achieve a comprehensive understanding of 'education as a field of knowledge'. It runs a Two Year BEd programme which prepares students to work as a teacher in schools. The Department also runs a PhD programme with variable intake of students. It engages in several community outreach activities and has been successful in building an environment of research in the field of education.

### **Academic programs and Student intake**

<b>Academic Programmes</b>	<b>Student Intake</b>
MA in Education	32
BEd	48
PhD	05

### **Major facilities and equipment available**

Well Equipped Resource Centers

1. Psychology Resource Centre
2. Art and Craft Resource Centre
3. Curriculum Lab
4. ICT Lab

### **Research projects, ongoing and new:**

<b>Project Title</b>	<b>Funding Agency</b>	<b>Amount (in INR )</b>	<b>Duration</b>	<b>Principal Investigator</b>
A comparative Study of Educational Aspiration Levels in Relation to the Intelligence, Socio-Economic Status and Parental Encouragement amongst Schedule Caste and Non-Schedule Caste students at Secondary Level in Assam	ICSSR	6 lakh	2016-18	N R Roy

## **PUBLICATIONS**

### **In International and National Journals**

Roy N R. Present scenario of Higher Education in Bodoland Territorial Area District of Assam, *Adhikar*, 7(12), 2017.

Roy N R and Das S S. Social Intelligence of Undergraduate Students in Tezpur University, *Journal of Contemporary Educational Research and Innovations*, 8(1), 2018

Sultana Y and Akhtar M. A study on human rights awareness among undergraduate students of Nagaon District, *Indian Journal of Psychometry and Education*, 49(1), 2018

Padmavathy R D. Changing Role of Teacher Educators in the Technological World. *International Education & Research Journal*, 3(5), 2017.

Padmavathy R D. Violence against Women Specific to North East India: A Trend Analysis, *International Journal of Research in Management & Social Science*, 5[4(v)], 2017.

Singh R. Study habits of senior secondary school students in relation to their gender and locality, *Asia Pacific Journal of Research*, I (LXXXVI), 2018.

Singh R. A study of environmental attitude of higher secondary school teachers in relation to their locality, *International Journal of Research in Management & Social Science*, 6 (1,VIII), 2018.

Pallai P, and Chakrawary S. Interrelationship between Education and Democracy, *Psycho-Lingua*, 47(2), 2017.

Chakrawary S, and Pallai P. A study on Integration of Value in teaching-learning with special reference to Rama Philosophy, *Psycho-Lingua*, 48(2), 2018.

Pallai P, and Chakrawary S. Integration of Technological Tools in Higher Education: Challenges and Opportunities, *Indian Journal of Psychometry & Education*, 49(1), 2018.

Chakrawarty S. Study Habits of Students with reference to their Electronic Games Playing Hours, *International Journal of Research in Management and Social Science*, 6(1,VIII), 2018.

### **Conference proceedings**

Roy N R. Activity based Teaching-Learning approach at Secondary Level of Education. In proceedings of an International Conference on Recent advances in Educational Psychology, Department of Education, NEHU, Shillong, 2018.

Padmavathy R D. Whatsapp Promote Excellence among Women Teachers: Specific to Assam. In Proceedings of an International conference on Technology integration for Educational Empowerment of women, Tamilnadu, 2017.

Padmavathy R D. Synergizing Vygotsky Psychology and Technology for Teachers Professional Development. In Proceedings of a National Seminar on Recent Trends in Teaching-Learning and the Future challenges in Technological Society, Tamilnadu, 2017.

Padmavathy R D. Social Media in Learning: A Challenge to Vygotsky Mediation and Activity Theory. In Proceedings of a National Conference on Impact of Social Media on Education in the Present Scenario, Tamilnadu, 2018.

Chakrawarty S. and Choudhuri R. Inclusive Education and Teacher's Attitude: A Step towards preparing Humane Reflective Teachers of 21<sup>st</sup> Century. In Proceedings of an International Conference on Humane Reflective Teacher: A Qualitative Approach to Teacher Education, BHU, Varanasi, 2017.

### **Books and Book Chapters**

Roy N R, and Das P. 2018. *Activity Based Learning: A Crosscutting Gender Perspective*. New Delhi: Adhyayan Publishers & Distributors.

Sultana Yeasmin. 2018. Constitutional provisions for social equity and equality of educational opportunities. In Sociology of education (self-learning module), Guwahati: KKHSOU Publication.

### **SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**

#### **International and National**

Pratima Pallia attended and presented a paper on, Relevance of Rama's philosophy in contemporary society, Department of Hindi, Tezpur University, Tezpur, November 20-22, 2017.

R D Padmavathy attended and presented a paper in an International conference on, Technology integration for Educational Empowerment of women, organised by Michael Job Memorial College of Education for Women, Coimbatore, Tamilnadu, July 3, 2017.

R D Padmavathy attended and presented a paper on, Recent Trends in Teaching-Learning and the Future challenges in Technological Society, in a National Seminar organised by Bharath College of Education, Thiruvarur, Tamilnadu, April 7, 2017.

R D Padmavathy attended and presented a paper, Impact of Social Media on Education in the Present Scenario, in a National Conference organised by Krishnashree College of Education, Namakkal, Tamilnadu, January 6, 2018.

R D Padmavathy attended workshop on Self Learning Materials for open development Mode of Learning, organised by CODL, Tezpur University, March 6-7, 2018.

R D Padmavathy presented a joint paper in a National Seminar on Skills in Education and Employability, organised by Krishnaswamy College of Education for Women, Puducherry, 9 Mar 2018.

Sashapra Chakrawarty attended an International Conference on Relevance of Ram's Philosophy in Contemporary Society, Department of Hindi, Tezpur University, Tezpur, November 20-22, 2017.

Sashapra Chakrawarty attended an International Conference on Inclusive Education and Teachers' Attitude: A Step towards Preparing Humane Reflective Teachers of 21<sup>st</sup> Century, Faculty of Education (K), B.H.U., Varanasi, November 15-16, 2017

#### **TALKS BY THE FACULTY ABROAD AND IN INDIA**

N R Roy delivered an invited lecture, Educational Leadership in the National Workshop organized by Department of Educational Administration, Maharaja Sayajirao University of Baroda, Gujarat, March 26-31, 2018

N R Roy delivered an invited lecture, Quality Enhancement and Contemporary Trends of Teaching-learning Process in Higher Education, in a two days UGC sponsored National Seminar organized by IQAC, S. Kula Women's College, Nambol, Manipur, February 16-17, 2018.

N R Roy delivered an invited lecture, Teaching Learning and Pedagogic Practices in Colleges of Assam, in a MHRD sponsored workshop organized by Jagiroad College, Jagiraod, Morigaon, Assam, March 09, 2018.

N R Roy delivered an invited lecture, Gandhian Approaches to Present Global Issues and Challenges, in a seven day National Level Workshop organized by Gandhi Study Center of Jhanji Hemnath Sarma College, Sivasagar, Assam on November 2, 2017.

N R Roy delivered an invited lecture, Educational Objectives: Level of Learning & Micro Teaching, in an Induction Training of Faculty organized by Teaching Learning Centre, Tezpur University, December 07, 2017.

N R Roy delivered an invited lecture, Curriculum Development & Curriculum Evaluation, in an Induction Training of Faculty organized by Teaching Learning Centre, Tezpur University, December 08, 2017.

N R Roy delivered an invited lecture, Taxonomy of Educational Objectives, Department of Education, Kaliabor College, Nagaon, October 14, 2017.

N R Roy delivered an invited lecture, New Dimension in School Training, at an workshop organized by Rotary Club of Greater Tezpur, November 15, 2017

Yeasmin Sultana delivered an invited lecture, Early Childhood Care and Education, in an workshop for teachers of pre-primary level organized by Takshashila Vidyapeeth, Tezpur University, Assam, April 23-25, 2018

R D Padmavathy delivered an invited lecture, Web Technology influence in Modern Classroom, in a National Seminar on Recent Trends in Teaching-Learning and the Future challenges in Technological Society, Tamilnadu, India, April 7, 2017.

R D Padmavathy delivered an invited lecture, Preparation of Research Tool in the National workshop, Namakkal, Tamilnadu, India, November 25, 2017.

H Sharma delivered an invited lecture, Pedagogic Processes in Elementary Schools and Learning Languages at Elementary Level, in a National level workshop organized by NIOS, MHRD at PRTI, Kumarghat, Unakoti, Agartala, January 17 and 18, 2018.

Pratima Pallai delivered an invited lecture, Different aspects of Report writing for Action Research Study, in a workshop organized by DER, NCERT Delhi, February 7-9, 2018

Sashapra Chakrawarty delivered an invited lecture, Double Discrimination: Inclusion of Girl Child with special Needs, in a Refresher Course organized by UGC- HRDC, Ranchi University, Jharkhand, July 7, 2018

Sashapra Chakrawarty delivered an invited lecture, Inclusive Education in Orientation Programme, organized by UGC- HRDC, Ranchi University, March 26, 2018

R Singh delivered an invited lecture, Pedagogic Processes in Elementary Schools and Learning Languages at Elementary Level in a National level workshop organized by NIOS, MHRD at PRTI, Kumarghat, Unakoti, Agartala, January 17 and 18, 2018.



## **DISTINGUISHED VISITORS TO THE DEPARTMENT**

Prof. Santosh Panda, former chairperson, NCTE, IGNOU New Delhi

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

National Education Day celebrated by the Department of Education on 11 November 2017

## **NUMBER OF STUDENTS PASSED**

NET-JRF: 02

## **THE FACULTY OF THE DEPARTMENT**

### **Associate Professor**

N R Roy, PhD (Assam)

### **Head of the Department**

*Specialization/Areas of Interest:* Measurement and Evaluation in Education, Research Methodology, Educational Planning and Management, Curriculum Development

E-mail: niledn@tezu.ernet.in

### **Assistant Professors**

Yeasmin Sultana, PhD (Assam)

*Specialization/Areas of Interest:* Language Education, Sociology of Education

E-mail: yeasmin@tezu.ernet.in

R D Padmavathy, PhD (Pondicherry)

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

E-mail: padma@tezu.ernet.in

H Sharma, PhD (DAVV, Indore)

*Specialization/Areas of Interest:* Educational Research, Educational Psychology, ICT in Education, Educational Administration, Guidance and Counselling, Early Childhood Education, Method of Teaching Physical Science and Biological Science

E-mail: hitesh@tezu.ernet.in

Sashapra Chakrawarty, PhD (BHU)

*Specialization/Areas of Interest:* Educational Psychology, Educational Research, Special Needs Education, Method of Teaching in Biological Science/Elementary 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, Teacher Education

E-mail: pratima@tezu.ernet.in

Md. Asif, MEd (JMI)

*Specialization/Areas of Interest:* Contemporary Indian Education, Teacher Education, Educational Technology, Pedagogy of Social Science

E-mail: mdasif@tezu.ernet.in

Sradhanjali Pradhan, PhD (RIE)

*Specialization/Areas of Interest:* Pedagogy of Physical Science, Educational Technology and ICT in Education, Measurement and Evaluation

E-mail: sradhanjali@tezu.ernet.in

R Singh, PhD (Panjab)

*Specialization/Areas of Interest:* Educational Technology, Educational Research, Special Education, ICT in Education, Language Education, Environmental Education.

E-mail: badotra@tezu.ernet.in

**Office Staff**

P Saikia,

Office Assistant

E-mail: tinku23@tezu.ernet.in

N Bauri

MTS

## **DEPARTMENT OF ENGLISH AND FOREIGN LANGUAGES**

### **THE DEPARTMENT**

The Department of English and Foreign Languages was established in 1994. It 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. In August 2012 and August 2015 an M.A. programme in Linguistics and Language Technology and an MA programme in Linguistics and Endangered Languages were introduced respectively. These programmes aim to give instruction and carry out research in Core Linguistics, Linguistics Theories, Field Linguistics, Computational Linguistics, Documentation and Archiving. Other academic programmes include Integrated MA in English (Introduced in August, 2011), Integrated BA BEd (Introduced in August 2011, but approved in 2015), and Certificate Course in Chinese.

### **Academic programmes and Student intake**

<b>Academic Programme</b>	<b>Student Intake</b>
MA English	50
MA Linguistics and Language Technology	20
MA Linguistics and Endangered Languages	20
Integrated M.A in English	20
Integrated BA BEd	10
Certificate in Chinese	39
PhD	Intake variable 13 for the Academic year 2017-18

### **Major facilities and equipment available**

The Department has a digital multimedia multi-purpose language laboratory with fifteen booths but currently out of order. The new 20 booths language laboratory is under process. 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 two smart classrooms and a computer laboratory for the use of students and research scholars.

### **Major research findings/research and development activities**

<b>Principal Investigator</b>	<b>Salient Research Findings</b>
P K Das	i. Specific studies are adding to our evolving understanding of Colonial Indian modernity. ii. An alternative paradigm of modernity is also emerging

### Research Projects, ongoing and new

Project Title	Funding Agency	Amount (in INR)	Duration	Principal Investigator
SAP- DRS-II	UGC	98 lakh	2015-20	P K Das Coordinator

### Publications

#### In International and National Journals

Daimari E. Landscape in Romesh Genesekera's Reef, The Sandglass, and Heaven's Edge, South Asian Review, 38(2), 2017.

Doley, S K. Can the Centre hold before things fall apart?, Rock Pebbles, XXI (II), 2017.

Doley S K. The 'Adjective' in Tibeto-Burman: A Case of the Mising Language, Language in India, 17(8), 2017.

Doley S K. The Misings and the question of Adjective in Mising, Language in India, 17(8), 2017.

Khoja B, Mohapatra B, and Sarma M M. Writing in EFL: Exploring students' perspectives in Syrian high school and university contexts, International Journal of Foreign Language Teaching & Research, 6(22), 2018.

Mohamad M, Sarma M M, and Mohapatra D. Teaching English in ESL and EFL Contexts: A Comparative Study in Syrian and Indian Public Schools, Journal of English Language and Literature, 5(1), 2018.

Phukan K. and Nath A K. Sexism and Gender Inequality in Tai Ahom, Dimorian Review, 4(6), 2017

#### Conference proceedings

Daimari E. Landscape and Representation: Reading two contemporary Sri Lankan English Fiction. In proceedings of an International Seminar on Politics of Representation: Interdisciplinary Perspectives, Dept of English, Sikkim University in collaboration with HRDD, Govt. of Sikkim, November 1 - 3, 2017.

Daimari E. Landscapes of Violence in Roma Tearne's Mosquito and Romesh Gunesekera's Heaven's Edge. In proceedings of an International seminar on Narratives of Violence and Terror in South Asia, Dept. of English, NEHU, Shillong, November 16 -18, 2017.

Doley S K. Esther Syiem's poetry: voice of defiance from 'another Indian' to the rest of the Indians. In proceedings of a National Seminar on Decoding the 'New' in New English Literature: Theory and Praxis, RGU, Arunachal Pradesh, September 14-15, 2017.

Doley S K. To the rest of the Indians from another Indian: Use of folk narratives as a political tool. In proceedings of a National Seminar on Oral Culture: People, Poetics, and Performance, NEHU, Shillong, August 22-23, 2017.

Doley S K. Influence of Assamese L2 on Mising L1 speakers: Should we accept bidirectional transfer in SLA studies. In proceedings of a Himalayan Symposium, Tezpur University, July 5-7, 2017.

Nath A K. Language shift and Maintenance in Tiwa: Responses towards new domains. In proceedings of a Tiwa Convention jointly organized by Sahitya Akademi and Tezpur University, September 22-23, 2017.

Phukan K. and Nath A K. Sexism and Gender Inequality in the Tai Ahom Language. In proceedings of the 23rd Himalayan Languages Symposium, Tezpur University, July 5-7, 2017.

### **Books and Book Chapters**

Biswas S. 2018. *R.K. Narayan's Malgudi Milieu: A Sensitive World of Grotesque Realism*. U.K.: Cambridge Scholar's Publishing.

Danta B K, Deepika S, and Thakur T. (Eds.). 2018. *The Unbilled Hour: Essays on Literature, Culture and Theory*, Bhubaneswar: Kitab Bhawan

Das P K (Ed). 2017. *In a Far Country (biography of Miles Bronson)*. Guwahati: Bhabani Books

Sarma M M. 2017. *Barnamoi Biswasahitya (World Literature)*. Guwahati: Guwahati University.

Sarma, M M. 2017. *Anubad Adhyayan:Tatva aru Prayog (Translation Studies: Theory and Practice)*. Guwahati: Bandhab.

Sarma, M M. 2018. *Kewal Sagarar Sabda (Only the sound of the sea)*. Guwahati: Papyrus

### **Book Chapter**

Daimari E. 2017. Tea Plantations, a natural beauty? Reading Patricia Weerakoon's Empire's Children. In Mishra S, and Dabir U (eds.). *Asian Literature in English: Identity and Survival*. Prestige Books: Delhi.

Danta B K. 2018. A Problem of Perspective: Joyce's Orwell's Dickens. In Danta B K, Deepika S, and Thakur T. (eds.). *The Unbilled Hour: Essays on Literature, Culture and Theory*. Bhubaneswar: Kitab Bhawan.,.

Danta F. 2018. Lakshminath Bezbaroa's Mor Jiwan Suworon: Points for Comparison with Phakirmohan Senapati's Atmcharita. In Danta B K, Deepika S, and Thakur T. (eds.). *The Unbilled Hour: Essays on Literature, Culture and Theory*. Bhubaneswar: Kitab Bhawan.

Sarma M M 2018. Menace in Pinter's Plays: A Reading of The Birthday Party and The Dumb Waiter. In Sarma, G (ed.). *Witness to Change: Readings in Literature. Essays in Honour of Professor Tarini Kanta Bhattacharyya*. Dept. of English, Cotton College: Guwahati.

Sarma M M. 2018. Ecology, Culture and Literature. In Bhadra S and Mukul S K (eds.). *Literature and Environmental Discourse*. New Delhi: Sarup Book Publishers Pvt. Ltd:

Sarma M M 2018. Jivani: Sangya aru Prakriti (Biography:Definition and Nature). In Das A C (ed.). *Asomiya Jivani aru Atmajivani Adhyayan (Studies in Assamese Biography and Autobiography)*. Guwahati: Purbanchal Prakash.

Sarma M M 2018. Asamiya Anuvad Natarak Parampara (Translated Plays in Assamese). In Das A C (ed.). *Asomiya Jivani aru Atmajivani Adhyayan (Studies in Assamese Biography and Autobiography)*. Guwahati: Purbanchal Prakash.

Sarma M M. 2017. Anka or Ankiya Nat:Genesis and Structure. In Gogoi R, Sonowal S and Pgu M (eds.).

Bhinna Samoy, bhinna chinta. Doomdooma: Doomdooma College.

Sarma, M M. Biswasahityar Dharana aru Sahityat Biswajanin Dharana (World Literature and the Notion of Universals in Literature). In Nath D (ed.). Tulanamulak Sahitya: Patabhumikat Asam (Comparative Literature in the Backdrop of Assam). Guwahati: Purbanchal Prakash.

## **SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**

### **International and National**

A K Nath attended a Conference on India's One Belt One Road Challenge: Views from North East-East India, Gauhati University, Guwahati, June 2, 2017.

Bashabi Gogoi attended and presented a paper, Doctor Zhivago on Film: David Lean's "Vision" of a Poetic Biography, in the International Conference on Transcending Cultural Boundaries: Studies of Foreign Languages, Literature and Culture in India, organized by the Department of Foreign Languages, Gauhati University, Guwahati in collaboration with the Institute of South Asian Studies, Russian State University for Humanities, Moscow and Centre for South East Asian Studies, Gauhati University, Guwahati, March 8-9, 2018.

B K Danta attended and presented a paper, To be or Not To be: Literary Criticism and the Tyranny of Relevance, at a Conference on Politics and Letters: The Function of Criticism at the Present Times, at Utkal University, Bhubaneswar, January 23-25, 2018.

B K Danta attended and presented a paper, The Novel in Search of the Northeast: People, Spaces, Politics at a Conference on Ethno-Eco-Mytho Facets of North East Indian Writing in English, CUTN, Thiruvapur, February 8-9, 2018.

B K Danta attended and delivered a plenary talk in the National Seminar on Ethno-Eco-Mytho Facets of North-East Indian Writings in English at Central University of Tamilnadu, Thiruvapur, February 8-9, 2018.

B K Danta attended a National Workshop on Documenting Oral Cultural Traditions of North East India as a Resource Person at National Institute of Rural Development & Panchayati Raj, Guwahati, February 16, 2018.

B K Danta attended and presented a paper, No One's Even Angry with Us Now, Just Bored: The Discipline Runs out of Excuses, Goes on Fencing; the Humanist, Challenged, Speaks; Or, Thinking Before Europe, in the International Conference organized by Forum on Contemporary Theory held at Mayfair Palm Beach Resort, Odisha, December 17-20, 2017.

D Mohapatra attended and presented a paper, Intercultural Communication Complications: English as a Lingua Franca in Multilingual University Campus, in the 10<sup>th</sup> Anniversary Conference of English as Lingua Franca, organized by University of Helsinki, Finland, June 12-15, 2017.

D Mohapatra attended and presented a paper, The real story of ELT in Syrian schools and the bumpy transition into university level, at the International Conference on Doing Research in Applied Linguistics 3/ 19<sup>th</sup> English in South-East Asia Conference 2017 held at King Mongkut's University of Technology Thonburi, Bangkok, Thailand, June 22-24, 2017.

D Mohapatra attended as a Resource Person and presented a paper, Managing Classroom Dynamics: A Changing Perspective, in a National Conference on The English Text in a North East Classroom: Pedagogy, Politics and Sociology of English Literature Teaching, organized by Tripura University in collaboration with DoNER at Tripura University, Tripura, November 2-3, 2017.

D Mohapatra co-presented a paper on, Disposable Educational Plans in Times of War: Curriculum B in Syria in

an International Conference on Aligning Education Systems to the Challenges of the Future held in the Department of Education, Shyama Prasad Mukherjee College, University of Delhi, Delhi, November 8-10 2017.

D Mohapatra attended and conducted a session in a workshop on, Addressing the Problems in Second Language Learning: Special focus on Assamese and English teaching in Assam, organized by H.P.B. Girls College, January 19, 2018.

D Mohapatra attended and presented a paper, Multilingual Approach to Language Teaching & Learning Practices in Indian Classrooms, in an International Conference on Language, Identity and Education in Multilingual Contexts, organized by Trinity College, Dublin, Ireland, February 1-3, 2018.

Daveirou Lanamai attended ten days Research Methodology Workshop on, Researching Subalternity in Social Sciences and Humanities organized by Dr. Ambedkar Chair, Tezpur University in collaboration with ICSSR, New Delhi at Tezpur University, Tezpur, March 18-27, 2018.

Esther Daimari attended and presented a paper, Landscape and Representation Reading Two Contemporary Sri Lankan English Fiction, in an International Seminar on Politics of Representation: Interdisciplinary Perspectives, organized by Sikkim University, Gangtok, November 1-3, 2017.

Reetamoni Narzary attended and presented a paper, Reluctant or Enthusiastic Messiah? The Politics of Homonization in the Jesus Novel, in an International Seminar on Politics of Representation: Interdisciplinary Perspectives, organized by Sikkim University, Gangtok, 1-3 November, 2017.

Reetamoni Narzary presented a paper, The Changing Status of Women: Myth and Reality with Special Reference to Northeast India, in an international conference at Kokrajhar Govt. College jointly organized in collaboration with Tata Institute of Social Sciences, Kokrajhar, March 7-8, 2018.

Sravani Biswas attended and presented a paper, Folk- Lore and Modernity in Arunachal Pradesh: An in Equal Interface, in the Symposium on Folk Literature of East and North East Regions: Continuity, Divergences and Merger organized by Sahitya Akademi in association with Rama Devi Bajla Women's College, Deoghra at Deoghra, September 4, 2017.

S K Doley attended and presented a paper, Motivation in Language Learning at the Tertiary Level: A Stimulus Appraisal- Based Study with Reference to Engineering Students Learning English as an L2, in an International Conference on Recent Advances in Educational Psychology, at the Department of Education, North Eastern Hill University, Shillong, March 15-16, 2018.

S K Doley attended and presented a paper, To the Rest of the Indian from another Indian: Use of Folk Narratives as a Political Tool, in a National Seminar on Oral Culture: People, Poetics, Performance, at North Eastern Hill University, Shillong, August 22-23, 2017.

S Sahoo attended and presented a paper, From Passive Victim to Strong Female Hero: Amish Tripathi's Representation of Sita in Sita: Warrior of Mithila, in an International Conference on In Search of the Hero(es) within the Genre and Beyond at Banaras Hindu University, Varanasi, February 21-26, 2018.

S Sahoo attended a National Seminar on, Revisiting Colonial Assam, as a Resource Person at Department of History, Dibrugarh University, Dibrugarh, March 29-30, 2018.

#### **TALKS BY THE FACULTY ABROAD AND IN INDIA**

B K Danta delivered a lecture, Odia Oral Narratives on Sankardeva, in a workshop on Documenting Oral Tradition, organized by MAKAIS and ICHR at NIRD, Guwahati, February 13, 2018.

B K Danta delivered a lecture, The Subaltern in Literary Theory and Criticism, in Research Methodology Workshop on Researching Subalternity in the Social Sciences and Humanities, Dr. Ambedkar Chair, Tezpur University, March 22, 2018.

Hemjyoti Medhi delivered a talk, From Oral to Digital: Perspectives from a Digital Archive Project on the Mahila Samitis in Assam, at an International Seminar on Digital Humanities and Digital Societies in the Contemporary World, University of Calcutta, Kolkata, January 18-19, 2018.

Hemjyoti Medhi delivered a talk, I alone am the rightful Panda for the Assamese, at Kalighat Temple: Reading Advertisements, Pilgrim Connections and the Political Economy of Vernacular Print Cultures, in the Bijuli (A Nineteenth Century Asamiya Periodical), The Book Unbound: Two Centuries of Indian Print. Jadavpur University and the British library, London, Kolkata, July 14-15, 2017.

#### **Distinguished visitors TO THE DEPARTMENT**

Dr Anjali Daimari, Department of English, Gauhati University, Guwahati  
Prof. Abhijit Gupta, Jadavpur University, Kolkata  
Prof. Anvita Abbi, Sahitya Akademi, New Delhi  
Dr Arzuman Ara, EFLU, Shillong Campus, Shillong  
Dr Bidisha Som, Department of HSS, IIT, Guwahati  
Prof. Chanchala C Naik, English and Foreign Languages University, Hyderabad  
Prof. George Louis Vendriem, Bern University, Switzerland  
Prof. G J V Prasad, Jawaharlal Nehru University, New Delhi  
Prof. Jayashree Mohanraj, English and Foreign Languages University, Hyderabad  
Prof. K. V. Subbarao, Prof. (Retd.), Delhi University, Delhi  
Prof. Margaret Ch. Zama, Mizoram University, Aizawl  
Dr Mimi Kevichusa Ezung, Department of Linguistics, Nagaland University  
Prof. Mukesh Ranjan, Jamia Millia Islamia, New Delhi  
Dr Niladri Sekhar Dash, Indian Statistical Institution, Kolkata  
Prof. Shailendra Kumar Singh, Department of Linguistics, North Eastern Hill University, Shillong  
Prof. Som Datta Mandal, Santiniketan  
Prof. Subir Dhar, Prof. of English (Retd.), Rabindra Bharati University  
Prof. Sukhbir Singh, Prof. of English (Retd.), Osmania University, Hyderabad

#### **Number of Students who passed NET-JRF/GATE**

NET-LS- 14, SET-06

#### **NOTABLE PLACEMENT**

Rashmi Mudoj, PGT English, KV Central University Tezpur

#### **THE FACULTY OF THE DEPARTMENT**

##### **Professors**

M M Sarma, PhD (Dibrugarh)  
*Specialization/Areas of interest:* Literature in English, Critical Theory, Fiction, ELT (Syllabus Design and Materials Production) and Linguistics  
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

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P K Das, PhD (Gauhati)

Dean, School of Humanities and Social Sciences

*Specialization/Areas of interest:* Indian Writing in English, American Literature

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Madhumita Barbora, PhD (Tezpur)

**Head of the Department**

*Specialization/Areas of interest:* Linguistics (Morphology, Syntax, Language Acquisition), Language Documentation, Field Linguistics

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, Applied Linguistics

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**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

Hemjyoti Medhi, PhD (Delhi)

*Specialization/Areas of interest:* Gender Studies, Women's Studies

E-mail: hjyoti@tezu.ernet.in

S Sahoo, PhD (Tezpur)

*Specialization/Areas of interest:* Indian Writing in English, Ecocriticism, Travel Writing

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**Assistant Professors**

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

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Pallavi Jha, PhD (Hyderabad)

*Specialization/Areas of interest:* Children's Literature, Popular Culture and Literature, Postcolonial Writing

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Bashabi Gogoi, PhD (Gauhati)

*Specialization/Areas of interest:* Indian Writing in English, Adaptation Theory

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A K Nath, PhD (JNU)

*Specialization/Areas of interest:* Language Typology, Morphology, Language Endangerment, Multilingualism,

Sociolinguistics

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Bipasha Patgiri, MPhil (JNU)

*Specialization/Areas of interest:* Phonology (Prosody, Dialectology, Language Typology and Syntax)

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Esther Daimari, MPhil (Gauhati)

*Specialization/Areas of interest:* South Asian Literature

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A Gope, MA (Hyderabad)

*Specialization/Areas of interest:* Acoustic Phonetics with special interest in Tone, Psychoacoustics, Computational Linguistics, International Phonology and Language Documentation

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S K Doley, PhD (EFLU, Shillong)

*Specialization/Areas of interest:* English Language Education

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Daveirou Lanamai, MA (JNU)

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Pallavi, MPhil (JNU)

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#### **Visiting Fellow**

S U Ahmed, Diplôme de deuxième cycle (Université de Paris I. Panthéon-Sorbonne Paris, France)

*Specialization/Areas of interest:* French Language

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T K Mazumdar, MA Russian (Part-I Completed) (Calcutta), Diploma in German (Ramkrishna Mission Institute of Culture, Kolkata)

*Specialization/Areas of interest:* German Language

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#### **Technical Staff**

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Technical Assistant

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#### **Office Staff**

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UDC

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P K Borah

MTS

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## *School of Humanities and Social Sciences*

### **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 students intake**

<b>Academic Programmes</b>	<b>Student Intake</b>
Certificate Course	10
PG Diploma in Translation	23
MA in Hindi	25
PhD	Intake variable 10 in the Academic year 2017-18

#### **PUBLICATIONS**

##### **In International and National Journals**

Anju Lata. Maila aanchal upnyas mein stri-vimarsh ke vividh aayam, 06(2), 2017.

Anushabda. Nind kyon raat bhar nhin aati..., *Bhasha*, 273, 2017.

Anushabda. Aadi gadya kavyon ka kram-wikas, *Wishesh sandarbh: Sanskrit Katha Sahitya, Seemant*, 3(4), 2017.

Anushabda. Asamiya aatmkatha ka atit, *Bhasha*, 277, 2018.

Tripathi S. Lok, Shastra aur aadiwasi Jeevan, *Shabdarth*, 109, 2017.

Tripathi S. Aadiwasiyon ka mithkiya vivechan, *Shodh bharti*, 109, Feb - April.2018.

Tripathi S. Nacchayo bahut gopal ka yaunik yatharth, *Shabdarth*, 03, March 2018.

##### **Books and Book Chapters**

Anju Lata. 2018. Upnyas ka wartman: aadhunikta ke daur mein vykti ki samajikta ka aakhyan (samaya sargam-

Krishna sobati). In Singh O P, and Shitanshu (Eds.), New Delhi: Prakashan Sansthan.

Anushabda. 2017. *Cinema: Lokranjan banaam Lokmangal*. In Tandon P, Tiwari S (Eds.). Sahitya, Cinema aur Samaj, New Delhi: Nawa Unnayan Sahityik Society.

Anushabda. 2018. *Bhakti aandolan aur Shrimant Shankardew*. In Tandon P, Tiwari S (Eds.). Madhyakalin Hindi Sahitya Samwedana, Shastra aur Samasaamayikata. New Delhi: Nawa Unnayan Sahityik Society.

Anushabda. 2017. *Poorvottar bharat ki aadiwasi lok kathaon mein mithakiya chetana* (Bodo lok kathaon ke wishesh sandarbh mein). In Poorvottar Bharatiya Sahitya Sahityamala Yojana. New Delhi: Central Hindi Directorate.

Anushabda. 2018. *Gita ki mahatta ewam iyatta*. In: Mandakini Sharma (Ed.). Gita bhashyon mein nihit Sandesh. New Delhi: Akhil Bharatiya Sahitya Parishad Nyas.

#### **Other publications**

##### **Book Reviews**

Tripathi S. 2017. Ramesh Tiwari: Sathottar vyang aur Shrilal Shukla. *Vyangya yatra*, New Delhi.

##### **Souvenir Edited:**

Anushabda. 2017. Ram in Asian life, literature and Art.

#### **SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**

##### **International and National**

Tripathi S. attended and presented a paper, Asomiya ki brajawali banam Hindi, at an International seminar on Hindi bhasha ki parampara: prayog aur sambhawanyen at Uttar Pradesh Hindi Sansthan, Lucknow, Sahitya Akadami, New Delhi & Vidyashri nyas, Varanasi, January 13-14, 2018.

##### **TALKS BY THE FACULTY ABROAD AND IN INDIA**

Anushabda delivered an invited lecture as a resource person on, Hindi aur Sanskrit ka antahsambandh in a National Seminar on Hindi Sanskritayoh antahsambandh organized by the Delhi Sanskrit Academy, Delhi, July 15<sup>th</sup> 2017.

Anushabda delivered an invited lecture as a resource person on the topic, Wartman Samay men Takniki Shabdawali ki aawashyakata ewam mahatwa, in a two day National Seminar organized by Commission for Scientific and Technical Terminology, MHRD, Delhi, at Kaliabor College, Tezpur, September 22-23, 2017.

Anushabda delivered an invited lecture as a resource person on the topic, Prashasanik mamlon mein Rajbhasha ka prayog, at Bharatiya Wimanpattan Pradhikaran, Uttari Kshetra Mukhayalaya, New Delhi, in a two day National Seminar organized by Commission for Scientific and Technical Terminology, MHRD, Delhi, October 5-6, 2017.

Anushabda delivered an invited lecture as a resource person on the topic, Takniki Shabadwali: Swaroop, Mahatwa ewam Aawashayakata, in a National Seminar organized by Commission for Scientific and Technical Terminology, MHRD, Delhi, at Manohari Devi Kanoi Girls College, Dibrugarh, Assam, October 13<sup>th</sup>-14<sup>th</sup>, 2017.

Anushabda delivered an invited lecture as a chief guest on, Wartman Bharatiy Samaj aur Sanskriti mein Yoga ki Upadeyata organized by DRDO, Tezpur, November 17<sup>th</sup>, 2017.

Anushabda delivered an invited lecture cum Introduction/Demonstration on, Keligopal (A Naat of Shrimant Shankardev), organized by the Ayodhya Research Institute, Ayodhya, Department of Culture, and Government of Uttar Pradesh, in Barasana, Mathura, U.P. on the occasion of 'Rangotsawa 2018', February 24, 2018.

Anushabda delivered an invited lecture as a resource person on, Manawiya moolya aur hindi sahitya at Central Institute of Himalayan Culture Studies, Dahung, Arunachal Pradesh, March 09, 2018.

Anushabda delivered an invited lecture as a resource person on, Asamiya lokjiwan mein raam in an International Seminar on, Ram in Global Art, Culture and Literature at S.P.M. College, University of Delhi, Delhi, April 20, 2018.

Tripathi S. delivered an invited lecture as a resource person on, Bhikhari thakur ki samajik chetna on the occasion of Bhikhari thakur ki smriti organized by Dept. of Hindi, Baba Awadhut Bhagwan Ram P.G. College, Anpara, Sonbhadra, July 11, 2017.

Tripathi S. delivered an invited lecture as a resource person on Shalivigyan ka saidhantik paksha in Lecture Series of Dept. of Hindi, Central University of Tamil Nadu, July 17, 2017.

#### **SEMINAR/WORKSHOP/SYMPOSIUM/INVITED LECTURES ORGANISED BY THE DEPARTMENT**

International Conference, Ram in Asian life, literature and art, sponsored by Ayodhya Research Institute, Ayodhya, Department of Culture, Government of Uttar Pradesh (U.P.) and Vani Foundation, New Delhi, November 20-22, 2017.

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

##### **Faculty member**

Tripathi S. received a National Award on "Sahitya Shiromani" by Antarrashtriya Hindi Sewi Sansthan, Allahabad, 2017.

#### **Number of Students who passed NET-JRF/GATE:**

SLET – 02

## THE FACULTY OF THE DEPARTMENT

### **Professor**

A K Nath, PhD (Manipur)

### **Head of the Department**

*Specialization/Areas of Interest:* Medieval Poetry, Folkloristic, Comparative Literature

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### **Associate Professor**

S K Tripathi, PhD (BHU)

*Specialization/Areas of Interest:* Applied Linguistics, Indian Poetics, Folkloristics

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### **Assistant Professor**

Anjulata, PhD (Tezpur)

*Specialization/Areas of Interest:* Medieval Poetry, Fiction

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Anushabda, PhD (Delhi)

*Specialization/Areas of Interest:* Linguistics, Media, Poetry, Indian and Western Poetics.

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## THE STAFF OF THE DEPARTMENT

S Ingti, BA (Gauhati)

Assistant

Email: ingti@tezu.ernet.in

A K Nath

MTS

## **DEPARTMENT OF LAW**

### **DEPARTMENT**

The Department of Law was established in the year 2016. It had no academic programme during the period of April 2017 to March 2018. However, Two-Year LL.M. programme with specializations in (i) Criminology and Criminal Law (ii) Human Rights, International Humanitarian Law and Law relating to Migrants has started from the autumn session of academic year 2018. Apart from teaching component, the Department is engaging with research and extension activities. During this period, they were also engaged in the preparation of syllabus and regulations of different programs in law.

### **Academic programmes and Student intake**

<b>Academic Programme</b>	<b>Student Intake</b>
LL M	20

### **Books and Book Chapters**

Acharjee M. 2017. Elderly Abuse in India: A Human Right Violation. Dr. Safiqur Rahman & Dr. Golok Chandra Deka (Eds.). Human & Global Challenges. Guwahati: IQAC, Guwahati College.

Syiem A H. 2017. Rights of Tribals in India: Constitutional and Legal Protection. In Dr. Safiqur Rahman (Eds.). Illumine-Light up. Guwahati: Unity Education Foundation.

### **SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**

Angel H. Syiem attended a Sensitization Workshop on Technological Empowerment of Women organised by IIT, Guwahati, November 3-4, 2017

Angel H. Syiem, D K Sarmah and Madhumita Acharjee attended a one-month long Induction Programme jointly organised by TLC, TU & MHRD, November 23 to December 22, 2017

Madhumita Acharjee attended a sensitization workshop on Technological Empowerment of Women organised by IIT, Guwahati, November 3-4, 2017

## **TALKS BY THE FACULTY ABROAD AND IN INDIA**

D K Sarmah spoke on, The Legal perspectives of Heritage, as an invited speaker in a panel discussion on, Heritage and Sustainability organized by the Department of Cultural Studies, Tezpur University, Tezpur, April 18, 2017.

D K Sarmah spoke on Peace Nobel Prize as part of a Lecture series on the works of Nobel Laureates 2017 organized by Tezpur University, November 15, 2017.

D K Sarmah presented a paper, Land Rights in Assam: Legal Dimensions in a National seminar on Need of Land Law Reforms in Assam in view of the Rights of the indigenous people at the Tezpur Law College, February 23, 2018.

D K Sarmah delivered a lecture, Legislative and Institutional framework of Human Rights in India in a One-Day Training Programme on Human Rights organized by the Centre for Inclusive Development, Tezpur University, March 26, 2018.

D K Sarmah delivered a lecture on, Feminist Jurisprudence in India in a panel discussion on the Feminism Movement: Need, Relevance and Understanding among the Masses in the 21<sup>st</sup> century, organized by the Department of Mass Communication and Journalism, Tezpur University, March 8, 2018.

## **THE FACULTY OF THE DEPARTMENT**

### **Professors**

B K Chakravarty, PhD (Gauhati)

### **Head of the Department**

*Specialization/Areas of Interest:* Constitutional Law

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### **Assistant Professors**

Angel Habamon Syiem, LLM (SLS)

*Specialization/Areas of Interest:* Human rights, International Law and Tribal issues.

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D K Sarmah, LLM (IPU)

*Specialization/Areas of Interest:* Criminology, Criminal Law.

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Madhumita Acharjee, LLM (Assam)

*Specialization/Areas of Interest:* Criminology, Juvenile Justice, Rights of elderly persons.

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### **Office Staff**

Bidisha Baishya,

Office Assistant.

B Bora

MTS



## **DEPARTMENT OF MASS COMMUNICATION AND JOURNALISM**

### **THE DEPARTMENT**

Established in 2001, the department of Mass Communication & Journalism provides state-of-the-art facilities for the students to produce industry grade quality media content. The Department has been consistently endeavouring to create a band of dedicated and professional communicators and journalists for the society to make a difference.

### **Academic programmes and student intake**

<b>Academic Programme</b>	<b>Student Intake</b>
MA in Mass Communication	37
MA in Communication for Development	14
PhD	Intake variable Nil in the last Academic year

### **Research projects, ongoing and new:**

<b>Project Title</b>	<b>Funding Agency</b>	<b>Amount (in INR)</b>	<b>Duration</b>	<b>Principal Investigator</b>
Advancing Communication for Development as a strategy for social change in Assam and NE Region Phase II	UNICEF	Re 21.31 lakh	Mar-Dec, 2018	Joya Chakraborty
A study on the Acculturation Process of the Mishing tribe of Assam and Arunachal Pradesh	ICSSR	Re 4 lakh	2017-19	U K Pegu

### **PUBLICATIONS**

#### **In International and National Journals**

Sharma H., and Pegu U. 2018. Villages and Rural Life in Contemporary Hindi Films on the Verge of extinction, *International Journal of Economics, Commerce and Business Management*, 5(1): 422-427.

Pegu U. 2017. Environment as News: An Analysis on the Challenges in Environmental Reporting, *AGU International Journal of Management Studies & Research*, 5: 2455-6092.

Pegu U. 2017. Cinema and the Environment: An Inquiry on Ecocritical Academia, *Desh Vikas*, 4(2): 51-60.

Pegu U. 2017. Process Re-engineering and Change Management in E-Governance in Assam, *International Journal of Research in Management & Social Science*, 5(3).

Pegu U. 2017. Media in Conflict Transformation and Peace Process: An Academic Inquest, Mizoram University Journal of Literature and Cultural Studies.

Deori M. 2017. Technology Mediated Media Education: A Case Study of E-Learning Initiatives in India, International Journal of Communication Research, 7(2).

### **Books and Book Chapters**

Bora A. 2017. Radio – the evergreen medium (2017). In Nanda, V. (ed.). Radio Journalism in India. Delhi: Kanishka Publishers.

Bora A. 2017. Media in Assam : A few relevant aspects. In Electronic & new media in North-East India. Guwahati: Communication & Journalism Dept., Gauhati University.

Bora A. 2017. Communication for Development : A literature review. In A Dutta, B. Bharali, and L.A. Goswami (Eds). Decoding Communication for Development in India's Northeast, Guwahati: Dept. of Communication and Journalism Gauhati University in association with Communication for Development Section, UNICEF, Assam, India.

Chakraborty, Joya. 2017. Communication for social change: Course, curriculum and development. In A Dutta, B. Bharali, and L. A. Goswami (Eds). Decoding Communication for Development in India's Northeast, Guwahati: Dept. of Communication and Journalism Gauhati University in association with Communication for Development Section, UNICEF, Assam, India.

Pegu U. 2017. E-Governance in India: Concept, Initiatives and Challenges. Germany: Lambert Publishing House.

### **Other publications**

Bora A. 2018. A resurgent print media : regional language journalism to the fore. Dhenkanal: Silver Jubilee special publication of Indian Institute of Mass Communication.

### **SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**

U Pegu presented a paper, Refugee Crisis in India: An Inquest on the Rohingya Debacle, in a National Seminar on Conflict in South Asia – Its Consequences and Implications, organized by Don Bosco College, Golaghat, March 16- 17, 2018.

U Pegu presented a paper, Aspirations of Indian Hegemony: Reflections in News Media, in a National Seminar on Conflict in South Asia – Its Consequences and Implications, organized by Don Bosco College, Golaghat, March 16- 17, 2018.

U Pegu presented a paper, Exploring the Understanding of the Concept of Secularism among Media Professionals in North-East India, in a National Seminar on Mass Media and National Integration: Freedom and Responsibility, organized by the Dept. of Mass Communication, Assam University, Silchar, February 8-9, 2018.

U Pegu presented a paper, Identity Question in Assam: Ambivalent Subjectivities-Who is Indigenous? in a National seminar on Politics of Difference (Relocation Subalternity/ marginality, organized by Assam University, Silchar, September 22-23, 2017.

U Pegu presented a paper, Qatar Crisis: Western Media's coverage of Saudi Arabia's demand to shut down Al Jazeera, in an International Seminar on Media and Politics, organized by the Dept. of Mass Communication, Assam University, Silchar, December 6-7, 2017.

Jaya Chakraborty presented a paper, Child rights and media literacy as conduit to adolescent empowerment, in a National Conference on Communication for Social Change, Development and Empowerment in Rural India, organized by Kalinga Institute of Industrial Technology, Bhubaneswar, December 4-5, 2017.

Anjuman Borah presented a paper, Balaknama – Stimulating Children’s Participation, Empowering Children’s Voices, at a National Level Conference on Communication for Social Change, Development and Empowerment in Rural India, organized by Kalinga Institute of Industrial Technology, Bhubaneswar, December 4-5, 2017.

Junali Deka participated in a Faculty Development Programme organised by IIT Bombay, at Tezpur University, Tezpur, August-September, 2017.

#### **TALKS BY THE FACULTY ABROAD AND IN INDIA**

Abhijit Bora conducted four sessions at a Refresher Course on Communication for Development at HRDC, Gauhati University, Guwahati, November 13-14, 2017.

Joya Chakraborty conducted a workshop on Media Literacy for children at Army Public School, Missamari, November 15, 2017.

Joya Chakraborty conducted a session at a Refresher course on Communication for Development, organized by Dept. of Communication and Journalism, Gauhati University in collaboration with UNICEF, November 2, 2017.

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

Seminar and Workshop on Gandhian Philosophy and Peace Journalism in Collaboration with Gandhi Smriti and Darshan Samiti, New Delhi, February 21-22, 2018.

Children’s Media Workshop, at Army Public School, Missamari, November 15, 2017.

#### **DISTINGUISHED VISITORS TO THE DEPARTMENT**

Prof. Sanjeev Bhanawat, (Retd Prof. & Head), Mass Communication Dept., Rajasthan University, Jaipur.

Mr Sushanta Talukdar, Editor, NEZINE.com.

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

As a part of the MA in Communication for Development programme, the students are engaged in developing participatory videos on various social issues. The impact of the field activities under this programme has made significant impact in generating awareness in the community.

**NUMBER OF STUDENTS WHO PASSED NET-JRF/GATE: NET-JRF: 5**

**NOTABLE PLACEMENT: ETV Bharat, Gandhi Fellowship, PRADAN**

#### **THE FACULTY OF THE DEPARTMENT**

##### **Professors**

S K Behera,

Professor of Eminence

*Area of Interest:* Communication Theory and Research, Gender and Media

E-mail: sunilkb@tezu.ernet.in

A Bora, PhD (Gauhati)

**Head of the Department**

*Area of Interest:* Radio, Development Communication

E-mail: abhijitb@tezu.ernet.in / abhijitbora71@rediffmail.com

**Associate Professors**

P Anbarasan, PhD (JNU)

*Area of Interest:* Media Studies, Cultural and Subaltern Studies, International Communication

E-mail: anbu@tezu.ernet.in

Joya Chakravarty, PhD (Hyderabad)

*Area of Interest:* ICT for Development, Development Communication, Women and Media; Traditional Media.

E-mail: jc@tezu.ernet.in

U K Pegu, PhD (JMI)

*Area of Interest:* ICT Implications on Society, Science Communication, Film Studies, and Media Analysis etc.

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**Assistant Professors**

P J Daimari, PhD (Tezpur)

*Area of Interest:* Film Studies, Photography

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Anjuman Borah, PhD (Tezpur)

*Area of Interest:* Media and Children, Children's Participation, Participatory Communication

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Kapou Malakar, PhD (Tezpur)

*Area of Interest:* New Media for development, Multimedia Journalism, Online Journalism, Media studies

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Junali Deka, PhD (Assam)

*Area of Interest:* Cultural Studies, New Media and Society, Visual Communication, Documentary Film Making

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M Deori, MA (Tezpur)

*Area of Interest:* New Media Journalism, Multimedia Production, Media and Disaster Management

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**Technical Staff**

R C Nath, PhD (Tezpur)

Technical Officer

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C Singha,

Senior Technical Assistant,

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**Office Staff**

Dipanjali Sinha

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B Das

MTS

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## **DEPARTMENT OF SOCIAL WORK**

### **THE DEPARTMENT**

The Department of Social Work, Tezpur University was established in 2014 to respond to the dearth of good Social Work schools and trained social work professionals in the North East Region (NER) of India. The Department has successfully completed four years in the path of imparting quality social work training. Students of the Department are placed in various reputed NGO's both within the state of Assam and outside. In addition to the M.A. Programme, the Department is planning to start its Phd. programme in the coming academic year 2018-19.

### **Academic programmes and Student intake:**

<b>Academic Programme</b>	<b>Student Intake</b>
MA	20

### **Research projects, ongoing and new**

<b>Project Title</b>	<b>Funding Agency</b>	<b>Amount (in INR )</b>	<b>Duration</b>	<b>Principal Investigator</b>
An Assessment of Conflict as A Social Determinant of Health in The North-East Region of India	ICMR, New Delhi	18.75 lakh	2016-18	Veda Yumnam

### **Publications**

#### **In International and National Journals**

Banik P, and Bijitha P R. Homelessness: A Case Study of Mankhurd in Mumbai, *The Asian Man*, 11(2), 2017.

Banik P. Floods in Assam: a Post-Disaster Impact on Women and Livelihood, *Journal of Exclusion Studies*, 8(1), 2018.

Nair S S, and Kalarivayil R. Has India's Surrogacy Bill Failed Women Who Become Surrogates?, *ANTYAJA : Indian Journal of Women and Social Change*, 3(1), 2018.

Saha A. Substance Abuse Among Street Children: School Risk and Protective Factors, *Social Defence Journal*, 2, 2018.

Xaxa V. The Jharkhand Freedom of Religion Act, 2017. *Economic and Political Weekly*, 52(40). 2017.

## **Books and Book Chapters**

### **Book chapter**

Saha A, and Lama A. 2018. My Culture My Mental Health, In Dey J (Ed.). *Globalization and the Concern of Social Landscape of India*. New Delhi: Renu Publishers.

Xaxa V. 2018. Tribes and Higher Education in India. In Krishna Kumar (Ed.). *Routledge Handbook of Education in India: Debates, Practices and Policies*. New Delhi: Routledge India

### **Books**

Xaxa V., Saha D., and Singha, R. 2018. *Work, Institutions and Sustainable Livelihood: Issues and Challenges of Transformation*, Singapore: Palgrave Macmillan.

Xaxa, V., and Tikoo, R. 2017. *Forest Lanterns: A Collection of Essays on Solutions for Nourishing India's Tribal Children*, Gurgaon: Penguin.

### **Other Publications**

Sharma N. 2017. Disability and Media. UGC e-PG Pathshala

Sharma N. 2017. Civil Society, Media and margins. UGC e PG Pathshala

## **SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**

### **International and National**

R Kalarivayil attended an International Conference on The Politics of Distribution: Migrant Labour, Development and Religious Aid, National University of Singapore, Singapore, November 16-17, 2017.

Veda Yumnam attended an International Conference on Critical Public Health Consequences of Double Burden of Malnutrition and the Changing Food Environment in South and South-East Asia , India International Centre, New Delhi, March 28-30, 2018

### **TALKS BY THE FACULTY ABROAD AND IN INDIA**

Veda Yumnam delivered an invited lecture, Unpacking health equity in conflict affected areas: A Social Determinants Framework, at the Indian Statistical Institute, North-East Centre, Tezpur, 15 December, 2017.

### **Distinguished visitors to the Department**

Mr. Lalit Kumar Natarajan, Love and Acceptance, Trippur.

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

### **Research Scholar/Student**

Nazifa Shaheen was selected as Best Actress in the EKAYAN- Social Workers Meet, Dibrugarh University, September, 2017.

### **OTHER IMPORTANT ACTIVITIES OF THE DEPARTMENT**

Programme on Disability Awareness was organized at Kolihamari Play Ground, Samdhara Panchayat in collaboration with Department of Psychiatric Social Work, LGBRIMH, Tezpur on the occasion of Womens' Day, March 8, 2017

Students of the Department performed a street play on Mental Health Awareness at LGBRIMH on the occasion of World Mental Health Day, October 10, 2017.

**Number of Students who passed NET-JRF/GATE**  
NET - 05

### **NOTABLE PLACEMENT**

Haq Centre for Child Rights  
Professional Assistance for Development Action (PRADAN)  
Seven Sisters Development Assistance (SeSTA)  
The Action Northeast Trust (The ANT)  
Global Peace Foundation  
Public Health Foundation of India  
Zublee Foundation

### **THE FACULTY OF THE DEPARTMENT**

#### **Professors**

V Xaxa, PhD (IIT, Kanpur)

#### **Head of the Department**

*Specialization/Areas of Interest:* Agrarian Studies, Plantation Labour, Indigenous Peoples, Development Studies  
E-mail: xaxasws@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.

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Veda Yumnam, MPhil (JNU)

*Specialization/Areas of Interest:* Social Determinants of Health, Disaster Management, Nutrition, Social Epidemiology of HIV/AIDS, Health Systems Research.

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R Kalarivayil, PhD (JNU)

*Specialization/Areas of Interest:* Innovation Studies, Science and Technology in Rural Development.

E-mail: rajeshk@tezu.ernet.in

Namami Sharma, MPhil (Delhi)

*Specialization/Areas of Interest:* Ecology and livelihood, Cultural ecology, Tribal Studies, Rural Community Development

E-mail: namamis@tezu.ernet.in

Prerana Banik, MPhil (TISS, Mumbai)

*Specialization/Areas of Interest:* Food security, Gender and livelihood, Labour rights, Inclusive policies and development, Marginalised group and social development

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**Office Staff**

Kiran Mahalia

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G Borah

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## **DEPARTMENT OF SOCIOLOGY**

### **THE DEPARTMENT**

The Department of Sociology at Tezpur University was established in 2006 with a Masters Programme. Subsequently the Ph.D programme was launched in 2008. The Department is a recipient of UGC Special Assistance Programme (2016-2021) and is emerging as one of the important centers of learning and research in sociology in India. The faculty members of the department have a wide range of interests and expertise and are currently engaged in research in areas such as Development, Education, Environment, Ethnic Conflicts, Urbanisation, Governance, Health, Migration, Social Movements and Science Studies. This diversity is reflected in their publication, completed and ongoing research projects, seminars and conferences, as well as in the teaching and learning efforts in the department. The department also organized the 42<sup>nd</sup> All India Sociological Conference in the year 2016 on the theme of 'Rethinking Sociological Traditions in India'.

The department is dedicated toward creating competent and socially sensitive graduates through rigorous teaching programmes and extension activities. Within a short period of time the students have been able to make a mark at national level which is attested by the fact that around 83 graduates have cleared UGC NET/JRF exams. The alumni of the department are employed in various capacities in different sectors. These include faculty positions in Universities, colleges and research positions within government institutions and at various national and international development organizations.

### **ACADEMIC PROGRAMMES AND STUDENT INTAKE**

<b>Academic Programmes</b>	<b>Student Intake</b>
MA	35
PhD	7

### **RESEARCH PROJECTS, ONGOING AND NEW**

<b>Project Title</b>	<b>Funding Agency</b>	<b>Amount (in INR)</b>	<b>Duration</b>	<b>Principal Investigator</b>
UGC-SAP DRS-I	UGC	40 lakhs	2016-21	C K Sharma

### **PUBLICATIONS**

#### **In International and National Journals**

Borah P P and Deka R. Some Aspects of Identity in Plural Societies. *North Eastern Research Bulletin*, 24:22-33. 2017.

Choudhury N and Kikhi, K. Understanding Mental Health: Perspectives from Three Competing Paradigms. *Anukriti*. 7(3). 2017.

Choudhury N and Kikhi K. Sociological Perspective on Mental Health of Women. *Indian Journal of Integrated Research and Analysis*, 1(4), 2017.

Sharma C K and Baruah P. Small Tea Plantation and its Impact on the Contemporary Rural Society of Assam. *International Journal of Rural Management*, 13(2), 2017.

## **BOOKS AND BOOK CHAPTERS**

### **Books**

Goswami, N. *Legitimizing Standard Language: Perspectives from Schools in Banaras*. New Delhi: Sage Publications 2017.

### **Book Chapter**

Sharma C K and Sharma I. 2017. The Forest Villages and the Forest Dwellers of Assam and the Forest Rights Act 2006. In Datta K. (Ed.). *Man and Forest in the Himalayas and Northeast India*. Delhi: B.R. Publishing Co.

Sharma C K, 2018. State Water Policy of Assam 2007: Conflict over Commercializing Water. In K. J. Joy et al. (Eds.). *Water Conflicts in Northeast India*. India: Routledge.

Borah P and Deka R. 2018. Northeast India: Historical Evolution and Diverse Conceptualizations of Region. In J. P. Saikia and P. P. Borah (Eds.). *Sociology of Northeast India-Empirical Reality and Disciplinary Practice*. Guwahati/New Delhi: DVS Publishers.

Deka R. 2018. Bhakti Movement of Sankaradeva and modernity in Assam. In Deka K K et al. (eds.) *Sankaradeva: Glimpses on his contributions*. Nagaon: MSSV Publications.

Kikhi K A. 2018. Critical Understanding of Sociology of Northeast India: Geo-political History and Migration. In Saikia J P & Borah P P (eds.). *Sociology of Northeast India: Empirical Reality and Disciplinary Practice*. Guwahati: DVS Publishers.

Kikhi K. 2017. Politics in Nagaland: From Military to Electoral Democracy. In Humanshu Roy, M.P. Singh & A.P.S. Chouhan (eds.). *State Politics in India*. New Delhi: Primus Books.

## **OTHER PUBLICATIONS**

### **Book Reviews**

Pamidi Hagjer. 2016. Lipset, David and Silverman, Eric K. (eds.). Mortuary Dialogues: Death Ritual and the Reproduction of Moral Community in Pacific Modernities, *Social Anthropology*, 2017

## **SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**

### **International and National**

C K Sharma presented a paper, Changing Land Relations among the Tribal Communities of Northeast India, in a National Seminar on Writing 'Tribes' in Northeast India: Past, Present and Future, Tribal Studies Centre, Assam University in collaboration with the OKD Institute of Social Change and Development, Silchar, March 19-20, 2018.

C K Sharma presented a paper, Small Tea Plantation in Assam: Prospects and Challenges, at a Conclave on Tea Industry, State Innovation and Transformation Aayog (SITA), Government of Assam, Guwahati, March 7-8, 2018.

A K Das presented a paper on Exploring the Governance Conundrum in Northeast India, in a National Seminar on Writing 'Tribes' in Northeast India: Past, Present and Future, Organised by Tribal Studies Centre, Assam University, Diphu Campus, in collaboration with OKDISCD, Guwahati, March 19-20, 2018.

A S Shimreiwung presented a paper, Between Inscription and Erasure: Trajectories in the Conceptualisation of Traditional Naga Religion, in a National Seminar on Writing 'Tribes' in Northeast India: Past, Present and Future organised by Tribal Studies Centre, Assam University, Diphu Campus, in collaboration with OKDISCD, Guwahati, March 19-20, 2018.

Pamidi Hagjer attended MHRD sponsored Induction Training of Faculty from Nov 23- Dec-22, 2017 in Teaching Learning Centre, Tezpur University.

### **TALKS BY THE FACULTY ABROAD AND IN INDIA**

C K Sharma delivered an invited Lecture on Reorganisation of States in Northeast India, Handiqui Girls College, Guwahati, August 31, 2017.

C K Sharma delivered an invited Lecture on Homeland Politics and Ethnicization of Space in Northeast India, Dept. of Political Science and Centre for Southeast Asian Studies, Gauhati University, September 22, 2017.

C K Sharma delivered a special Lecture, Conceptualising Northeast India, Tripura Central University, October 26, 2017.

C K Sharma delivered a Keynote Lecture on, Globalization and Northeast India, National Seminar on Impact of Globalization in Northeast India: Opportunities and Challenges. Digboi Women's College. Assam, 7 February, 2018.

C K Sharma delivered the 4<sup>th</sup> Karendra Narayan Baruah Memorial Lecture, Sampratik Uccha Siksha Byabostha: Paribartan, Sankat aru Pratyahvan, Jorhat Kendriya Mahavidyalay, Jorhat, March 3, 2018.

K Kikhi delivered a lecture, Naga Identity Politics and the State in a National Seminar on State Politics in Northeast India, jointly organized by the Department of Political Science, Sikkim University, Nehru Memorial Museum & Library, New Delhi, Maulana Abul Kalam Azad Institute of Asian Studies, Kolkata, September 22-23, 2017.

K Kikhi delivered a keynote address at the ICSSR sponsored National Seminar on Re-thinking Customary Laws: A Critical Outlook, organized by Japfü Christian College, Kigwema, Kohima, September 29-30, 2017.

K Kikhi presented, Synopsis Development & Research Design and Sampling at a National Level Research Methodology Workshop on Researching Subalternity in Social Sciences & Humanities, organised by Dr. Ambedkar Chair, Tezpur University, Tezpur, March 18-27, 2018.

K Kikhi delivered an inaugural lecture, Today's Youth: Challenges and Opportunities in NE India in a National Seminar organised by Mahapurusha Srimanta Sankaradeva Viswavidyalaya, Nagaon, April 6-7, 2018.

K Kikhi delivered a special lecture, Verrier Elwin and the Nagas: A Relook, in a National Seminar on Verrier Elwin: Field Work Tradition and Indian Anthropology organised by Anthropological Survey of India, Ministry of Culture, Government of India, NERC, Shillong. May 21-22, 2018.

R Deka delivered an invited lecture at the UGC-MHRD Human Development Centre, Gauhati University, The Bhakti tradition and Sankaradeva at the Refresher Course in Assamese, on September 11, 2017

R Deka delivered a keynote address in the national seminar on Today's Youth: Challenges and Opportunities in northeast India, organized by MSSV, Nagaon held on April 6, 2018.

R Deka delivered an invited lecture, Religion and Social Exclusion: the case of Barpeta satra in a national seminar on Equity with Special Emphasis on North Eastern Region organized by Dr. Ambedkar Chair, Tezpur University, Tezpur, June 21-22, 2018.

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

Urban Action School (UAS) 2017: Advanced Course for Urban Policy Practitioners on 'Our Urban Futures', July 29 – August 5, 2017 in association with ActionAid.

Graduate (PhD) Seminar, January 8-9, 2018, in collaboration with CNRS, Paris.

6<sup>th</sup> International Conference on Northeast India titled 'Locating Northeast India: Human Mobility, Resource

Flows, and Spatial Linkages' on January 9-12, 2018, in collaboration with Centre for Southeast Asia, Gauhati University, Centre for Himalayan Studies (CNRS), Paris; Indira Gandhi National Centre for the Arts, ICSSR-NERC, Tezpur University.

UGC-SAP (DRS-I) Seminar on, Contemporary Inter-State Rural Outmigration from Assam, March 22-23, 2018.

**DISTINGUISHED VISITORS TO THE DEPARTMENT:**

Prof. N. Jayaram, Former Director, Institute of Social and Economic Change, Bangalore

Prof. Sanjib Baruah, Bard College, New York

Prof. Tiplut Nongbri, Dr. Saifuddin Kitchlew Chair, Centre for North East India Studies and Policy Research, Jamia Millia Islamia, New Delhi

**NUMBER OF STUDENTS WHO PASSED NET-JRF/GATE:**

JRF: 2

UGC NET: 7

**THE FACULTY OF THE DEPARTMENT**

**Professors**

V Xaxa, PhD (IIT, Kanpur)

*Area of Interest:* Agrarian Studies, Plantation Labour, Indigenous Peoples, Development Studies

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C K Sharma, PhD (Delhi)

**Head of the Department**

*Area of Interest:* Development, Environment, Social Movements, Urbanisation, Ethnicity, Migration, Society and Politics of Northeastern India.

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K Kikhi, PhD (NEHU)

*Area of Interest:* Research Methodology, Gender and Society, Sociology of Northeast India

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**Associate Professors**

R Deka, PhD (Dibrugarh)

*Area of Interest:* Sociological Theories, Sociology of Movement, Agrarian Sociology.

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**Assistant Professors**

A K Das, PhD (Tezpur)

*Area of Interest:* Sociology of Development, Research Methodology in Social Sciences, Sociology of Health and Illness, Sociology of Governance, Sociology of Religion

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Sumesh S S, PhD (Kerala)  
*Area of Interest:* Research Methods, Social Stigma, Social Exclusion, Environment and Movements  
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Nirmali Goswami, PhD (IIT Kanpur)  
*Area of Interest:* Sociology of Education, Education Policy of India, Identity Politics, Multiculturalism, Sociology of Language  
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Sarmistha Das, PhD (Tezpur)  
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S Ray, PhD (Delhi)  
*Area of Interest:* Sociology of Science, Sociology of India, Sociological Theory, Sociology of Literature  
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S. Shimreiwung, PhD (JNU)  
*Area of Interest:* Sociology of Religion, Culture and Art, Tribal Studies, Orality and Colonial Photography  
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shimreiwung@gmail.com

Pamidi Hagjer, MA (JNU)  
*Area of Interest:* Ritual Studies, Kinship, Sociological Theories.  
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#### **THE STAFF OF THE DEPARTMENT**

A J Bharali  
UDC

Jogen Das  
MTS

## **CENTRE FOR ASSAMESE STUDIES**

### **The Centre**

The Centre for Assamese Studies of Tezpur University completed seven years on June 7, 2018. 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 Programmes and student intake**

<b>Academic Programme</b>	<b>Student Intake</b>
PhD (under Dr. Bhupen Hazarika Fellowship)	Intake variable (Currently: 02)

### **Academic Activities**

At present, a three credit Inter-disciplinary (CBCS) course on Communicative Assamese is offered at the Centre. Along with this course, MIL (Assamese) courses of 2 and 3 credits respectively for Integrated MA, BA BEd are also being offered by the Centre.

### **Publications**

#### **In International and National Journals**

Dutta, J. Ideological Conflicts in Birendra Bhattacharya's fiction. *Muse India*, 74, 2017.

Dutta, J. Translation of Literature and National Integration: A Re-appraisal. *International Education and Research Journal– a peer-reviewed Multi-disciplinary International Research Journal*, Volume 3(5), 2017.

#### **Other Articles Published in Periodicals**

Dutta, J. Tathya aru Satyar Bistrita Anusandhan: Alpana Sarkar Deakar Unabimsa Satikar Patabhumit Asamiya Nari, Eti Alocana" in *Aalaap* edited by Sanjib Pol Deka, Vol I, 2017.

### **SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**

#### **International and National**

Juri Dutta presented a paper, Bihur Utsa, Bihu Utsav aru Utzapon: Oitijyar Punoruddhar, Atmaporicayar Cetana aru Bicchinna Paripacchik (Bihu, Its Source, the Bihu Festival and Bihu Celebration: Heritagization of Bihu, Identity Consciousness and Detached Environment) in a National Seminar on Performing Arts of Assam in the Context of Globalization: Heritage, Transformation and Identity, organized by DCB Girls' College, Jorhat in collaboration with Heritage Assam, Jorhat, Assam, June 23 - 24, 2017.

Juri Dutta presented a paper, Teaching Communicative Assamese and Validation of Linguistic and Communicative Oral Language Tests: A Few Anecdotes in the 23rd Himalayan Languages Symposium organized by Department of English and Foreign Languages, Tezpur University, July 5 - 7, 2017.

Juri Dutta Presented a paper, Women's Voices in Colonial Writings of Assam in a UGC sponsored National Seminar on Revisiting Colonial Assam organized by Department of History, Dibrugarh University, March 29 - 30, 2018.

Juri Dutta attended a one month Induction Training for Faculties, organized by Teaching Learning Centre, Tezpur University, November 23 - December 22, 2017.

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

Release of Digitized Works of Historic Documents, January 30, 2018.

Celebration of Matribhasa Diwas, February 21, 2018.

#### **OTHER IMPORTANT ACTIVITIES OF THE DEPARTMENT**

The Centre undertook a massive project of digitizing about four thousand old Assamese manuscripts and printed books. Several rare and old Assamese books and manuscripts, including the first edition of The Kirtana and the Namaghosa published by Haribilas Agarwala in 1876, rare sanchi-bark manuscripts of Dasam Skandha Bhagavata (Barpeta Satra), Ananta Kandali's Ramayana (Barpeta Satra), Namaghosa (Barhampur Binapani Library, Jamuguri), the first edition of Hemchandra Barua's Hema Kosa (1900), the personal diaries of Padmanath Gohain Baruah (1871-1946), K.K.Handiqui (1898-1982) many of the hand-written manuscripts of Jyotiprasad Agarwala (1903-1951), Chandrabala Barua (1907-1983), Maheswar Neog (1915-1995), Praphulladatta Goswami (1919-1994) and others, and important official letters and documents relating to the establishment of Gauhati University in 1948 have been digitized. Many of the books from local libraries, like the Tezpur Government M.V. School Library, Barhampur Binapani Library, Jamuguri and Media Archives, Guwahati, particularly its Benudhar Sarma collection have been digitized.

#### **THE FACULTY OF THE CENTRE**

##### **Professor**

P K Das, PhD (Gauhati)

Head i/c, Centre for Assamese Studies

Professor, Dept. of English and Foreign Languages

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##### **Assistant Professor**

Juri Dutta, PhD (RGU)

*Specialization/Areas of Interest:* Regional Literatures of India, Translation Studies & Comparative Literature

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##### **Office Staff**

P K Sarma, BA (Gauhati)

Data Entry Operator

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B Bora, MTS



## **CENTRE FOR ENDANGERED LANGUAGES**

### **THE CENTRE**

The University was awarded the Centre for Endangered Languages by the Ministry of Human Resource Development in 2014 with an approved grant in-aid of Rs. 6,00,00,000/- (Rupees six crore only). Out of this, 50% of the amount i.e. Rs. 3,00,00,000/- was sanctioned as the first installment on April 3, 2014. The Centre started to function from January 2016. Faculties and staff were appointed, required equipments were purchased, and the phonetic and documentation laboratories were set-up. This is the Nodal Centre for the consortium of North-East India comprising Tezpur University, Rajiv Gandhi University, Arunachal Pradesh, and Sikkim University, Sikkim. The Centre is attached to the Department of English and Foreign Languages. It also offers two CBCS courses during each semester.

### **Academic Programmes and Student Intake**

<b>Academic Programme</b>	<b>Student Intake</b>
MA in Linguistics and Endangered Languages	20

### **Major facilities and equipment available**

#### Facilities Available

- 1 Phonetic Lab (With 20 seat capacity)
- 1 Documentation Lab (Recording and Editing Suite)
- 3 Smart classrooms

### **Major research findings/research and development activities**

The faculty, research associates and field assistants of the Centre are divided into seven groups for collection of data from some of the endangered languages of the Northeast Region. Till date five (5) field works have been conducted by the 7 groups. The staff went for field work to Manipur, Nagaland and Dima Hasao Area and Tinsukia District of Assam for collection of data. The table below shows the details:

<b>State</b>	<b>Groups</b>	<b>Areas</b>	<b>Chosen Endangered Language</b>
Assam	1	Dima Hasao Area	Biate
	2	Dima Hasao Area	Khelma
	3	Dima Hasao Area	Hrangkhoh
Manipur	4	Senapati District	Onaemila
	5	Kangpokpi district	Purum
Nagaland	6	Tuensang district	Yimchunger
	7	Tening Peren district	Liangmai

A Learner's Book on six of the endangered languages (Biate, Khelma, Hrangkhol, Onaeme, Purum and Liangmai) have been published.

Books on Phonology, Morphology and Syntax are under process.

The following books are published:

- a. A Learner's Book on Yimchunger Language.
- b. Ethnolinguistic account of Biate, Khelma, Hrangkhol, Onaeme, Purum, Liangmai and Yimchunger Language
- c. 3 Volumes of Language Dictionaries on the Seven Endangered Languages
- d. Digitized form of the 3 Language Dictionaries

## **Publications**

### **In International and National Journals**

Brahma D. Some Aspects of Transitive and Intransitive Verb Compounding in Bodo Language, *Language in India* 17(7), 2017.

Phukan K., and Nath A K. Sexism and Gender Inequality in Tai Ahom, *Dimorian Review*, 4(6), 2017.

Sarangthem B. Towards the understanding of surnames and naming patterns in Meitei Society. *IOSR Journal of Humanities and Social Science*, 22(11), 2017.

Shougrakpam D. Reduplicated Structure in Manipuri. *IOSR Journal of Humanities and Social Sciences*, 22(8), 2017.

Widinibou. The performance of Traditional Religion of the Liangmai Naga in North East India: Continuity and Change, *Veda's journal of English language and Literature*, 4(2), 2017.

Widinibou. Language Endangerment with Special Reference to Liangmai Naga, *International Journal of Dravidian Linguistics*, 46(2), 2017.

### **Conference proceedings**

Nath A K. Language shift and Maintenance in Tiwa: Responses towards new domains. In proceedings of the first Tiwa Convention jointly organized by Sahitya Akademi and Tezpur University, September 22-23, 2017.

Phukan K., and Nath A K. Sexism and Gender Inequality in the Tai Ahom Language. In proceedings of the 23rd Himalayan Languages Symposium at Tezpur University, July 5-7, 2017.

### **Books and Book Chapters**

Barbora M. (Ed.). 2017. *Bugun-People's Linguistics Survey of India. 4(II)*. New Delhi: Orient Blackswan Pvt. Ltd.

Barbora M. (Ed.). 2017. *Hrangkhol Nam Chonga Irchuna Lekhabu: A Learner's Book of the Hrangkhol Language*, (Authored by Borgohain T.), Centre for Endangered Languages, Tezpur University.

Borah G K (Ed.). 2017. *Onaeme Leih Dangdo Laireiboung: A Learner's Book of the Onaeme Language*. (Authored by Dutta N, and Sarangthem B), Tezpur: Centre for Endangered Languages, Tezpur University.

Longmailai M. (Ed.). 2017. *Biate Tong Riseina Bu: A Learner's Book of the Biate Language*. (Authored by Boro R R. and Brahma D.), Tezpur: Centre for Endangered Languages, Tezpur University.

Brahma, D. 2017. *Word formation processes in Bodo: Affixation*. Guwahati: Purbayon Publication.

Shougrakpam, D. (Ed.). 2017. *Purum Chong Kinchuna Zedetrubu: A Learner's Book of the Purum Language*, (Authored by Meitei E M.), Centre for Endangered Languages, Tezpur University.

Nath A K. (Ed.). 2017. *Khelma Chong Anchuna Lekhabu: A Learner's Book of the Khelma Language*, (Authored by Bhattacharya P R, and Dutta B). Tezpur: Centre for Endangered Languages, Tezpur University.

Patgiri B and Gope A. (Eds.). 2017. *Liangkhun Ketibu Khuang: A Learner's Book of the Liangmai Language*. (Authored by Widinibou C), Centre for Endangered Languages, Tezpur University.

Longmailai, M. 2017. *Studies on Dimasa History, Language and Culture*,1, DYF Selected Papers, Guwahati: DVS Publishers.

#### **Book Chapters**

Borah G K. Sangatmak Bhaxabigyan: eti samu abhax (Cognitive Linguistics: An Introduction). In N. Padum (ed.). *Bhaxabigyanar gati-prakriti* . An Axom Sahitya Sabha Publication, 2017.

Longmailai M. Language, Identity and Origin of Dimasa. In M. Longmailai (Ed.). *Studies on Dimasa History, Language and Culture*. Guwahati: DVS Publishers, 2017

Patgiri B. Dhwanitatwik Prakriya aru Bixistatar Tatwa. In N. Padum (ed.). *Bhaxabigyanar goti-prokriti*, An Axom Sahitya Sabha Publication, 2017.

Patgiri B. Language Death: A Concern. In Dutta C, and Chetia P (Eds.). *Spectrum: Multidisciplinary Thoughts*, Guwahati: Purbayon Publication, 2017.

Sarangthem B., and Longmailai M. Taboos Prevailing in Conservative Manipuri and Dimasa Society. In M Longmailai (Ed.). *Studies on Dimasa History, Language and Culture*. Guwahati: DVS Publishers, 2017.

#### **SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**

##### **International and National**

A Gope attended and presented a paper, Acoustic Analysis of Yimchunger Tone, at the 23<sup>rd</sup> International Conference of Himalayan Languages Symposium, Tezpur University, Tezpur, July 5 – 7, 2017.

A Gope attended and presented a paper, Preparation of Digital Lexical Database from a Multi-Domain Sylheti

Speech Corpus, at the 23<sup>rd</sup> International Conference of Himalayan Languages Symposium, Tezpur University, Tezpur, July 05 –07, 2017.

A Gope attended and presented a paper, Acquisition of Mandarin Tone by Non-Native Adult Speakers, at the 23<sup>rd</sup> International Conference of Himalayan Languages Symposium, Tezpur University, Tezpur, July 5 –07, 2017.

A Gope attended the 4-day Workshop on Field Linguistics, Department of English and Foreign Languages, Tezpur University, Tezpur, February 02 – 05, 2018.

A K Nath attended and presented a paper, Language shift and Maintenance in Tiwa: Responses towards new domains at the First Tiwa Convention jointly organized by Sahitya Akademi and Tezpur University, Tezpur, September 22 – 23, 2017.

A K Nath attended and presented a joint paper, Sexism and Gender Inequality in the Tai Ahom Language, at the 23<sup>rd</sup> Himalayan Languages Symposium at Tezpur University, Tezpur, July 05 – 07, 2017.

A K Nath and Bipasha Patgiri attended and given a joint poster presentation, Onomastics of some tribal languages of Assam with special reference to Tai Phake, at the 23<sup>rd</sup> Himalayan Languages Symposium at Tezpur University, Tezpur, July 05 – 07, 2017.

A K Nath attended the 4-day Workshop on Field Linguistics, Department of English and Foreign Languages, Tezpur University, Tezpur, February 02 – 05, 2018.

Barshapriya Dutta attended and gave an oral presentation, Kinship terms in Khelma, at the 23<sup>rd</sup> International Conference of Himalayan Languages Symposium, Tezpur University, Tezpur, July 05 – 07, 2017.

Barshapriya Dutta attended a 4-day Workshop on Field Linguistics, Department of English and Foreign Languages, Tezpur University, Tezpur, February 02 – 05, 2018.

Bipasha Patgiri attended and presented a paper, Neutralization and Voicing Assimilation in Mishing, at the 45<sup>th</sup> All India Conference of Dravidian Linguistics and International Symposium on Case and Agreement, Department of Linguistics, University of Delhi, Delhi, June 23 – 25, 2017.

Bipasha Patgiri attended and presented a joint paper, Rising Pitch in Declarative Sentences in Nepali: A Semantic Approach, at the 23<sup>rd</sup> International Conference of Himalayan Languages Symposium, Tezpur University, Tezpur, July 05 – 07, 2017.

Bipasha Patgiri attended the 4-day Workshop on Field Linguistics, Department of English and Foreign Languages, Tezpur University, Tezpur, February 02 - 05, 2018.

Bobita Sarangthem attended and presented a paper, A Case study on Negative Markers in Sizang, at the 23<sup>rd</sup> International Conference of Himalayan Languages Symposium, Tezpur University, Tezpur, July 05 – 07, 2017.

Bobita Sarangthem attended and presented a paper, The Cultural and Linguistic affinities amongst Meitei-Sizang-Thadou, at the 38<sup>th</sup> Annual Conference of the Linguistics Society of Nepal, Tribhuvan University, Kathmandu, November 26 – 27, 2017.

Bobita Sarangthem attended and presented a paper, The Tense Suffix – lei in Maram, at the 10<sup>th</sup> International Conference on North East Indian Linguistics Society, Assam University, Silchar, January 29 – 31, 2018.

Bobita Sarangthem attended the 4-day Workshop on Field Linguistics, Department of English and Foreign Languages, Tezpur University, Tezpur, February 02 – 05, 2018.

D Brahma attended and presented a shared paper, Biate: An Ethnolinguistic Study at the 23<sup>rd</sup> International Conference of Himalayan Languages Symposium, Tezpur University, Tezpur, July 05 – 07, 2017.

D Brahma attended and presented a paper, Verbal Compounding in Bodo, 23<sup>rd</sup> International Conference of Himalayan Languages Symposium, Tezpur University, Tezpur, July 05 – 07, 2017.

D Brahma attended and presented a paper, Derivational Processes of the Bodo Language, at the 38<sup>th</sup> Annual Conference of Linguistic Society of Nepal (38<sup>th</sup> LSN), Tribhuvan University, Kathmandu, Nepal, November 26 – 27, 2017.

D. Brahma participated in the 4-day Workshop on Field Linguistics, Department of English & Foreign Languages, Tezpur University, Tezpur, February 02 – 05, 2018.

Dhanapati Shougrakpam attended the 4-day Workshop on Field Linguistics, Department of English and Foreign Languages, Tezpur University, Tezpur, February 02 – 05, 2018.

Dhanapati Shougrakpam attended and presented a paper, Noun Incorporation in Manipuri – A Semantic Extension, at the 23<sup>rd</sup> International Conference of Himalayan Languages Symposium, Tezpur University, Tezpur, July 05 – 07, 2017.

E M Meitei attended a 4-day Workshop on Field Linguistics, Department of English and Foreign Languages, Tezpur University, Tezpur, February 02 – 05, 2018.

E M Meitei attended and given a poster presentation, Negative construction in Mao, 23<sup>rd</sup> International Conference of Himalayan Languages Symposium, Tezpur University, Tezpur, July 05 – 07, 2017.

G K Borah attended and presented a paper, On the absence of the numeral in the singular definite classifier phrase, at the 23<sup>rd</sup> International Conference of Himalayan Languages Symposium, Tezpur University, Tezpur, July 05 – 07, 2017.

G K Borah attended the 4-day Workshop on Field Linguistics, Department of English and Foreign Languages, Tezpur University, Tezpur, February 02 – 05, 2018.

I D Raguibou attended a Workshop-cum-Intensive Training Programme in Documentation and Description of Tribal and Endangered Languages of North-East India, NEHU, Shillong, Organised by CIIL, Mysore and Department of Khasi, NEHU, Shillong, August 07 – 11, 2017.

I D Raguibou attended a 3-day Workshop on Grammatical Structure of Tibeto Burman Languages of North East India, Department of Linguistics, Assam University, Silchar, January 16 – 18, 2018.

I D Raguibou attended and presented a paper Pre-nasalized Phonemes in Zeliangrong Languages, at the 10<sup>th</sup> International Conference of the North East Indian Linguistics Society, Assam University, Silchar, January 29 – 31, 2018.

I D Raguibou attended and presented a joint paper, Causatives in Liangmai at the 10<sup>th</sup> International Conference of the North East Indian Linguistics Society, Assam University, Silchar, January 29 – 31, 2018.

Monali Longmailai attended and presented a paper, Some aspects of Folkloristics in Dimasa, at the 23<sup>rd</sup> International Conference on Himalayan Languages Symposium, Tezpur University, Tezpur, July 05 – 07, 2017.

Monali Longmailai attended and presented a paper, Biate: An Ethnolinguistic Study, at the 23<sup>rd</sup> International Conference on Himalayan Languages Symposium, Tezpur University, Tezpur, July 05 – 07, 2017.

Monali Longmailai attended and presented a paper, Towards a Sociolinguistic Study of Haflong Hindi, at the 39<sup>th</sup> International Conference of Linguistic Society of India, at the Indian Institute of Technology, Patna, December 08 – 11, 2017.

Monali Longmailai attended 3<sup>rd</sup> National DYF Seminar on Interdisciplinary Dialogues and Cross-Cultural Studies on Dimasa, Dhansiri, Karbi Anglong, January 12, 2018.

Monali Longmailai attended One-Day Stone Craft Workshop, Dimasa Youth Forum, Adarsha Community Hall, Dhansiri, Karbi Anglong, January 12, 2018.

Monali Longmailai attended and presented a paper, Dijuwa and Hasao Dialects of Dimasa: A Comparative Study, at the 10<sup>th</sup> International Conference of the North East Indian Linguistics Society, Assam University, Silchar, January 29 – 31, 2018.

Monali Longmailai attended the 4-day Workshop on Field Linguistics, Department of English and Foreign Languages, Tezpur University, Tezpur, February 02 – 05, 2018.

P R Bhattacharyya attended and presented a paper, Indefinite pronouns in Assamese, at the 38<sup>th</sup> Annual Conference of Linguistic Society of Nepal, Tribhuvan University, Kathmandu, Nepal, November 26 – 27, 2017.

P R Bhattacharyya attended and presented a paper, The Ethnographic Study of Personal Naming system of Khelmas, at the 23<sup>rd</sup> International Conference on Himalayan Languages Symposium, Tezpur University, Tezpur, July 05 – 07, 2017.

P R Bhattacharyya attended and presented a paper, Oral tradition of personal naming among Khelmas in past, at the National Seminar on Oral Culture: People, Poetics and Performance, Department of Cultural and Creative Studies, North Eastern Hill University, Shillong, August 22 – 23, 2017.

R R Boro attended a 4-day Workshop on Field Linguistics, Department of English and Foreign Languages, Tezpur University, February 02 – 05, 2018.

R R Boro attended and given an oral presentation on, Biate: An Ethnolinguistic Study Applicatives in Bodo, at the 23<sup>rd</sup> International Conference on Himalayan Languages Symposium, Tezpur University, Tezpur, July 05 – 07, 2017.

Widinibou attended and presented a paper, The Traditional Cultural Heritage of the Liangmai Naga in Northeast India at the 23<sup>rd</sup> International Conference on Himalayan Languages Symposium, Tezpur University, Tezpur, July 05 – 07, 2017.

Widinibou attended and presented a paper, Liangmai Orthography: A proposal, at 23<sup>rd</sup> International Conference on Himalayan Languages Symposium, Tezpur University, Tezpur, July 05 – 07, 2017.

Widinibou attended and presented a paper, Word Initial Prenasalization in Liangmai, at the Tenth International Conference North East Indian Linguistics Society, organized by University of Oregon, USA, LaTrobe University, Austria and Guwahati University, hosted by Assam university, Silchar, January 29 – 30, 2018.

Widinibou participated in the 4-day Workshop on Field Linguistics, Department of English & Foreign Languages, Tezpur University, Tezpur, February 02 – 05, 2018.

#### **TALKS BY THE FACULTY ABROAD AND IN INDIA**

A Gope delivered four invited lectures and conducted a workshop on An Advanced Workshop on Laboratory Phonetics and Phonology. CIIL, Mysore, September 27 – 30, 2017.

A Gope delivered two invited lectures to the trainees of 3 –week Intensive Training Programme on, Introduction to Translation, CIIL, Mysuru, September 26, 2017.

G K Borah chaired a technical session at the First Tiwa Convention jointly organized by Sahitya Akademi and Tezpur University, September 22 – 23, 2017.

G K Borah delivered an invited talk, Language as Literature at Sankardev Academy, Nalbari, Assam, October 22, 2017.

G K Borah delivered an invited talk, Language, Concept, and Reason at a seminar organized by Jukti Bikax Samiti, Assam, Jorhat Press Club, Jorhat, Assam, February 18, 2018.

Monali Longmailai delivered a talk on Documenting Dimasa: Interdisciplinary Approaches and Language Attitude, at the 3<sup>rd</sup> National DYF Seminar on Interdisciplinary Dialogues and Cross-Cultural Studies on Dimasa, Adarsha Community Hall, Dhansiri, Karbi Anglong, January 12, 2018.

Monali Longmailai chaired a session at the 3<sup>rd</sup> National DYF Seminar on Interdisciplinary Dialogues and Cross-Cultural Studies on Dimasa, Adarsha Community Hall, Dhansiri, Karbi Anglong, January 12, 2018.

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

The 23<sup>rd</sup> Himalayan Languages Symposium, an International Conference from 5<sup>th</sup> to 7<sup>th</sup> July, 2017 where Prof. George Van Driem from University of Berne, Switzerland and Prof. K.V Subbarao, from University of Delhi, were the invited speakers.

The North East Cluster Coordinators meeting, 15<sup>th</sup> September, 2017. The meeting was attended by Prof. Madhumita Barbora, Coordinator, CFEL, Tezpur University, Prof. S. Simon John, Coordinator, CFEL, Rajiv Gandhi University, Dr. S Sinha, Coordinator, CFEL, Sikkim University

CFEL Book Release Ceremony was held on February 2, 2018.

Padma Shri Anvita Abbi, Former Director, Centre for Oral and Tribal Literature, Sahitya Akademi and Retired Professor, Jawaharlal Nehru University, New Delhi and Prof Shyam Sundar Bhattacharya, Former Director, Language Cell, Government of India, were the chief guests. Prof. M M Sarma, Acting Vice-Chancellor, Tezpur University, Dr. Biren Das, Registrar, Tezpur University were the guests of honour.

Workshop on Field Linguistics was organized from February 2 - 5 2018.

Padma Shri Anvita Abbi, Former Director, Centre for Oral and Tribal Literature, Sahitya Akademi and Retired Professor, Jawaharlal Nehru University, New Delhi and Prof Shyam Sundar Bhattacharya, Former Director, Language Cell, Government of India were the Resource persons in the workshop.

### **Distinguished visitors to the department**

Padma Shri (Prof) Anvita Abbi, Former Director, Centre for Oral and Tribal Literature, Sahitya Akademi and Retired Professor, Jawaharlal Nehru University, New Delhi  
Prof. George Van Driem, University of Berne, Switzerland  
Prof. K.V Subbarao, University of Delhi  
Dr Mimi Kevichusa Ezung, Department of Linguistics, Nagaland University  
Dr Niladri Sekhar Dash, Indian Statistical Institution, Kolkata  
Prof Shyam Sundar Bhattacharya, Former Director, Language Cell, Government of India

### **OTHER IMPORTANT ACTIVITIES OF THE DEPARTMENT**

The Centre is planning to offer a Certificate Course in Endangered Languages for Indigenous native speakers of the North East region as an outreach programme initiative.

### **THE PERSONNEL OF THE CENTRE**

#### **Coordinator**

Madhumita Barbora, PhD (Tezpur)

Professor, Department of English and Foreign Languages

*Specialization/Areas of Interest:* Syntax, Field Linguistics: Documentation of Tibeto-Burman languages of North East India and Applied Linguistics

E-mail: [mmb@tezu.ernet.in](mailto:mmb@tezu.ernet.in)



**Linguistics faculties of Department of English and Foreign Languages associated with the Centre**

G K Borah, PhD (NTNU, Trondheim, Norway)

*Specialization/Areas of interest:* Linguistics (General and Cognitive), Philosophy of Language

E-mail: gkb@tezu.ernet.in

A K Nath, PhD (JNU)

*Specialization/Areas of interest:* Language Typology, Morphology, Language Endangerment, Multilingualism, Sociolinguistics.

E-mail: akn@tezu.ernet.in

Bipasha Patgiri, MPhil (JNU)

*Specialization/Areas of interest:* Phonetics, Phonology, Historical Linguistics, Dialectology and Language Typology

E-mail: bipasha@tezu.ernet.in

A Gope, PhD (IIT, Gauhati)

*Specialization/Areas of interest:* Acoustic Phonetics with special interest in Tone, Psychoacoustics, Computational Linguistics, International Phonology and Language Documentation.

E-mail: amalesh@tezu.ernet.in

**Assistant Professors at the Centre for Endangered Language**

Bobita Sarangthem, PhD (Manipur)

*Specialization/Areas of interest:* Descriptive Linguistics, Sociolinguistics, Phonetics and Phonology, Field Linguistics (Endangered Languages)

E-mail: bobsara@tezu.ernet.in

Dhanapati Shougrakpam, PhD (Manipur)

*Specialization/Areas of interest:* Descriptive Linguistics, Morphology, Field Linguistics (Endangered Languages)

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Monali Longmailai, PhD (NEHU)

*Specialization/Areas of interest:* Descriptive Linguistics, Morpho-Syntax, Field Linguistics and Language Documentation

E-mail: monali@tezu.ernet.in

**Research Associates**

D Brahma, PhD, (Assam)

*Specialization/Areas of interest:* Comparative Linguistics & Morphology of Tibeto-Burman Languages

E-mail: daima85@tezu.ernet.in

Pushpa Renu Bhattacharyya, PhD (Gauhati)

*Specialization/Areas of interest:* Descriptive Linguistics and Socio-linguistics

E-mail: pushparb@tezu.ernet.in

Widinibou, PhD (Assam)

*Specialization/Areas of interest:* Phonology and Tibeto-Burman languages

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**Field Assistants**

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Rima Saikia, MA (Tezpur)  
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Trisha Borgohain, MA (Tezpur)  
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**Technical Staff**

T Narzari, MSc-CS (SHIATS)  
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E Upadhyay  
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## **CHANDRAPRABHA SAIKIANI CENTRE FOR WOMEN STUDIES**

### **THE CENTRE**

Chandrapraba Saikiani Centre for Women studies (CSCWS) was established in the year 2009. It supports redistribution of women power and control of resources in favour of women. The vision of Chandrapraba Saikiani Centre for Women Studies, Tezpur University provides a platform and promote studies on women belonging to the diverse socio-cultural milieu with a special focus on the North-East region of India. Looking at the diverse population and the geographical dynamics of the region the Centre aims to develop a theoretical understanding of the matter. The priority of CSCWS is to build a body of information and knowledge resource pool regarding women of this region. For the preservation of the rich cultural heritage of the region, documentation will be undertaken to advance the development of women's studies, while contributing to general advances of knowledge in human social and cultural development. The aim basically is to enhance academic component in action and advocacy to demonstrate new service models and strategies and utilize it for teaching simultaneously.

### **Academic programmes and Student intake**

<b>Academic Programme</b>	<b>Student Intake</b>
PG Diploma in Women's Studies	15

### **Major research findings/research and development activities:**

<b>Principal Investigator</b>	<b>Salient Research Findings</b>
Madhurima Goswami	Women and Trafficking: A study of border areas of Sonitpur District of Assam: -Acute poverty and natural disaster. -Existence of fake placement agencies both in the source and destination. -Demand of domestic helps in metro. -Effect of social evils. -Large family size.

### **Publications**

#### **In International and National Journals**

Boro S. Women's Participation in Agriculture and The Urbanization Process of North East India, *Mahila Pratishtha*, 3(3), 2018.

Boro S. Power game of Witch Hunting in Assam: An Analysis, *International Journal for research in Social Science and Humanities*, 4(2), 2018.

Goswami M. Status and Challenges of the Northeast Women: Quest for New Humanity, *Academic Discourse*,

6(2), 2017.

Goswami M. Hegemonic Masculinity: Rethinking of the Concept in Art, *Indian Journal of Arts*, 7(2.1), 2017. Mahanta M. and Boro S. Panchayati Raj and Women of Rural Assam, *Desh Vikas*, 4(4), 2018.

### **Conference proceedings**

Boro S. Feminism' in Literature of Women Writers of Assam. In the proceedings of a UGC National Seminar on Emerging Trends in Women's Writing in India, Rangapara College, Assam, 2017.

Boro S. Women's Participation in Agriculture and The Urbanization Process of North East India. In the proceedings of a UGC National Seminar on Present Status of Agriculture and Allied Activities in India with Special Reference to North East, Raha College, Assam, 2017

Boro S. The role of Civil Society in Assam. In the proceedings of a National Seminar on Civil Society in Changing India: Emerging Roles, Relationship and Strategies, Digboi Mahila Mahavidyalaya, Digboi, 2018

Goswami M. Women in Urban Folklore. In the proceedings of a National Seminar on Women and Urbanity in North East India through the lens of Cultural Memory, Tezpur University, Tezpur, Assam, 2017.

Mahanta M. Feminism' in Literature of Women Writers of Assam. In the proceedings of a National Seminar on Emerging Trends in Women's Writing in India, Rangapara College, Assam, 2017.

Mahanta M. Women in Urban Folklore. In the proceedings of a National Seminar on Women and Urbanity in North East India through the lens of Cultural Memory, Tezpur University, Tezpur, Assam, 2017.

### **Books and Book Chapters**

Boro S. 2018. Women Trade in Assam: An Analysis. In Madhurima Goswami (Ed.). *The Northeast Indian Women: Issues of Displacement, Violence, Media and Law*, Tezpur: CSCWS, Tezpur University.

Daimary I. 2018. Bodo Women in Conflict Situation. In Madhurima Goswami (Ed.). *The Northeast Indian Women: Issues of Displacement, Violence, Media and Law*, Tezpur: CSCWS, Tezpur University.

Goswami M. 2018. *The Northeast Indian Women: Issues of Displacement, Violence, Media and Law*. Tezpur: CSCWS, Tezpur University.

Goswami, M. 2018. Staging of a Ritual Priestess. In Madhurima Goswami (Ed.). *The Northeast Indian Women: Issues of Displacement, Violence, Media and Law*. Tezpur: CSCWS, Tezpur University.

Mahanta, M. Mental Health and Women. In Madhurima Goswami (Ed.) *The Northeast Indian Women: Issues of Displacement, Violence, Media and Law*, Tezpur: CSCWS, Tezpur University.

### **SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**

#### **International and National**

Madhurima Goswami attended a National Seminar on Women and Urbanity in North East India through the lens of Cultural Memory, Tezpur University, Tezpur, November 27-28, 2017.

Madhurima Goswami attended a Conference on Indian Association for Women's Studies, August 23, 2017.  
Mousumi Mahanta attended a National Seminar on Women and Urbanity in North East India through the lens of Cultural Memory, Tezpur University Tezpur, November 27-28, 2017.

Sonali Boro attended a National Seminar on Civil Society in Changing India Emerging Roles, Relationship and Strategies, Digboi Mahila Mahavidyalaya, January 9 -10, 2018.

Sonali Boro attended a Two-Week Capacity Development Programme for Social Sciences Faculty, OKD Institute of Social Change and Development, July 4 -17, 2017.

Sonali Boro attended a workshop on, Our Urban Future, Urban Action School, Tezpur University, Tezpur, July 29 – August 5, 2017.

Sonali Boro attended a National Seminar on the Present Status of Agriculture and Allied Activities in India with Special Reference to North East, Raha College, Raha, October 13-14, 2017.

Sonali Boro attended a National Seminar on the Emerging Trends in Women's Writing in India, Rangapara College, Rangapara, October 27-28, 2017.

#### **TALKS BY THE FACULTY ABROAD AND IN INDIA**

Madhurima Goswami delivered an invited lecture, Role of women in the Contemporary society, in Axomiya Club, March 4, 2018.

Madhurima Goswami delivered an invited lecture, Workshop on Human trafficking in North East organized by North Eastern Social Research Centre Guwahati, November 9-10, 2017.

#### **SEMINAR/WORKSHOP/SYMPOSIA/INVITED LECTURES ORGANISED BY THE CENTRE**

Women Studies in Higher Education, March 16, 2018.

A week long basic computer training programme, February 26 -March 5, 2018.

#### **Distinguished visitors to the Centre:**

Prof. Susheela Kaushik, Retired Prof. of Delhi University

#### **AWARDS & HONOURS RECEIVED BY THE FACULTY/ RESEARCH SCHOLARS/ STUDENTS:**

##### **Research Scholar/Student**

Plabana Mahanta won 1st Position, Folk Dance Competition.

Plabana Mahanta won 2nd Position, Classical Dance Competition.

Gayotri Phukon won 2nd Position, Folk Dance Competition.

## **OTHER IMPORTANT ACTIVITIES OF THE CENTRE/ACHIEVEMENTS OF THE FACULTY**

- (i) Outreach programme organized:
- Community awareness campaign on Child trafficking was organized in Napaam, Sonitpur, June 2<sup>nd</sup>, 2017.
  - Gender Sensitization programme was organized in Nagaon District Library, Nagaon, March 8<sup>th</sup>, 2018.
- (ii) Contribution of the Dept. to the Society:

Tilottoma Barooah Memorial Award has been constituted in the Centre for a person working in the field of Women's Empowerment and Social Justice.

## **THE FACULTY OF THE CENTRE**

### **Associate Professor**

Madhurima Goswami, PhD (Tezpur)

*Specialization/Areas of Interest:* Women and Religion, Critical Theory, Performance Studies and Sanskrit Literature

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### **Assistant Professor**

Mousumi Mahanta, PhD (Tezpur)

*Specialization/Areas of Interest:* Gender and Mental Health, Women's Studies, Sociology of Health, Mental Illness, Feminist Research

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### **Research staff**

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Sonali Boro,

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### **Technical Staff**

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### **Staff**

Malati Boro

MTS

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## **Dr. Ambedkar Chair**

Dr. Ambedkar Chair, Tezpur University was established by Dr. Ambedkar Foundation, Ministry of Social Justice and Empowerment, New Delhi in the year 2016, to serve as core centre for North East India furthering ideas and philosophy of Dr. B.R. Ambedkar and emancipation of the disadvantaged sections. The thrust area of the Chair is to conduct research on issues related to disadvantaged communities in the context of North East India with particular emphasis on their marginalisation, development and participation. The Chair was set up with the following objectives:

- i. Teaching and research
- ii. Building a library
- iii. Conducting research projects
- iv. Organising public lectures
- v. Conducting awareness and skill development programmes

### **Research Projects, ongoing and new**

<b>Project Title</b>	<b>Funding Agency</b>	<b>Amount (in INR)</b>	<b>Duration</b>	<b>Principal Investigator</b>
Annotated Bibliography on Scheduled Castes and Scheduled Tribes in Social Sciences & Humanities	Dr. Ambedkar Foundation (DAF), Ministry of Social Justice & Empowerment, New Delhi	1.5 Lakh	Two Years	K Kikhi and D R Gautam

### **Other Publications:**

Varghese, N.V., Malik, Garima, and Gautam, D.R. Teacher Recruitment in Higher Education in India: An Analysis of National Eligibility Test (NET) Results, 2017

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

#### **National Workshop**

Research Methodology National Workshop on 'Researching Subalternity in Social Sciences & Humanities', Sponsored by ICSSR (New Delhi) & Dr. Ambedkar Foundation (New Delhi), March 18 – 27, 2018.

#### **Invited Lectures**

Prof. Anand Teltumbde delivered Inaugural Lecture on 'Ideals of Dr. Ambedkar and Indian Democracy', August 17<sup>th</sup>, 2017.

Prof. Virginius Xaxa delivered 68<sup>th</sup> Constitution Day Lecture on 'Indian Constitution: Dawn of New Social Order', November 27<sup>th</sup>, 2017

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

National Essay Competition (Assamese) for Sr. Secondary (Ambedkar's Views on Nation & Nationalism) & Higher Education (Personality of Dr. B. R. Ambedkar, His Social Environment, His Education and Western Thoughts) level, April, 2017.

Plantation of Tree in the vicinity of School of Humanities & Social Sciences as a Tribute to Dr. B. R. Ambedkar on his 62<sup>nd</sup> Mahanirvana Diwas, December 6, 2017.

Awareness Program about different schemes of Dr. Ambedkar Foundation, Ministry of Social Justice & Empowerment, at Napam Village through Street Play, March 10, 2018.

Awareness Program about different schemes of Dr. Ambedkar Foundation, Ministry of Social Justice & Empowerment, at Harigaon Village, Nurbari Tea Estate through Street Play, March 25, 2018.

## **THE FACULTY**

### **Professor**

K Kikhi, PhD (NEHU)

### **Chair Professor**

*Specialization/Areas of interest:* Sociology of North East India, Tribal Studies, Ethnic movements

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### **Research officer**

D R Gautam, PhD (NIEPA)

*Specialization/Areas of interest:* Social Exclusion and Higher Education

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### **Technical staff**

Anu Singh, MSc (Gauhati)

Stenography

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## **Srimanta Sankaradeva Chair**

Prof. Ranjit Kumar Dev Goswami was appointed as Srimanta Sankaradeva Chair Professor, at Tezpur University vide letter No. TU/VC/1(I)/2014/1711, dated 4<sup>th</sup> August, 2014. Professor Goswami assumed office on February 2, 2015. He served as the Srimanta Sankaradeva Chair Professor, from February 02, 2015 to January 30, 2018 and was also the Head in Charge of the Centre for Assamese Studies.

### **Events**

Release of Digitized Works of Historic Documents, January 30, 2018.

The Centre undertook a massive project of digitizing about four thousand old Assamese manuscripts and printed books. Several rare and old Assamese books and manuscripts, including the first edition of *The Kirtana* and *the Namaghosa* published by Haribilas Agarwala in 1876, rare sanchi-bark manuscripts of *Dasam Skandha Bhagavata* (Barpeta Satra), Ananta Kandali's *Ramayana* (Barpeta Satra), *Namaghosa* (Barhampur Binapani Library, Jamuguri), the first edition of Hemchandra Barua's *Hema Kosa* (1900), the personal diaries of Padmanath Gohain Baruah (1871-1946), K.K.Handiqui (1898-1982) many of the hand-written manuscripts of Jyotiprasad Agarwala (1903-1951), Chandrabala Barua (1907-1983), Maheswar Neog (1915-1995), Praphulladatta Goswami (1919-1994) and others, and important official letters and documents relating to the establishment of Gauhati University in 1948 have been digitized. Many of the books from local libraries, like the Tezpur Government M.V. School Library, Barhampur Binapani Library, Jamuguri and Media Archives, Guwahati, particularly its Benudhar Sarma collection have been digitized.

### **Srimanta Sankaradeva Chair Professor**

Prof Ranjit Kumar Dev Goswami

Head, Centre for Assamese Studies (till 30/01/2018)

*Specialization/Areas of Interest:* Sankaradeva Studies, Nineteenth Century Assam, Intellectual History, European Poetry



# **School of Management Sciences**

**Dean, School of Management Sciences**

**Department of Business Administration**

**Department of Commerce**

**Centre for Disaster Management**

**Tezpur University Intellectual Property Rights Cell**



## School of Management Sciences

The School of Management Sciences comprises Department of Business Administration, Department of Commerce, Centre for Disaster Management and Intellectual Property Rights Cell.

As we take pride in the improvement in rank secured by Tezpur University in the QS (Quacquarelli Symonds) BRICS University Rankings 2018, the School of Management Sciences takes equal pride in moving up a few notches in the Business Today rankings. The Department of Business Administration has successfully completed UGC-SAP DRS1 and has been sanctioned the second phase. There have been over a dozen publications during the year. The department is expanding its international footprint with student trips to Singapore and Malaysia and five MBA students did one semester of their studies in Avans University. An interactive session on the topic of Corporate Professionalism was taken by Ms. Benigna Leiss, Board Member of Centre for Energy Economics, University of Texas and Former General Director, Chevron on November 23, 2017. Like previous years, the World Tourism Day was organized by the Department on 27 September, 2017. An interactive skill building session on Leader Speak was taken by Mr. Purba Jyoti Sharma, Regional Sales Manager- North East Region, Nestle. A National Seminar on "Management, Commerce and Economics- 2017 (Emerging Trends in Business & Economic Development in India with reference to North-Eastern Region)" was jointly organised by Department of Business Organization, Tezpur University and Department of Business Administration, USTM, Meghalaya. An MoU was signed with FINER in order to enhance industry-academia experience, research activity and to promote first generation entrepreneurs in the Northeastern region on 19 February, 2018.

Department of Commerce is the latest addition to the school. We are offering Integrated M.Com and we have tried to give the students a competitive edge by aligning the program to professional courses like CA, CS and CMA. Lateral entry and exit is permitted. Student engagement is visible through industrial visits, excursions and creation of an e-magazine. The departments organised a discussion on Goods and Service Tax, Intensive workshop on advanced Microsoft Excel and a lecture on Money Ki Baat. A Students' meet on Entrepreneurship was organized by the students of the department during 23-24 March 2018.

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. Dr. Dipak Nath, Assistant Professor, CDM attended Workshop on "Drone and its Application: Harnessing full potential through Industry Academia Interactions", Organized by AIT, Thailand and Tezpur University, on 16 March, 2018 at Tezpur University. He also acted as a Resource Person in the Thematic Training Programme Comprehensive Disaster Risk Mitigation – Flood & Earthquake, on 13 June, 2017, at the Centralized Training Centre, Sashastra Seema Bal (SSB), Salonibari, Tezpur.

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. Outreach programs were conducted and patent filing was in progress during the year. With the theme "Innovation – Improving Lives", Tezpur University Intellectual Property Rights Cell celebrated the World Intellectual Property Day, on 26 April, 2017.

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 faculties 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.

#### **THE PERSONNEL OF THE OFFICE OF THE DEAN**

##### **Dean, School of Management Sciences**

Prof Chandana Goswami PhD (Gauhati), FDP (IIMA), British Chevening Scholar  
E-mail: cg1@tezu.ernet.in

##### **Staff of the Office of the Dean**

B Borah, MCom (Gauhati)  
LDC  
E-mail: brind@tezu.ernet.in

## **DEPARTMENT OF BUSINESS ADMINISTRATION**

### **THE DEPARTMENT**

The Department of Business Administration was opened in January 1995. The flagship programme of the Department is its 2-year Master's degree in Business Administration. The Department has also introduced a new 2-year Master's degree in Tourism and Travel Management from 2016. Doctoral programme is also offered by the department. The specialized areas include Human Resource Management, Financial Management, Marketing Management, Operations Management, and Information Technology. 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 has successfully completed 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 A category and included among the Top 5 Business School in East India by The 7<sup>th</sup> Chronicle B- School Survey-2016 and 27<sup>th</sup> in the NIRF ranking 2016 under Management Category.

### **Academic programmes and student intake**

<b>Academic Programme</b>	<b>Student Intake</b>
MBA (Full-time)	50
MTTM	17
PhD	Intake variable

### **Major facilities and equipment available**

The Department has one air-conditioned Boardroom and one Student Lounge which facilitates case discussions. All classrooms have audio-visual facilities such as LCD projectors, sound systems etc. Moreover, one classroom is also equipped with smart classroom facilities. The Department has a small library-cum-reading room, a fully air conditioned seminar hall, a training hall and a Computer Lab. The Office is equipped with a modern office automation system.

### **Research projects, ongoing and new**

<b>Project Title</b>	<b>Funding Agency</b>	<b>Amount (in INR )</b>	<b>Duration</b>	<b>Principal Investigator</b>
Evaluation Study on Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) in the Districts of Dhekiajuli and Udalguri in Assam	Govt. of Assam	3.0 lakh	2017-18	S S Sarkar and Papor Baruah

### **PUBLICATIONS**

#### **In International and National Journals**

Choudhury, M. and Goswami, C. MSME Financing Gaps: Research Review 1995- 2017, *Small Enterprises Development, Management & Extension Journal (Sedme)*, 3(44), 1-26, 2017.

Chutia, L. J. and Sarma, M. K. Native Tradition and Changing Market Dynamics : The Future Sustainability of Hajo and Sarthebari Metal Crafts, *The Chitrolekha Journal on Art and Design*, 2(1), 1-2, 2017.

Dutta, H. and Das, D. Accounting for Farms in India: An Analysis in the Context of Recognition, Measurement and Presentation of Financial Data, *The IUP Journal of Accounting Research and Audit Practices*, 2017.

Goswami, C. and Boro, K. Technology Based Banking Behaviour of Urban Customers : An Empirical Study in Kamrup Metro Districts of Assam, India, *Asian Journal of Research in Banking and Finance*, 8(4), 20-47, 2018.

Gurung, D. J. and Goswami, C. Role of User Generated Content in Destination Image Formation, *International Journal of Tourism and Travel*, 10(1), 6-16, 2017.

Kalita, K. and Sarma, M. K. Linking and Anticipating Impulse Buying in Services: A Review, *The Marketing Review*, 17(3), 385-406, 2017.

Kalita, K. and Sarma, M. K. Eating out as Life Style: Yielding to the Impulsive Temptation, *SCMS Journal of Indian Management*, 14(4), 76-94, 2017.

#### **Conference proceedings**

Sarkar, S. S. Goods and Services Tax. In The Management Perspectives Conference Proceedings AMDISA's 14<sup>th</sup> South Asian Management Forum, Maldives, May, 2017.

Sarkar, S. S. Taxation System in Asian Countries: An Empirical Analysis, In World Business, Economics and Finance Research Conference, Bangkok, April, 2018.

#### **Books**

Das, S. K., Das, D and Bhowal, A. 2017. *Sustainable Development in India*. New Delhi: Avon Publications.

#### **Book Chapters**

Das, D. Probing the Relevance of Sustainability Development Goals in South Asian Region. In: *Sustainable Development in India* (Eds. Das, S. K., Das, D and Bhowal, A.), New Delhi: Avon Publications, 2017, pp. 1-15.

Baruah, P. Public Service Motivation for Service Delivery: A Study in Arunachal Pradesh. In: *Emerging Trends in Business and Economic Development in India with Reference to North East India*, Guwahati: Purbayan Publications, 2018.

Gogoi, K. and Baruah, P. Performance Goal Setting and its Outcome in the Digital Age: Perception of Employees in Public Organization. In: *Human Resource Management and Development in the Digital Age* (Ed. Bhattacharjee, A.), New Delhi: Mittal Publications, 2018.

Gurung, D. J. and Goswami, C. Understanding Pre-Visit Destination Image Formation Based on Reviews and Quarries on Travel Blogs. In: *Emerging Paradigms of Hospitality and Tourism: Marketing Perspectives* (Ed. Dixit, S. K.), New Delhi: DPS Publications, 2017, pp. 97-115.

Kalita, K. and Sarma, M. K. Exploring Impulse Buying in Travel Services: A Study in the Urban Areas of Assam. In: *The Emerging Paradigms of Hospitality & Tourism: Marketing Perspectives* (Ed. Dixit, S. K.), New Delhi: DPS Publications, 2017, pp. 116-133.

#### **SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**

##### **International and National**

Heera Barpujary attended a two weeks FDP on Data Analytics with Python, IIT Guwahati, 13-24 May, 2017.

Papori Baruah and M Yasung attended a national Seminar, Emerging trends in Business and Economic Development in India with reference to North-eastern Region, organized by Department of Business



Administration, USTM and Department of Business Administration, Tezpur University and presented a paper, Public service Motivation for service delivery: A study in Arunachal Pradesh, 19-20 May, 2017.

Papori Baruah and R.R. Baruah attended a National Seminar on Management, Commerce and Economics-2017, organized by the Department of Business Administration, USTM in association with Department of Business Administration, Tezpur University and presented a paper, Leadership Functions and Team Effectiveness: A Study on Telecom Sector in Assam, 19 -20 May, 2017

Papori Baruah and K Gogoi attended an International seminar on Human Resource Management and Development in Digital age, organized by the Department of Management, NEHU, Shillong and presented a paper, Performance Goal setting: Perception and outcome, 23-24 June, 2017.

Papori Baruah and R.R. Baruah attended an International seminar on Human Resource Management and Development in Digital age, organized by the Department of Management, NEHU, Shillong and presented a paper, Team Effectiveness Model in Telecom Sector: Impact of Digital Age, 23-24 June, 2017.

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

Remembrance Day celebration in memory of Late Prof. Madhab Chandra Bora Inter-Institutional Quiz and Oration organized by the Department on 16 November, 2017.

An interactive session on the topic of Corporate Professionalism taken by Ms. Benigna Leiss, Board Member of Centre for Energy Economics, University of Texas and Former General Director, Chevron on November 23, 2017.

World Tourism Day organized by the Department on September 27, 2017.

An interactive cum skill building session on Leader Speak taken by Mr. Purba Jyoti Sharma, Regional Sales Manager- North East Region, Nestle on September 18, 2017.organized by the Department on August 12, 2016

National Seminar on "Managerial, Commerce and Economics- 2017 (Emerging Trends in Business & Economic Development in India with reference to North-Eastern Region) jointly organised by Department of Business Organization, Tezpur University and Department of Business Administration, USTM, Meghalaya on May 19 and 20, 2017.

#### **DISTINGUISHED VISITORS TO THE DEPARTMENT**

Mr. Abhijit Dey, VP, Asia-IT, Operations and Service Delivery, Sodexo

Mr. Achyanta Kr. Sarmah, Assistant Professor, IIM Shillong

Ms. Bengina Leiss, Corporate Professionalism

Ms. Namrata Gill, Vice-President HR, Dr.Reddy's Pharmaceutical Ltd.

Mr. Piyush Bhartiya, Co-Founder, Admitkard and LifePad

Mr. Pritam Dutta, Global IT Business Partner, Unilever

Mr. Sanjay Arora, Enable Mentoring

Dr. Sant Bahadur Singh,Sr. VP (Projects, Technical & Export), Patanjali Ayurved Ltd

Mr. Satyarth Priyedarshi, Head of Product Marketing, JioChat

Dr. Shalini Lal, Founder, Infinity OD

Mr. S R Medhi, Ex-Director (Technical), Numaligarh Refinery Limited

Mr. Venkatesh Iyer ,Founder and CEO of Goli Vadapav

## 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, during 9-10 March, 2018. With *Sampark*, the Department in particular and Tezpur University in general aim to stand high on a pedestal where our illustrious legacy comes together with the corporate world to script a golden future.

MoU signed with FINER in order to enhance industry-academia experience, research activity and to promote first generation entrepreneurs in the Northeastern region on 19 February, 2018

## NUMBER OF STUDENTS WHO PASSED NET-JRF/GATE [2017-2018]

### NET - 03

## NOTABLE PLACEMENT [2017--2018]

Organization	No. of students placed
Kotak Life Insurance	1
ICICI Bank	8
ICICI Prudential	1
Colgate-Palmolive	2
Nestle	4
Asomi Finance Pvt. Ltd.	4
Mahindra Finance	1
Everest Industries	1
Marico	1
Greenlam Industries	1
Flipkart	2
Satin Micro Finance	1
ITC	2
Berger Paints	1
BCPL	2
VisionRI Connexion Services Ltd.	1
Amul	2

## THE FACULTY OF THE DEPARTMENT

### Professors

M K Sarma, PhD (Tezpur)

### Director, Training Learning Centre

*Specializations/Areas of interest:* Marketing, Tourism Management

E-mail: [mrinmoy@tezu.ernet.in](mailto:mrinmoy@tezu.ernet.in)

Chandana Goswami, PhD (Gauhati)

### Dean, School of Management Sciences

*Specializations/Areas of interest:* Financial Management, General Management

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S S Sarkar, PhD (Tezpur)

### Head in charge, Department of Commerce

*Specializations/Areas of interest:* Financial Management, Accounting & Taxation

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D Das, PhD (RGU),  
**Director, Centre for Open and Distance Learning**  
*Specializations/Areas of interest:* Financial Management  
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C Goswami, PhD (Tezpur)  
*Specialization/Areas of interest:* Marketing Management  
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Papori Baruah, PhD (Tezpur)  
**Head of the Department**  
*Specialization/Areas of interest:* Human Resource Management  
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**Associate Professors**

T R Sarma, PhD (Tezpur)  
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A Bhuyan, PhD (Tezpur)  
*Specialization/Areas of interest:* Managerial Economics, Entrepreneurship Development  
E-mail: anjanb@tezu.ernet.in

A Roy, PhD (Tezpur)  
*Specialization/Areas of interest:* Financial Management  
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**Assistant Professors**

Heera Barpujary, PhD (Tezpur)  
*Specialization/Areas of interest:* System Management and Knowledge Management  
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Kakali Mahanta, PhD (Dibrugarh)  
*Specialization/Areas of interest:* Marketing, Human Resource Management  
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Runumi Das, PhD (Gauhati)  
*Specialization/Areas of interest:* Marketing Management  
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M Dutta, PhD (Gauhati),  
*Specialization/Areas of interest:* Tourism  
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P Baruah, MBA (SIU, Pune),  
*Specialization/Areas of interest:* Supply Chain management, Logistics, Transportation  
E-mail: prayashb@tezu.ernet.in

**Adjunct Faculty**

Amlan Bora, MBA (AIT)  
Trade and Investment Commissioner, NBSO.  
*Specialization/Areas of interest:* Brand Management

**Guest Faculty**

N Das, PhD (NEHU)  
*Specialization/Areas of interest:* Tourism, Community Livelihood  
E-mail: niranjandas@tezu.ernet.in

**Visiting Fellow**

B K Das, PhD (Gauhati)  
Former MD, Numaligarh Refinery Ltd.  
*Specialization/Areas of interest:* Human Resource

**Technical staff**

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**Office Staff**

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S Borah  
MTS

## **DEPARTMENT OF COMMERCE**

### **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 an Integrated Masters Programme in Commerce (5 Years). 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. Besides, faculty members exclusively meant for Department of Commerce, assistance in teaching is regularly received from the faculty members of Department of Business Administration, Department of English and Foreign languages, etc.

### **PROGRAMMES AND STUDENT INTAKE:**

<b>Academic Programmes</b>	<b>Student Intake</b>
Integrated MCom	30
MCom (Lateral Entry)	Intake dynamic 12 in the last Academic year

### **MAJOR FACILITIES AND EQUIPMENT AVAILABLE:**

- Interactive Pen Display
- Electronic Podium with Microphone and Speaker
- Student Response system

### **PUBLICATIONS**

#### **In International and National Journals**

Hussain, F. and Saikia, B. Rural Non- Farm Employment In North Eastern Region: The Changing Structure, *Quest International Multidisciplinary Research Journal*, Volume No.7 (2), 2018.

Kumar, M. and Vij, M. Earnings management and financial crisis: Evidence from India, *Journal of International Business and Economy*, 18(2), 2017.

Tiwari R. K. and Debnath J. Financial Inclusion: A Study of Street Vendors in Nagaland, *Gauhati University Journal of Commerce*, Volume No. XIX, (2018).

### **SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**

Tiwari R. K. attended a National Seminar on Regional Development and Planning in Northeast Region of India, at Department of Economics, Dr. B.K.B. College, Assam on Brick Kiln Industry: Prospects, Problems and the Road Ahead, February 23, 2018.

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

Discussion on Goods and Service Tax at the Council Hall for teaching and non-teaching staff including students of the University, August 24, 2017.

The Department organized 02 nos. of Intensive workshops on advanced Microsoft Excel during October 6-8, 2017 and October 13 – 15, 2017 for the student of the University.

A lecture, *Money Ki Baat*, was organized by the Department for teaching and Non-teaching staff as well as students of the University, October 24, 2017

Students' meet on Entrepreneurship organized by the students of the Department, March 23-24, 2018.

### **DISTINGUISHED VISITORS TO THE DEPARTMENT**

Prof. S.S. Khanka, Former Professor National Institute of Financial Management, Faridabad.

Ms. Smita Dey Tarafder, Standard Chartered, B'lore.

Prof. V.K. Shrotriya, Dept. of Commerce, Delhi School of Economics, University of Delhi.

### **OTHER IMPORTANT ACTIVITIES OF THE DEPARTMENT**

#### **Students E-Magazine**

The students of the Department successfully have brought out the fourth issue of "*Adwitya*"- *the matchless*. The launch of its Fourth issue was on 11 May 2017.

#### **Industrial Visits**

The Department organizes Industrial visits for the students of Integrated MCom programme (2014 batch) and MCom programme (Lateral Entry, 2017 batch) and they visited Chaygaon Industrial Area, Chaygaon, November 02, 2017 in the Autumn Semester 2017.

The students of Integrated MCom programme (2017 batch) visited Belseri Tea Estate, Dhekiajuli, November 08, 2017.

In Spring Semester the students of Integrated MCom (2016 batch) visited Securities and Exchange Board of India (SEBI) office at Guwahati, March 12, 2018.

## **Excursion**

The Department organized an excursion for the students from the Batch 2015. The students visited several tourist places in Shimla, Kulu and Manali during December 27, 2017 to January, 5 2018.

## **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, financial inclusion, microfinance

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R Goswami, M Com (Gauhati)

*Specialization/Areas of Interest*: Accounting and Finance

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Farah Hussain, PhD (Dibrugarh)

*Specialization/Areas of Interest*: Economics and Mathematical Economics

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M Kumar, MCom (Delhi)

*Specialization/Areas of Interest*: Corporate Finance and Accounting

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### **Visiting Faculty**

S Dugar, FCA (ICAI)

*Specialization/Areas of Interest*: Taxation

Neelam Somani, CS (ICSI)

*Specialization/Areas of Interest*: Company Law

R K Nahata, CA (ICAI)

*Specialization/Areas of Interest*: Indirect Taxes

Rachita Saraf, CA (ICAI)

*Specialization/Areas of Interest*: Banking

### **Office Staff**

B Das, MA (Gauhati)

Upper Division Clerk

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N Dutta

MTS

## **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**

CBCT / Open Elective course on Disaster Management (DM 301) was conducted during 2017-18 for the PG students of Tezpur University.

CBCT / Open Elective course on Disaster Management (DM 101) was conducted during 2017-18 for the UG students of Tezpur University.

The Centre has continued the courses DEM 104 and DEM 203 in the Post Graduate Diploma programme in Environment and Disaster Management under distance education programme of the University during 2017-18.

### **SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**

D Nath attended a Workshop on Drone and its Application: Harnessing full potential through Industry Academia Interactions, Organized by AIT, Thailand and Tezpur University, 16 March, 2018 at Tezpur University.

### **TALKS BY THE FACULTY ABROAD AND IN INDIA**

D Nath, attended as a Resource Person in the Thematic Training Programme Comprehensive Disaster Risk Mitigation – Flood & Earthquake, 13 June, 2017, Centralized Training Centre, Sashastra Seema Bal (SSB), Salonibari, Tezpur.

### **THE FACULTY OF THE DEPARTMENT**

#### **Assistant Professor**

D Nath, PhD (Gauhati)

#### **Head of the Centre**

*Specialization/Areas of Interest:* Nuclear Physics & Cosmic Radiation/Disaster Risk Assessment

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#### **Office Staff**

B Das, BCom (Gauhati)

UDC



## **TEZPUR UNIVERSITY INTELLECTUAL PROPERTY RIGHTS CELL**

### **THE CELL**

Tezpur University Intellectual Property Rights (TUIPR) Cell entered its ninth year of establishment in 2017-18. The culture of protecting intellectual properties was initiated and chiselled in the Cell during the period of 2011-2017, when various activities related to IPR were funded and supported in the University by the Ministry of Human Resources Development, Government of India. However, in absence of such financial support this financial year, the IPR activities of the Cell had to be limited mostly to teaching, and few awareness activities with modest funding from the University and various collaborating agencies. The awareness programmes were in the form of two incampus programs. Celebration of World IP Day, an annual IPR event in the campus, was themed on “Innovation – Improving Lives”, while the other event focused on providing hands-on exposure to the researchers on the diverse information sources/databases. This event was organised in collaboration with Central Library, Tezpur University and was planned in addition to the annual patent search workshop held in the campus meant for capacity building of the research scholars of the University. Choice based Credit Transfer (CBCT) courses on IPR were offered for only Ph.D. level students due to various constrains.

Like past years, the Cell has continued providing technical assistance to the innovations from Tezpur University. The IPR awareness created so far, together with, the patent search workshops conducted for past three years, have been instrumental in identification and timely protection of promising intellectual outputs. This year, the TUIPR Cell received 6 invention disclosures from 5 departments. These were evaluated by the Cell in consultation with the inventors. Contextual prior art searches done by the Cell, in addition to those conducted by the researchers, were the basis for assessing novelty and inventive steps for the innovations. The applications were eventually filed in the Indian Patent Office after completion of the inhouse procedures.

The application “A process for preparing carbon nanotubes for nonbiodegradable polypropylene and polytetraheptete” by Prof. S.K. Samdarshi et al. granted a patent on October, 9, 2017 with patent number 285978.

### **ACADEMIC COURSES**

- Internalizing Intellectual Property Rights, CBCS in PhD level (4 credit)

### **IPRS FILED /GRANTED**

<b>Sl.No</b>	<b>Application No/patent No.</b>	<b>Title of Invention</b>
1	201831009528	A portable optical fiber instrument for instant petrol purity detection
2	201831009592	Designed 2d graphitic sheet for viscous oil removal using magnet
3	201831009678	"Integrated and automated set up for preparation and vending of panipuri

4	201831010002	Toxin-epitope based detection of species-specific snake envenomation
5	201831010001	Synthetic anticoagulant peptides derived from Naja naja snake venom
6	201831009091	A smokeless multifunctional and multipot solid fuel stove
7	285978, date of issue of certificate: 09/10/2017	A process for preparing carbon nanotubes for non-biodegradable polypropylene and polytetraheplete

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

Colloquium on World Intellectual Property Day celebration, April 26,, 2017.

One Day workshop on Information Access and Analysis in the Innovation and Research Value Chain, May 10, 2017.

#### **THE PERSONNEL OF THE CELL**

##### **Coordinator**

P Deb, PhD (Jadavpur)

Professor, Department of Physics

*Specialization/Areas of Interest:* IPRs, Patents and Trade Secrets

E-mail: coordinator\_tuipr@tezu.ernet.in

##### **Research Officer**

Juri Borbora Saikia, PhD (Tezpur)

*Specialization/Areas of Interest:* IPRs, Patents, Industrial Design and GI

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##### **Office Staff**

M Das

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# **School of Sciences**

**Dean, School of Sciences**

**Department of Chemical Sciences**

**Department of Environmental Science**

**Department of Mathematical Sciences**

**Department of Molecular Biology and Biotechnology**

**Department of Physics**

**DBT Nodal Centre**



## School of Sciences

The School of Sciences consists of five departments, viz., Department of Chemical Sciences, Department of Environmental Science, Department of Mathematical Sciences, Department of Molecular Biology and Biotechnology and Department of Physics. These five departments of the school offer 13 different MTech, MSc, Integrated MSc and Integrated BSc BEd Programmes, in addition to their individual discipline specific PhD programmes. Four departments namely department of Chemical Sciences, Mathematical Sciences, Molecular Biology and Biotechnology and Physics offer Integrated M. Sc. programmes with an intake of 20 students each. The departments of Chemical Sciences, Mathematical Sciences and Physics also offer integrated BSc BEd Programmes with an intake of 10 students each. Further, an MTech programme in Polymer Science and Technology is offered by the Department of Chemical Sciences. The departments of the School also support the required teaching and laboratory courses of the BTech programmes in seven disciplines offered by the School of Engineering. The total intake of students in all 13 non-PhD programmes in the School is 272.

There are a total of 79 members of faculty that include 29 Professors, 11 Associate Professors and 39 Assistant Professors working in five departments of the School. In addition, Prof. M. Lakshmi Kantam, Professor at ICT, Mumbai is an Adjunct Professor in the Department of Chemical Sciences.

The members of the faculty of the School are engaged in cutting-edge research in their respective areas. They have made several significant contributions in academic and research activities during 2017-2018. From the Department of Chemical Sciences, Prof. R C Deka and Prof. N Karak were awarded the prestigious Fellow of the Royal Society of Chemistry in 2017 and 2018, respectively. Prof. R C Deka has also been awarded Prof. A. S. R. Anjaneyulu Endowment Award, 2017 by the Indian Chemical Society and honoured with the Secretary position of the Catalysis Society of India. Dr. Ashalata Devi of the Department of Environmental Science was conferred Young Scientist of the year 2017 by International Foundation for Environment and Ecology (IFEE), Kolkata, Professor A K Mukherjee of Department of Molecular Biology and Biotechnology was awarded Visitor Best Researcher award 2017 and Dr. E Kalita and Dr. S P G. Ponnampalani of the Department of MBBT were awarded Biotechnology Overseas Associateship.

The members of faculty of the School secured projects funded from agencies like DST, DBT, Deity, DRDO, BRNS, SERB, CSIR and UGC. All five departments in the School are DST-FIST and UGC-SAP supported. The faculty members of these five departments of the School have published 294 research papers in peer-reviewed international and national journals during 2017-2018. The Department of Chemical Sciences leads with 98 publications, followed by MBBT with 74 publication. The Department of Environmental Science, Mathematical Sciences and Physics have 45, 40 and 37 publications, respectively.

Alumni of the school are well placed in various academic institutions and industries in India. This year from the School of Sciences a total of 121 students qualified NET/GATE/SLET.

The departments under the school regularly organize conferences/workshops and outreach programmes.

**THE PERSONNEL OF THE OFFICE OF THE DEAN**

**Dean, School of Sciences**

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## DEPARTMENT OF CHEMICAL SCIENCES

### THE DEPARTMENT

The Department of Chemical Sciences came into existence in the year 1997 with the prime objective of providing a pool of quality manpower in different areas of Chemical Sciences keeping in mind the requirement of Industry and Academia. At the very beginning, the Department started functioning by offering MSc program in Polymer Science. The Department started offering Integrated MSc in Chemistry program in 2009, and MSc in Chemistry in 2012. With rise in demand, 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 program covering several important frontier areas of research in Chemical Sciences and interdisciplinary Sciences. There are several post-doctoral fellows working in various fields. 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. The programs in the department are well-established and infrastructural facilities exist for studies and research. During these glorious two decades, faculty members of the Department have published quality research papers in international and national journals of repute. Many major projects (including international collaborations) were executed successfully and many are undergoing. Two patents were granted to the faculty members of this department. The alumni of the Department are well placed in different industries, R&D organizations and other prestigious institutes in India and abroad. DST-FIST and UGC-SAP provide financial assistance to the Department.

### Academic programmes and Student intake

Academic programmes	Student Intake
MSc in Chemistry	20
Integrated MSc in Chemistry	20
MTech in Polymer Science and Technology	10
Integrated BSc Bed	10
PhD	Intake variable 21 in the last Academic year

### 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, Model: Nicolet Impact I-410
- 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
A J Thakur	<ul style="list-style-type: none"> <li>• “On water” and one pot multicomponent reaction strategy towards synthesis of pyrazolo[3,4-d]pyrimidine carbamide and thiocarbamides has been developed from easily available starting materials and via a very facile and environmentally benign route. The reaction strategy offered added advantage of post reaction operational simplicity. The conversion was excellent and isolation of the product was not difficult as it separated out as solid in the reaction media. It could be collected by simple filtration and further purification was not necessary.</li> <li>• Gold nanoparticles were synthesized by chemical method and biological method (using plant extract) followed by characterization. Efficacy of these synthesized NPs are being studied in organic transformations.</li> <li>• Synthesis of Pd NPs supported on reduced graphene oxide was accomplished followed by characterization and its application in synthesis of indole derivatives.</li> </ul>
A K Phukan	<ul style="list-style-type: none"> <li>• Carbene Driven Stabilization of the H<sub>red</sub> state of Biomimetic Model [FeFe] Hydrogenase Complexes.</li> <li>• Activation of Small Molecules by Singlet Carbenes</li> </ul>
B Sarma	<ul style="list-style-type: none"> <li>• Developed a new amide functional based porous organic materials that behaves as smart heterogeneous catalytic support for selective oxidation reaction.</li> <li>• Developed a technique to control nucleation process of drug polymorph by designing heterogeneous surface of organic self-assembled monolayers.</li> <li>• Developed few new pharmaceutical cocrystals based on combination drug therapy with improved pharmacokinetic properties than the existing drug for future formulation.</li> </ul>
K K Bania	<ul style="list-style-type: none"> <li>• AgCN synthesis without employing toxic KCN or NaCN as one of the environmentally friendly process.</li> <li>• Pd-Cu-based catalyst for methanol oxidation and metal sulphide supported Vanadium oxide for hydrogen fuel generation from water.</li> </ul>
N Gogoi	<ul style="list-style-type: none"> <li>• Development of chiral single molecule magnets.</li> <li>• Investigation of magnetic anisotropy in single ion species.</li> <li>• Development of heterogeneous catalyst for challenging C-C coupling reactions.</li> </ul>



N Karak	<ul style="list-style-type: none"> <li>• Waterborne hyperbranched polyester nanocomposites with photocatalytic and self-cleaning property</li> <li>• Bio-based hyperbranched polyurethane nanocomposites as sustainable smart materials</li> <li>• Functional nanomaterials with catalytic and chemical sensing attributes</li> </ul>
P Puzari	<ul style="list-style-type: none"> <li>• A broad spectrum amperometric biosensing technique for detection of six different classes of pesticides has been developed.</li> <li>• An ISFET biosensor for hydrocarbon detection using Cytochrome P450 has been developed in collaboration with the department of ECE and MBBT of Tezpur University.</li> </ul>
P Bharali	<ul style="list-style-type: none"> <li>• Synthesis, characterization and electrocatalytic evaluation for oxygen reduction reaction over various PdCuM/C (M = Fe, Ni, Co) with different Pd/M compositions.</li> <li>• Morphology dependent electrocatalytic activity of Co<sub>3</sub>O<sub>4</sub>-based nanoparticles for bifunctional oxygen reduction and oxygen evolution reactions.</li> </ul>
R C Deka	<ul style="list-style-type: none"> <li>• Global optimization of metal oxides has been performed.</li> <li>• Computational insights on structure and dynamics of anti-cancer drugs.</li> <li>• CO oxidation on bare and supported Platinum based Metal Clusters.</li> <li>• Theoretical insights on the reaction pathway and kinetics of volatile organic compounds (VOC).</li> <li>• Design and synthesis of catalytic systems for Friedel Crafts acylation to synthesize potent drug intermediates has been performed.</li> </ul>
R Borah	<ul style="list-style-type: none"> <li>• Synthesis and characterization of metal based ionic salts; polymer bridged ionic liquids and basic ionic liquids.</li> <li>• Applications of functionalized ionic materials as reusable photocatalyst for degradation of dye and heterogeneous catalysts for one pot synthesis of nitrogen heterocycles.</li> </ul>
S K Dolui	<ul style="list-style-type: none"> <li>• Development of stimuli responsive hydrogels based on synthetic and natural polymers and their applications in drug delivery, self healing, shape memory, as adhesive etc.</li> <li>• Synthesis of supramolecular self-healing polymers and its composites and the effective use of click reaction chemistry to introduce self healing properties on the polymers and its composites.</li> <li>• Synthesis and characterization of sunflower oil based polyurethane and its nanocomposites with via non-isocyanate routes.</li> <li>• Developing efficient ways of enhancing the efficiency of quasi solid state dye sensitized solar cells by harvesting the unused higher energy visible light using carbon dot.</li> <li>• Application of carbon dots as sensitizers for broadening the sunlight response region of catalysts for methanol oxidation reaction and other applications.</li> </ul>
S P Mahanta	<ul style="list-style-type: none"> <li>• Developed a copper ion mediated strategy for the colorimetric sensing of aqueous fluoride.</li> </ul>
T K Maji	<ul style="list-style-type: none"> <li>• Wood polymer green nanocomposites were prepared by using modified soybean oil, methacrylic acid, methacrylic anhydride and a synthesized crosslinker derived from naturally occurring rosin. The prepared composites exhibited an overall improvement in properties compared to those of styrene</li> </ul>

	<p>based composites.</p> <ul style="list-style-type: none"> <li>• Bio-degradable composites were prepared by using waste chicken feather and modified soybean oil. The work is in progress.</li> <li>• Polymer coated nanoparticles/nanocomposites were prepared and found effective for removal of contaminants in water especially arsenic. Polymer coated plant materials or plant material alone were found to possess the property of removing arsenic significantly from contaminated water. The reusability as well as stability of the prepared material was checked and found quite good.</li> <li>• Polymeric nanoparticles for controlled delivery applications were prepared by using silibinin/curcumin and its derivatives as, anticancer drug .The prepared drug encapsulated nanoparticles were evaluated and <i>invitro</i> study are in progress.</li> </ul>
U Bora	<ul style="list-style-type: none"> <li>• Development of Agro-Waste Extract Based Solvents for organic reactions.</li> </ul>

#### Research projects, ongoing and new

Project Title	Funding Agency	Amount (in INR )	Duration	Principal Investigator
Application and Development of "NOSE" approach with special reference to Carbon-Carbon and Carbon-Heteroatom bond formation reactions	CSIR	20.00 lakh	2017- 2020	A J Thakur
Homocoupling, Heterocoupling and Liberation of Borylene Ligands	DST	10.15 lakh	2016-2018	A K Phukan
Chemistry of Monovalent Group 13 and Divalent Group 14 Bases: A Theoretical Study	DST	43.77 lakh	2017-2020	A K Phukan
Computational Design of Functional and Structural Mimics of the Active Site of [FeFe]-Hydrogenase	CSIR	5.40 lakh	2017-2020	A K Phukan
Control Polymorph Nucleation of Drugs on Functionalized Surfaces	SERB	26.26 lakh	2015-2018	B Sarma
Metal Complexes of New Chiral Schiff Bases: Design, Structure Elucidation, Reactivity and Synthetic Applications	SERB	35.04 lakh	2016-2019	B Sarma
Multi-component crystal technology to improve drug pharmacokinetic attributes	CSIR	28.25 lakh	2017-2020	B Sarma
Development of polymer supported Nb and Ta based catalysts for organic oxidation under ecologically sustainable reaction condition	SERB	45.17 lakh	2017-2020	Nashreen S Islam
Development of Chiral Single Molecule Magnets	SERB	24.90 lakh	2016-2019	N Gogoi
Development of Exchange Biased {3d-4d/5d} Assemblies: A rational Route Towards High T <sub>b</sub> Nanomagnets	CSIR	12.40 lakh	2014-2017	N Gogoi

Investigation on structure-property relationship for self-healing smart hyperbranched polyurethane nanocomposites with antistatic and antimicrobial attributes	SERB	29.93 lakh	2017-2020	N Karak
Development of waterborne hyperbranched polyester and polyurethane from bio based resources and their nanocomposites	CSIR	24.00 lakh	2018-2020	N Karak
Identification of efficient semiconductor dopant combinations for selective chemiadsorption of tea pesticides on metal oxide semiconductor (MOS) sensor.	NTRF	34.01 lakh	2016-2010	P Puzari
Electrochemical study of enzyme embedded supported bilayer lipid membrane for development of a sensor for organophosphate and organocarbamate pesticides	SERB	64.97 lakh	2017- 2020	P Puzari
Development of hybrid catalysts for oxygen reduction reaction	SERB	29.49 lakh	2015- 2018	P Bharali
Directed functionalization of oxide and carbon nanomaterials for the development of efficient catalysts for carbon dioxide conversion into value-added products.	DST (DST-RFBR)	24.00 lakh	2017-2019	P Bharali
Theoretical investigation of methane oxidation catalyzed by metal nanoclusters supported on zeolites	SERB	47.00 lakh	2017-2020	R C Deka
Theoretical investigation of methane oxidation catalyzed by metal nanoclusters supported on zeolites	DBT	61.95 lakh	2017-2020	R C Deka
Continuous Flow reaction-An Attempt to Miniaturization of some pharmaceutical processes	SERB	47.40 lakh	2017-2020	R C Deka
Synthesis and characterization of task-specific ionic liquid systems for one pot synthesis of pyrimidine derivatives	CSIR	20.00 lakh	2017-2020	Ruli Borah
Synthesis, characterization and investigation of physicochemical properties of specific ionic liquid (IL) based systems for evaluation of electrochemical and photocatalytic activities	SERB	44.35 lakh	2017-2020	Ruli Borah
Functional Graphene based nanocomposites and their Catalytic Application	CSIR	20.00 lakh	2017-2010	S K Dolui
Design, syntheses and anion binding studies of pyrrole based cyclic pseudopeptides	SERB	27.36 lakh	2015-2018	S P Mahanta
Green nanocomposite from fully renewable biopolymers: Vegetable oil reinforced with rosin acid and Keratin	SERB	23.42 lakh	2016-2019	T K Maji

Site specific Functionalization of Nitrogen Based heterocyclic moieties via C-H activation	SERB	48.70 lakh	2017-2020	U Bora
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- Hazarika, C., Sarma, D., Puzari, P., Medhi, T. and Sharmah, S. Use of Cytochrome P450 enzyme isolated from *Bacillus streptosericus* sp. as recognition element in designing Schottky based ISFET Biosensor for hydrocarbon detection *IEEE Snsor Journal*, DOI 10.1109/JSEN.284769,2018.

Hazarika, D., Gupta, K., Mandal, M. and Karak, N. High-Performing Biodegradable Waterborne Polyester/Functionalized Graphene Oxide Nanocomposites as an Eco-Friendly Material, *ACS Omega*, 3(2), 2018.

Hazarika, D. and Karak, N. Unprecedented Influence of Carbon Dot@TiO<sub>2</sub> Nanohybrid on Multifaceted Attributes of Waterborne Hyperbranched Polyester Nanocomposite, *ACS Omega*, 3(2), 2018.

Ivanova-Shor, E. A.; Shor, A. M.; Laletina, S. S.; Deka, R. C. and Nasluzov, V. A. Modeling of heterogeneous catalysts based on silica and zeolites by the hybrid quantum chemical embedded cluster method. *Russian Chemical Bulletin*, 66, 2017.

Khannam, M., Boruah, R. and Dolui, S. K. An efficient quasi-solid state dye sensitized solar cells based on graphene oxide/gelatin gel electrolyte with NiO supported TiO<sub>2</sub> photoanode. *Journal of Photochemistry and Photobiology A: Chemistry*, 335, 2017.

Khannam, M. and Dolui, S. K. Cerium doped TiO<sub>2</sub> photoanode for an efficient quasi-solid state dye sensitized solar cells based on polyethylene oxide/multiwalled carbon nanotube/polyaniline gel electrolyte. *Solar Energy*, 150, 2017.

Khannam, M., Nath, B. C., Mohan, K. J. and Dolui, S. K. Development of Quasi-Solid-State Dye-Sensitized Solar Cells Based on a Poly(vinylalcohol)/Poly(ethyleneglycol)/Functionalized Multi-Walled Carbon Nanotubes Gel Electrolyte. *Chemistry Select*, 2(2), 2017.

Khannam, M., Sharma, S., Bhargav, R., Patra, A. and Dolui, S. K. Development of Perovskite Sensitized Thin Film Solar Cells Based on Graphene Oxide/TiO<sub>2</sub> Photoanodes. *Sensors & Transducers*, 210, 2017.

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Mandal, M. and Maji, T. K. Comparative study on the properties of wood polymer composites based on different modified soybean oils, *Journal of wood chemistry and technology*, 37, 2017.

Mandal, M. and Maji, T. K. Preparation, physical properties and ultraviolet resistance of wood nanocomposites based on modified soybean oil and bentonite, *Wood Material Science & Engineering*, 2018.

Mahanta, S. P. and Panda, P. K. Bis(pyrrole-benzimidazole) conjugates as novel colorimetric sensors for anions, *Journal of Chemical Sciences*, 129, 2017.

Mohan, R., Bora, A. J. and Dutta, R. K. Fluoride removal from water by lime-sludge waste, *Desalination and Water Treatment*, 112, 2018

Mohan, K., Dolui, S., Nath, B. C., Bora, A., Sharma, S. and Dolui, S. K. A highly stable and efficient quasi solid state dye sensitized solar cell based on Polymethyl methacrylate (PMMA)/Carbon black (CB) polymer gel electrolyte with improved open circuit voltage. *Electrochimica Acta*, 247, 2017.

Mondal, M. and Bharali, P. Nickel-catalyzed reductive defunctionalization of esters and amides to aromatic hydrocarbons, *New Journal of Chemistry*, 41(22), 2017.

Nath, B. C., Mohan, K. J., Barua, R., Ahmed, G. A. and Dolui, S. K. Dimensionally integrated  $\alpha$ -MnO<sub>2</sub>/Carbon black binary complex as platinum free counter electrode for dye sensitized solar cell. *Journal of Photochemistry and Photobiology A: Chemistry*, 348, 2017.

Nath, B. C., Mohan, K. J., Saikia, B. J., Ahmed, G. A. and Dolui, S. K. Designing of platinum free NiS anchored graphene/polyaniline nanocomposites based counter electrode for dye sensitized solar cell. *Journal of Materials Science: Materials in Electronics*, 28(1), 2017.



- Nath, J. and Dolui, S. K. Synthesis of carboxymethyl cellulose-g-poly (acrylic acid)/LDH hydrogel for in vitro controlled release of vitamin B 12. *Applied Clay Science*, 155, 2018.
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- Onyestyák, G., Novodárszki, G., Wellisch, A. F., Valyon, J., Thakur, A. J. and Deka, D. Guerbet self-coupling for ethanol valorization over activated carbon supported catalysts, *Reaction Kinetics, Mechanisms and Catalysis*, 121(1), 2017.
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- Saikia, A. and Karak, N. Polyaniline nanofiber/carbon dot nanohybrid as an efficient fluorimetric sensor for As (III) in water and effective antioxidant, *Materials Today Communications*, 14, 2018.
- Saikia, C., Das, M. K., Ramteke, A. and Maji, T. K. Controlled release of curcumin from thiolated starch-coated iron oxide magnetic nanoparticles: An in vitro evaluation, *International Journal of Polymeric Materials and Polymeric Biomaterials*, 66(7), 2017.
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- Saikia, G., Gogoi, S. R. and Islam, N. S. Peroxo compounds of V(V) and Nb(V) as potent inhibitors of calcinurin activity towards RII phosphopeptide, *Chemistry Select*, 2, 2017.
- Saikia, H., Borah, B.J. and Bharali, P. Room temperature reduction of nitroaromatics using Pd nanoparticles stabilized on nano-CeO<sub>2</sub>, *ChemistrySelect*, 2(32), 2017.
- Saikia, H., Hazarika, K.K., Chutia, B., Choudhury, B. and Bharali, P. A simple chemical route toward high surface area CeO<sub>2</sub> nanoparticles displaying remarkable radical scavenging activity, *ChemistrySelect*, 2(11), 2017.
- Saikia, L., Namsa, N. D. and Thakur, A. J. Microwave-assisted rapid synthesis of pyrido[2,3-d:6,5-d']dipyrimidine-2,4,6,8-tetraones over sulfonic acid functionalized imidazolium salts under solvent-free condition, *ChemistrySelect*, 2(25), 2017.
- Sarma, B. and Thakuria, T. Drug-drug and drug-nutraceutical cocrystal/salt as alternative medicine for combination therapy: A crystal engineering approach, *Crystals*, 8(2), 2018.
- Sarma, P., Dutta, A. K. and Borah, R. Design and Exploration of -SO<sub>3</sub>H Group Functionalized Brønsted Acidic Ionic Liquids (BAILs) as Task-Specific Catalytic Systems for Organic Reactions: A Review of Literature, *Catalysis Surveys from Asia*, 21, 2017.
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Sarmah, K., Pal, J., Maji, T. K. and Pratihar, S. Magnetically Recoverable Heterobimetallic Co<sub>2</sub>Mn<sub>3</sub>O<sub>8</sub>: Selective and Sustainable Oxidation and Reduction Reactions, *ACS Sustainable Chemistry & Engineering*, 5(12), 2017.

Sharma, M., Das, B., Hazarika, A., Mangina, N. R., Karunakar, G. V. and Bania, K. K. An indirect approach for encapsulation of chiral cobalt catalyst in microporous Zeolite-Y, *Microporous and Mesoporous Materials*, 272, 2018.

Sharma, M., Das, B., Sarmah, J. C., Hazarika, A., Deka, B. K., Park, Y. B. and Bania, K. K. Fractal to monolayer growth of AgCl and Ag/AgCl nanoparticles on vanadium oxides (VO<sub>x</sub>) for visible-light photocatalysis, *Journal of Materials Chemistry A*, 5(32), 2017.

Sharma, M., Das, B., Sharma, M., Deka, B. K., Park, Y. B., Bhargava, S. K. and Bania, K. K. Pd/Cu-oxide nanoconjugate at zeolite-Y crystallite crafting the mesoporous channels for selective oxidation of benzyl-alcohols, *ACS Applied Materials & Interfaces*, 9(40), 2017.

Sharma, M., Saikia, G. and Islam, N. S. vanadium based polyoxometalates as new and efficient catalyst for phenol hydroxylation under mild conditions, *New Journal of Chemistry*, 2018.

### Conference proceedings

Borah, P., Saikia, B. and Sarma, B. Control Sulfathiazole Polymorph Nucleation on Functionalized Surface, in proceedings of an International Conference on Emerging Trends in Nanomaterials Science and Technology, NIT, Dimapur, Nagaland, India, January 2017.

Bora, P. and Sarma, B. Self Assembled Monolayer Preparation to Control Nucleation: Characterization Utilizing Different Analytical Techniques, in proceedings of an International Conference on Sophisticated Instruments in Modern Research, IIT, Guwahati, India, June 30 - July 1, 2017.

Khatioda, R. and Sarma, B. Trapping Electronic Properties of Amide-Porous Polymer to Promote Selective-Oxidation Reactions, in proceedings of the 24<sup>th</sup> Congress and General Assembly of The International Union of Crystallography, Hyderabad, India, August 21 – 28, 2017.

Pathak, D., Khatioda, R. and Sarma, B. Exploring 2D COF as a Remarkable Catalyst Carrier for Efficient Reduction of p-Nitrophenol, in proceedings of a UGC sponsored National Seminar on Recent Trends in Environment Responsive chemical processes, D.R. College, Golaghat, India, September 22-23, 2017.

Pathak, D., Khatioda, R. and Sarma, B. Selective Oxidation of benzyl Alcohols into aldehydes on surface of organic 2D π-walls, in proceedings of a Workshop on Translational Research on Natural Products for Therapeutical uses, IASST, Guwahati, India, November 30, 2017.

Saikia, B. and Sarma, B. Solid formulation of liquid drug propofol via co-crystallization, in proceedings of the 24<sup>th</sup> Congress and General Assembly of The International Union of Crystallography, Hyderabad, India, August 21 – 28, 2017.

Sarma, B. In vitro release behavior of multicomponent drugs by tuning molecular conformation, non-covalent interactions”, in proceedings of the 24<sup>th</sup> Congress and General Assembly of The International Union of Crystallography, Hyderabad, India, August 21 – 28, 2017.

### Patents

Khannam, M. and Dolui, S. K. Development of Ce<sup>3+</sup> Doped TiO<sub>2</sub> Nanoparticles as Photoanode in Quasi Solid State Dye Sensitized Solar Cells, Patent Appl. No. 201731008074 dated 08-03-2017.

### **Books and Book Chapters**

Begum, P. and Deka, R. C. Activation of C-H Bond in Methane on Mono and Bimetallic Pd and Pt Subnanoclusters. In Chakraborty, T., Ranjan, P., and Pandey, A. (eds.). *Computational Chemistry Methodology in Structural Biology and Materials Sciences*, CRC Press, 2017.

Borah, B. J., Mondal, M. and Bharali, P. Palladium-based hybrid nanocatalysts: Application toward reduction reactions. In Mohapatra, S., Nguyen, T. A., and Nguyen-Tri, P. (eds.). *Noble metal-metal oxide hybrid nanoparticles: Fundamentals and Applications*, Elsevier, 2018.

Borthakur, B. and Phukan, A. K. Structure and Reactivity of Carbenes and Ylide Stabilized Carbenes: Contributions from Theory. In Gessner, V. H. (ed.). *Modern Ylide Chemistry: Applications in Ligand Design, Organic and Catalytic Transformations*, Springer, 2018.

### **SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**

A Bora and S K Dolui attended and presented a paper, All-Solid-State Flexible Supercapacitor Based on Self Assembled Polyaniline Nanotube/ Reduced Graphene Oxide Aerogel, at the Fourth International Symposium on Advances in Sustainable Polymers (ASP 17), IIT Guwahti, January 8 - 11, 2018.

A Bora and S K Dolui attended and presented a paper, Carbon Black/ Polyaniline Nanotube Composite as Electro-catalyst for Tri-iodide Reduction in Dye Sensitized Solar Cells, at the Condensed Matter Days (CMDAYS-2017), Tezpur University, August 29 - 31, 2017.

A Bora and S K Dolui attended and presented a paper, A Novel Carbon Nanotube/ Polyaniline Nanotube Composite as Room Temperature Methanol Vapor Sensor, at a National Seminar on Advances in Materials Science, Gauhati University, March 24 – 25, 2017.

A Saikia and N Karak attended an International Conference on Advances in Polymer Science & Technology, New Delhi, November 23– 25, 2017.

A Saikia and N Karak attended the conference Advances in Sustainable Polymers, IIT Guwahati, January 8 – 11, 2018.

B Sarma attended the International Conference on Sophisticated Instruments in Modern Research, IIT, Guwahati, India, June 30 - July 1, 2017.

B Sarma attended an International workshop on Comprehensive Metabolomics and Unknown Characterization Approaches Using Agilent LC/QToF and GC/QToF Platforms, Agilent Technologies India Pvt. Ltd., Bangalore, India, January 19-20, 2017.

B Sarma, D Pathak and R Khatioda attended a national seminar on recent trends in environment responsive chemical processes, D. R. College, Golaghat, India, September 22 -23, 2017.

B Sarma, D Pathak and R Khatioda attended a workshop on translational research on natural products for therapeutical uses, IASST, Guwahati, India, November 30, 2017.

B Sarma attended the QS BRICS WORLD UNIVERSITY RANKINGS Workshop, India Habitat Centre, New Delhi, November 8, 2017.

B Sarma attended the Time Higher Education WORLD UNIVERSITY RANKINGS conference organized by O. P. Jindal Global University, India Habitat Centre, New Delhi, November 16, 2017.

K K Bania attended the RACI Conference at Melbourne, Australia, 2017.

K Boruah and R Borah attended and presented a paper, Study of boosting nature of N,N- dialkylated imidazolium basic ionic liquid for Aza-Michael reaction, at a national conference on Emerging Trends in Chemical Sciences, Department of Chemistry, Dibrugarh University, March 26 -28, 2018.

R Duarah and N Karak attended an International Conference on Advances in Polymer Science & Technology, New Delhi, November 23– 25, 2017.

R Duarah and N Karak attended the conference Advances in Sustainable Polymers, IIT Guwahati, 8 – 11 January, 2018.

D Dowerah, P J Sarma and R C Deka attended and presented a paper, Computational Study on the Prediction of Global Minimum Structures of (MnO)<sub>n</sub> Clusters for n=1-10: A Pre-screened Approach Through DFT Energy Landscape, at a national conference on Nanomaterials Science, Technology and Applications, Department of Physics, Dibrugarh University, November 10-11, 2017.

D Hazarika and N Karak attended the International Conference on Advances in Polymer Science & Technology, New Delhi, November 23 – 25, 2017.

D Hazarika and N Karak attended the conference Advances in Sustainable Polymers, IIT Guwahati, January 8 – 11, 2018.

J Nath and S K Dolui attended and presented a paper, Synthesis of Carboxymethyl cellulose-g-Poly(Acrylic Acid)/LDH Hydrogel for the *In Vitro* Controlled Release of Vitamin B<sub>12</sub> presented in CMDAYS, Tezpur University, Assam, August 29-31, 2017.

J Nath and S K Dolui Chitosan/Graphene Oxide based Nanocomposite Hydrogel with High Mechanical and Shape Memory Effect presented in 4th International Symposium on Advances in Sustainable Polymers, IIT Guwahati, January 8-11, 2018.

J Handique and S K Dolui attended and presented a paper, Surface initiated self-healing polymers via Atom Transfer radical Polymerization from the surface of Graphene, at the 4<sup>th</sup> International Symposium on Advances in Sustainable Polymers, IIT Guwahati, January 8-11, 2018.

J Handique and S K Dolui attended and presented a paper, Synthesis of some self-healing polymer-graphene oxide composites by Atom Transfer radical Polymerization, at CMDAYS, Tezpur University, Assam, August 29-31, 2017.

K Mohan and S K Dolui attended and presented a paper, An efficient DSSC based on Polymethyl Methacrylate /Carbon Black Polymer Gel Electrolyte, at the 4<sup>th</sup> International Symposium on Advances in Sustainable Polymers (ASP 17), IIT Guwahati, January 8 - 11, 2018.

K Mohan and S K Dolui attended and presented a paper, An Efficient and Stable Quasi-Solid State DSSC based on PMMA/CB based PGE with Improved V<sub>OC</sub>, at Condensed Matter Days (CMDAYS-2017), Tezpur University, August 29 - 31, 2017.

K Mohan and S K Dolui attended and presented a paper, A Highly Stable Quasi-Solid State DSSC with Improved V<sub>OC</sub> based on PMMA/CB PGE, at a National Seminar on Advances in Materials Science, Gauhati University, Guwahati, March 24 – 25, 2017.

N S Islam attended the 17<sup>th</sup> National Conference on Modern Trends in Inorganic Chemistry, Jointly organized by NCL, Pune and IISER-Pune, Pune University as Session Chairperson and member of National Organizing Committee, December 11-14, 2017.

P Puzari attended a short term course on fabrication of interdigitated electrodes at INUP, IITB, February 19-23, 2018.

P J Sarma and R C Deka attended and presented a paper, Reduction of Carbon Dioxide to Formic Acid over Nanosized SnO<sub>2</sub> Clusters: Mechanistic Query via DFT Approach, at a national conference on Nanomaterials Science, Technology and Applications, Department of Physics, Dibrugarh University, November 10-11, 2017.

R Bayan and N Karak, attended the conference Advances in Sustainable Polymers, IIT Guwahati, January 8– 11, 2018.

S Das, S Saikia, and R Borah attended and presented a paper, Study of environmentally benign synthesis of chalcones via Claisen-Schmidt condensation under solvent-free medium, at a UGC Sponsored national seminar on Recent Trends in Environment Responsive Chemical Processes, D R College, Golaghat, September 22-23, 2017.

S Doley and S K Dolui attended and presented a paper, Development of Sunflower Oil based polyurethane through non isocyanate routes: An eco friendly approach at CMDAYS, Tezpur University, Assam, August 29-31, 2017.

S Doley and S K Dolui attended and presented a paper, In Situ development of bio-based polyurethane/epoxyhybrid materials via non-isocyanate route and its coating properties, at the 4<sup>th</sup> International Symposium on Advances in Sustainable Polymers, IIT Guwahati, January 8-11, 2018.

S Doley and S K Dolui attended and presented a paper, Development of CO<sub>2</sub> source monomer Cyclic Carbonates Castor Oil as a precursor for synthesis of polyurethane networks: A non-isocyanate route, at the Emerging Trends in Chemical Sciences, Dibrugarh University, Assam, February 26-28, 2018.

S Saikia and R Borah attended and presented a paper, Exploration of 1,3-disulfoimidazolium chloronickellate/HZSM-5 materials and their potential use as heterogeneous catalyst for the synthesis of indole derivatives presented, at national seminar on Recent Trends in Environment Responsive Chemical Processes, D. R. College, Golaghat, September 22-23, 2017.

T Ghosh and N Karak attended the conference Advances in Sustainable Polymers, IIT Guwahati, January 8–11, 2018.

U Bora attended the 6<sup>th</sup> Asian Network for Natural and Unnatural Materials (ANNUM VI) held at Gifu, Japan, July 27-28, 2018.

#### **TALKS BY THE FACULTY ABROAD AND IN INDIA**

A K Phukan delivered a talk, Activation of Small Molecules by Singlet Carbenes, in an International Conference on Emerging Trends in Chemical Sciences (ETCS-2018) organized by the Department of Chemistry, Dibrugarh University, Assam, India, February 26-28, 2018.

A K Phukan delivered a talk, Tracing the Route to Ammonia: A Theoretical Study on the Possible Pathways for Dinitrogen Reduction, in a National Conference on Frontiers in Inorganic Chemistry-II (FIC-II) organized by the Department of Inorganic Chemistry, Indian Association for the Cultivation of Science (IACS), Kolkata, India, March 8-9, 2018.

B Sarma delivered a talk in a One Day Seminar for UG Major Students, Bajali College, Pathsala, Assam, March 28, 2018.

B Sarma delivered a talk, Cocrystal Technology for Improved API Properties, in the 12<sup>th</sup> International WFCFD, ICT Mumbai, February 22-24, 2018.

B Sarma delivered a talk, Crystal Engineering, in the Department of Chemistry, Darang College, Tezpur, February 12, 2018.

B Sarma delivered a talk, Functionalized surface for desired polymorph nucleation & toxic impurity separation, in the 12<sup>th</sup> International WFCFD, ICT Mumbai, February 22-24, 2018.

B Sarma delivered a talk, in vitro release behavior of multicomponent drugs by tuning molecular conformation, non-covalent interactions, in the 24<sup>th</sup> Congress and General Assembly of The International Union of Crystallography; Hyderabad, India, August 21 – 28, 2017.

B Sarma delivered a talk, Multi-Drug Crystal Technology for Improved Absorption, Release and Distribution Behavior” in International Conference on Emerging Trends in Chemical Sciences 2018 (ETCS-2018), Dibrugarh University, Assam, February 24-26, 2018.

B Sarma delivered a talk, “Pharmaceutical characterization by other complimentary techniques Electron Diffraction for Pharmaceutical Applications, an International Workshop, CSIR-IICT Hyderabad, July 10, 2018.

B Sarma delivered a talk, Exploiting  $\pi$ -Cloud Conjugation of 2D Covalent Organic Framework for Selective Oxidation Reactions in the National Conference on Applied Sciences, Sustainable and Evolving Technologies, ASSET 2018, CIT Kokrajhar, BTAD, Assam, March 9 - 11, 2018.

B Sarma delivered a talk, Polymorph Nucleation on Self-Assembled Monolayer using Raman Lasers, in the international conference on sophisticated instruments in modern Research, IIT, Guwahati, India, June 30- July 1, 2017.

N Karak delivered a talk, Advances in Sustainable Polymers, IIT Guwahati, January 8-11, 2018.

N Gogoi delivered a talk, Modification of Coordination Environment: A Convenient Tool for Modulation of Single Ion Magnetic Anisotropy, in a National Conference on New Dimensions of Chemistry organized by INST Mohali, IIT Bombay and IICT Hyderabad at Aahana Resort, Nainital, May 2-5, 2017.

N Gogoi delivered a talk, Rational Manipulation of Single Ion Magnetic Anisotropy at Silver Jubilee National conference on Condensed Matter Physics Condensed Matter Days organized by Department of Physics, Tezpur University, August 29-31, 2017.

N Gogoi delivered a talk, Rational Modulation of Single Ion Magnetic Anisotropy in a National Conference on Applied Sciences, Sustainable & Evolving Technologies & 63<sup>rd</sup> Annual Technical Session of Assam Science Society organized by Central Institute of Technology, Kokrajhar & Bodoland University, Kokrajhar, March 9-11, 2018.

N Gogoi delivered a talk, Rational Modulation of Single Ion Magnetic Anisotropy in a National Symposium on Recent Trends in Chemical Sciences organized by Department of Chemistry, NIT Meghalaya, Shillong, October 12-13, 2017.

N Karak delivered a talk, International Conference & Exhibition on Polymers (ICEP), Maniram Dewan Trade Centre, Guwahati, February 23- 25, 2018.

N S Islam delivered a talk, Macromolecular r metal complexes of potential bio-chemical application, in a National Seminar on Emerging Trends in Chemistry, Department of Chemistry, Gauhati University, January 29, 2018.

N S Islam delivered a talk, polymer anchored metal complexes as bio-inspired heterogeneous catalysts, in a National Seminar in organometallics and catalysis, St. Mary's College, Shillong, July 12-13, 2017.

N S Islam delivered a talk, Research fundings in India, existing opportunities, Teaching Learning Centre, Tezpur University, December 3, 2017.

P Bharali delivered a talk, Cyclic Voltammetry/Rotating Disk Electrode Measurements toward Understanding the Electrocatalytic Oxygen Reduction Activity, in an International Conference on Sophisticated Instruments in Modern Research (ICSIMR-2017), Indian Institute of Technology Guwahati, June 30 - July 1, 2017.

P Bharali delivered a talk, Design of Hybrid Pd-based Nanocatalysts for Bifunctional Oxygen Reduction and Oxygen Evolution Reactions, in the Indo-French workshop on Green and Sustainable Chemistry: Role of Catalyst, Indian Institute of Technology (ISM) Dhanbad, February 6-8, 2018.

P Bharali delivered a talk, Nobel Prize in Chemistry 2017, Lectures on Frontier knowledge, Imagination and Initiatives based on the works of Nobel Laureates of the year 2017, Tezpur University, November 16, 2017.

P Bharali delivered a talk, Student Centric and Curriculum based Orientation Programme for Chemistry students (under DBT star College Scheme), Digboi College, Digboi, March 26, 2018.

P Bharali delivered a talk, Synergistic Catalysis of  $\text{Co}_3\text{O}_4\text{-Mn}_2\text{O}_3/\text{C}$  Hetero-nanostructures toward Oxygen Reduction Reaction, in a National conference on Applied Sciences, Sustainable & Evolving Technologies (ASSET) & 63<sup>rd</sup> Annual Technical Session of Assam Science Society, Central Institute of Technology, Kokrajhar, March 9-11, 2018.

S K Dolui delivered a talk, Polymer based flexible solar cell in Condensed Matter Days (CMDAYS-2017), Tezpur University, August 29 - 31, 2017,

S P Mahanta delivered a talk, Supramolecular Chemistry and its application, in a One Day Seminar for UG Major Students, Bajali College, Pathsala, Assam, March 28, 2018.

U Bora attended the National Conference on Applied Sciences, Sustainable and Evolving Technologies, ASSET 2018, CIT Kokrajhar, BTAD, Assam, March 9 - 11, 2018.

U Bora delivered a talk, Green Chemistry, in the One Day Seminar for UG Major Students, Bajali College, Pathsala, Assam, March 28, 2018.

U Bora delivered an invited lecture sponsored by sponsored by the Kyushu district of the Pharmaceutical Society of Japan at Daiichi Pharmaceutical University, Fukuoka, Japan, 2017.

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

National Workshop on FT-NMR Technology in Collaboration with JEOL India Pvt. Ltd., New Delhi, 13<sup>th</sup> October, 2017.

Workshop on Arsiron Nilogon conducted by the Department of Chemical Sciences, 10<sup>th</sup> September, 2017.

Workshop on Sanchi-Pat conducted by the Department of Chemical Sciences on 11<sup>th</sup> September, 2017.

Royal Society of Chemistry "Salters' Chemistry Camp for 9<sup>th</sup> standard students" 23-25 January, 2018.

American Chemical Society Northeast Publishing Workshop on to improve the quality of research publications by helping early career researchers to effectively communicate their work 8<sup>th</sup> January, 2018.

Workshop on Arsiron Nilogon and Fluoride Nilogon conducted by the Department of Chemical Sciences, 24-25 February, 2018.

#### **DISTINGUISHED VISITORS TO THE DEPARTMENT**

Dr. Bedanta Gogoi

Mr. Bijon Mahanta, OIL India Ltd. Duliajan

Prof. Holger Braunschweig, Institute of Inorganic Chemistry, Germany

Dr. Ivo Krummenacher, Senior Researcher, Institute of Inorganic Chemistry, Germany

Prof K. N. Singh

Dr. M. M. Kalita, Research Officer, Taiwan Biometric Company

Prof. M. Palaniandaver, F.A.Sc, F.N.A, F.R.Sc, Professor of Eminence, Bharatidashan University

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

B Sarma has been selected as Editorial Board Member (Scientific Advisor to Editor) of International Journal "Journal of Pharmaceutical Sciences" of <https://onlinelibrary.wiley.com> for the period of three years, January 2018-January 2021.

B Borthakur (Research Scholar) awarded for his outstanding performance in ETCS 2018 in Dibrugarh University, February 2018.

Kabirun Ahmed (Research Scholar) received Royal Society of Chemistry Best Poster Prize in International Conference on Emerging Trends in Chemical Sciences.

K K Bania received the Indo-Australia Early Mid Career Research Fellowship by INSA, New Delhi.

N Karak awarded the Fellowship of Royal Society of Chemistry (FRSC) by Royal Society of Chemistry, UK.

Kasturi Sarmah (Research Scholar) awarded the GYTI award by SRISTI (Society for Research and Initiatives for Sustainable Technologies and Institutions)

Progyashree Goswami (Research Associate) awarded for their outstanding performance in ETCS 2018 in Dibrugarh University, February 2018.

R C Deka honoured Secretary of Catalysis Society of India 2018.

R C Deka awarded Prof. A. S. R. Anjaneyulu Endowment Award, 2017 by the Indian Chemical Society.

R C Deka awarded Fellow of the Royal Society of Chemistry (FRSC) 2017.

Rituparna Duarah (Research Scholar) awarded the Best Oral presentation award, Advances in Sustainable Polymers, IIT Guwahati, 2018.

T Ghosh (Research Scholar) awarded the Best Poster award, Advances in Sustainable Polymers, IIT Guwahati, 8 – 11 January, 2018.

#### **NUMBER OF STUDENTS WHO PASSED NET-JRF/GATE**

NET: 07

GATE: 22

SLET: 14

#### **NOTABLE PLACEMENT**

03 (OIL, Duliagan)

#### **THE FACULTY OF THE DEPARTMENT**

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**Adjunct Professor**

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## DEPARTMENT OF ENVIRONMENTAL SCIENCE

### THE DEPARTMENT

The Department of Environmental Science was opened in 2004 with the objective of imparting education on regional and global environmental issues. Initially it was a Centre for Environmental Science, opened in 2003, the centre was converted to the Department of Environmental Science in 2004. The curriculum for the M. Sc. 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 & Adaption, Hydrogeochemistry, Vermicomposting, Pollution Remediation, Biodiversity Conservation and Atmospheric System Modeling.

### Academic programmes and Student intake

Academic programmes	Student Intake
MSc	30
PhD	Intake variable 04 in the last Academic year 2017-2018

### Major facilities and equipment available

Besides laboratories for regular academic activities the department has specialized laboratories that facilitate research. Some of the instruments in the laboratories of the department include 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 with gaseous sampling attachment, High Speed Refrigerated Centrifuge, Sartorius RO System, Sartorius Ultra-Pure Water Purification System, HOBO Pro V2 Tea/RH data logger, Flame Photometer, Electrophoresis gel unit and Fluorescence Microscope with Camera & Software. The Department also has a GIS laboratory that facilitates Arc GIS Master Lab Kit and ERDAS Software, and a plant culture house.

New equipment (waiting for installation):

- Inductively Coupled Plasma Mass spectrophotometer (ICP-MS)
- Carbon Hydrogen Nitrogen and Sulphur Analyzer (CHNS)
- High-performance liquid chromatography (HPLC)
- Ion chromatography (IC)

### MAJOR RESEARCH FINDINGS/RESEARCH AND DEVELOPMENT ACTIVITIES

Principal Investigator	Salient Research Findings
A K Das	➤ 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.

	<ul style="list-style-type: none"> <li>➤ In terms of floodplain alternation, deposition is dominant over erosion during last three decades.</li> </ul>
Ashalata Devi	<ul style="list-style-type: none"> <li>➤ Sacred groves of Assam: Sacred groves of Assam are vulnerable to various anthropogenic and developmental activities though indigenous communities have strong approach of protection associated with their socio-cultural and religious practices. Out of the 282 recorded sacred groves of Assam, 59% of the sacred groves are highly threatened, 31.2% are moderately threatened and 9.5% are least threatened.</li> <li>➤ Vegetation diversity and composition changes according to the altitude in the Talle valley wildlife sanctuary of Arunachal Pradesh. Rich faunal diversity and high diversity of Felidae species was recorded in the low altitudinal region of Pange area of the sanctuary. Avifauna of the sanctuary found to migrate to the lower altitude region during the winter season. Cattle's grazing and hunting activities are found to be main factor for threatening the wildlife of the sanctuary. Logging activities is not recorded inside the sanctuary.</li> </ul>
K K Baruah	<ul style="list-style-type: none"> <li>➤ 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 Mg C ha<sup>-1</sup> yr<sup>-1</sup>.</li> <li>➤ Bahadur and Dinanath were identified to have high photosynthetic efficiency and high partitioning efficiency out of 06 genotypes of irrigated boro rice studied, and these two varieties are also identified to be low methane emitting rice variety</li> <li>➤ 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.</li> </ul>
K P Sarma	<ul style="list-style-type: none"> <li>➤ Identified a wetland plant of Assam for remediation of Arsenic from aqueous solution.</li> </ul>
S S Bhattacharya	<ul style="list-style-type: none"> <li>➤ Silver nanoparticles (AgNP) prepared through a new green synthetic route showed efficient soil conditioning abilities with minimal toxicity in plant-earthworms-microbe matrices (<i>Journal of Hazardous Materials, 2018; Geoderma, 2018</i>).</li> <li>➤ Standardization of the vermicomposting technology could have been achieved for remediating toxic silk industry effluents and sludge (SPES). Also, reported the effectiveness of earthworm <i>Eudrilus eugeniae</i> in vermicomposting of SPES for the first time (<i>Bioresource Technology, 2018</i>).</li> <li>➤ Carlinoside and Capsaicin are two medicinally active secondary metabolites found in <i>Cajanus cajan</i> (Arhar) and <i>Capsicum chinense</i> (Bhut jolokia) respectively. The crops were grown in two different soil types and the research findings suggested that the soil with higher C induced greater production of Carlinoside and Capsaicin in Arhar and Bhut jolokia respectively as compared to C fatigued soils (<i>Environmental Research, 2018; Scientia Horticulturae, 2016</i>).</li> </ul>

#### Research projects, ongoing and new

Project Title	Funding agency	Amount (in INR)	Duration	Principal Investigator
Sacred Groves Of Assam: Biodiversity Status And Strategies For Their Conservation	GBPIHED	9.96 Lakh	2014-17	Ashalata Devi
Exploration of Biodiversity and conservation issues of Talley Valley Wildlife sanctuary, Arunachal Pradesh with	MoEF&CC	38.96 Lakh	2016-19	Ashalata Devi

reference to wildlife species distribution along climate and topographical gradients				
Spatial Distribution Of Uranium And Associated Water Quality Parameters In Six Districts Of Assam (Sonitpur, Lakhimpur, Morigaon, Nagaon, Jorhat, Sibsagar)	Department of Atomic Energy, BARC, Trombay	24.56 Lakh	2014-17	K P Sarma
Understanding Of Arsenic Phase Distribution And Co-Contamination Perspective With Fluoride In The Brahmaputra Flood Plains	DST-SERB	25.00 Lakh	2014-17	M Kumar
Utilization Of Textile Industry Sludge Through Application Of Vermitechnology: An In-Sight On Metal Accumulation Potential Of Earthworm	DST-SERB	54.8 Lakh	2017-2020	S S Bhattacharya
Elucidating The Mechanism And Assessing Amelioration Potential Of <i>Ocimum</i> And <i>Lucas</i> In Stress Induced Impaired Homeostasis On Growth And Reproduction In Zebrafish.	ICAR-NASF	46.57 Lakh	2017-2020	S S Bhattacharya
Prospect of a novel protein in earthworm gut to minimize heavy metal risk in vermicompost for sustainable crop production	CSIR	26.96 Lakh	2017-2020	S S Bhattacharya

## PUBLICATIONS

### In International and National Journals

Barman, N., Bhuyan, P., Chabukdhara, M., Deka, P. and Hoque R. R. PM10 bound elements, ions, carbon and PAHs during festive biomass burning over the Brahmaputra Valley. *Asian Journal of Water, Environment and Pollution*, 14 (2), 2017.

Baruah, K. K., Bharali, A., Mazumdar, A. and Jha, G. Genotypic variation in carbon fixation, <sup>13</sup>C fractionation and grain yield in seven wheat cultivars grown under well-watered conditions. *Functional Plant Biology*, 44, 2017.

Baruah, S., Sarma Bora, M., Sharma, P. and Sarma, K. P. Understanding of the distribution, translocation, bioaccumulation, and ultrastructural changes of *Monochoria hastata* plant exposed to cadmium. *Water Air Soil Pollution*, 228 (17), 2017.

Bharadwaj, N., Gogoi, N., Borthakur, S. and Basumatary, N. Morpho-physiological responses in different mungbean genotypes under Drought stress. *Research Journal of Recent Sciences*, 2018.

Bharali, A., Baruah, K. K. and Gogoi, N. Potential option for mitigating methane emission from tropical paddy rice through selection of suitable rice varieties. *Crop and Pasture Science*, 68, 2017.

Bharali, A., Baruah, K. K., Baruah, S. G. and Bhattacharya, P. Impacts of integrated nutrient management on methane emission, global warming potential and carbon storage capacity in rice grown in a Northeast India soil. *Environmental Science and Pollution Research*, 25, 2017.

Bharali, A., Baruah, K. K., Bhattacharya, P. and Gorh, D. Integrated nutrient management in wheat grown in a Northeast India soil: Impacts on soil organic carbon fractions in relation to grain yield. *Soil and Tillage Research*, 168, 2017.

- Bharali, A., Baruah, K. K., and Gogoi, N. Potential option for mitigating methane emission from tropical paddy rice through selection of suitable rice varieties. *Crop and Pasture Science*, 68, 2017.
- Bharali A., Baruah, K. K. and Gogoi, N. Methane emission from irrigated rice ecosystem: relationship with carbon fixation, partitioning and soil carbon storage. *Paddy Water Environment*, 15, 2017.
- Bharali A., Baruah, K. K., Bhattacharya P. and Gorh, D. Integrated nutrient management in wheat grown in a northeast India soil: Impacts on soil organic carbon fractions in relation to grain yield. *Soil and Tillage Research*, 168, 2017.
- Bhuyan, P., Deka, P., Prakash, A., Balachandran, S. and Hoque, R. R. Chemical characterization and source apportionment of aerosol over mid Brahmaputra Valley, India. *Environmental Pollution*, 234, 2018.
- Borah, M., Devi, A. and Kumar, A. Diet and feeding ecology of the western Hoolock Gibbon (*Hoolock hoolock*) in a tropical forest fragment of Northeast India. *Primates*, 59, 2018.
- Bordoloi, N., Baruah K. K. and Thakur, A. J. Effectiveness of plant growth regulators on emission reduction of greenhouse gas (Nitrous oxide): An approach for cleaner environment. *Journal of Cleaner Production*, 171, 2018.
- Bordoloi, N. and Baruah, K. K. Effect of foliar application of plant growth regulators on nitrous oxide (N<sub>2</sub>O) emission and grain yield in wheat. *Environmental Science and Pollution Research*, 24, 2017.
- Buragohain, S., Sarma, B., Nath, D. J., Gogoi, N., Meena, R. S. and Lal, R. Effect of 10 years of biofertiliser use on soil quality and rice yield on an inceptisol in Assam, India. *Soil Research*, 56, 49-58, 2017.
- Das, P., Barua, S., Sarkar, S., Chatterjee, S. K., Mukherjee, S., Goswami, L., Das, S., Bhattacharya, S., Karak, N. and Bhattacharya, S. S. Mechanism of toxicity and transformation of silver nanoparticles: inclusive assessment in earthworm-microbe-soil-plant system. *Geoderma*, 314, 2018.
- Das, P., Barua, S., Sarkar, S., Karak, N., Bhattacharyya, P., Raza, N., Kim, K. H. and Bhattacharya, S. S. March Plant extract mediated green silver nanoparticles: Efficacy as soil conditioner and plant growth promoter. *Journal of hazardous materials*, 346, 2018.
- Das, S., Teja, K. C., Mukherjee, S., Seal, S., Sah, R. K., Duary, B., Kim, K. H. and Bhattacharya, S. S. Impact of edaphic factors and nutrient management on the hepatoprotective efficiency of Carlinoside purified from pigeon pea leaves: An evaluation of UGT1A1 activity in hepatitis induced organelles. *Environmental Research*, 161, 2018.
- Das, N., Das, A., Sarma, K. P. and Kumar, M. Provenance, prevalence and health perspective of co-occurrences of arsenic, fluoride and uranium in the aquifers of the Brahmaputra River floodplain. *Chemosphere*, 194, 755-77, 2018.
- Das, P. Barua, S. Sarkar, S. Chatterjee, S. K. Mukherjee, S. Goswami, L. Das, S. Bhattacharya, S. Karak, N. and Bhattacharya, S. S. Mechanism of toxicity and transformation of silver nanoparticles: Inclusive assessment in earthworm-microbe-soil-plant system. *Geoderma*, 314, 2018.
- Das, P., Barua, S., Sarkar, S., Karak, N., Bhattacharyya, P., Raza, N., Kim, K-H. and Bhattacharya, S. S. Plant extract-mediated green silver nanoparticles: Efficacy as soil. *Journal of hazardous materials*, 346, 2018.
- Das, N., Sarma, K. P., Patel, A. K., Deka, J. P., Das, A., Kumar, A. and Shea, P. Seasonal disparity in the co-occurrence of arsenic and fluoride in the aquifers of the Brahmaputra flood plains, Northeast India. *Environmental Earth Sciences*, 76, 2017.
- Dey, M. D., Das, S., Kumar, R., Doley, R., Bhattacharya, S. S. and Mukhopadhyay, R. R. Vermiremoval of methylene blue using *Eisenia fetida*: A potential strategy for bioremediation of synthetic dye-containing effluents. *Ecological Engineering*, 106, 2017.
- Dutta, G. and Devi, A. Quantitative vegetation analysis of tropical moist mixed deciduous forests of Assam, northeast India. *Indian Forester*, 143, 2017.
- Farooq, M., Nadeem, F., Gogoi, N., Ullah, A., Algamadi, S., Nayyar, H. and Siddique K. H. M. Heat stress in grain legumes during reproductive and grain-filling phases. *Crop and Pasture Science*, 68, 2017.
- Ghosh, M. and Devi, A. An application of blended amendments in monsoon rice field. *Ecological Processes*, 200, 2017.
- Ghosh, M. and Devi, A. An application of blended amendments in monsoon rice field. *Ecological Processes*, 6, 2017.

- Gogoi N., Farooq, M., Barthakur, S., Baroowa, B., Paul, S., Bharadwaj, N. and Ramanjulu, S. Thermal stress impacts on reproductive development and grain yield in grain legumes. *Journal of Plant Biology*, 61(5), 265-291, 2018.
- Goswami, L., Mukhopadhyay, R., Bhattacharya, S. S., Das, P. and Goswami, R. Detoxification of chromium-rich tannery industry sludge by *Eudrillus eugeniae*: Insight on compost quality fortification and microbial enrichment. *Bioresource Technology*, 266, 2018.
- Goswami, L., Kim, K. H., Akash Deep, Das, P., Bhattacharya S. S., Kumar, S. and Adelodun, A. A. Engineered nano particles: Nature, behavior, and effect on the Environment. *Journal of Environmental Management*, 196, 2017.
- Goswami, L., Nath, A., Sutradhar, S., Bhattacharya, S. S., Kalamdhad, A., Vellingiri, K. and Kim, K. H. Application of drum compost and vermicompost to improve soil health, growth, and yield parameters for tomato and cabbage plants. *Journal of Environmental Management*, 200, 2017.
- Handique S., Sharma P., Baruah K. K. and Tripathi J. K. Spatial and temporal variations in the geochemistry of the Brahmaputra river water. *International Journal of Geoscience*, 8, 756-765, 2017.
- Hussain, N., Das, S., Goswami, L., Das, P. and Sahariah, B. Bhattacharya, S. S. Intensification of vermitechnology for kitchen vegetable waste and paddy straw employing earthworm consortium: Assessment of maturity time, microbial community structure, and economic benefit. *Journal of Cleaner Production*, 182, 2018.
- Kalita, S. and Bhola, R. K. Antifeedant effect of some plant extracts on *Tribolium castaneum* (Herbst). *PARIPEX- Indian Journal of Research*, 7(3), 2018.
- Mondal, A., Das, S., Sah, R. K., Bhattacharyya, P. and Bhattacharya, S. S. Environmental footprints of brick kiln bottom ashes: Geostatistical approach for assessment of metal toxicity. *Science of the Total Environment*, 609, 2017.
- Paul, S., Das, S., Raul, P. and Bhattacharya, S. S. Vermi-sanitization of toxic silk industry waste employing *Eisenia fetida* and *Eudrilus eugeniae*: Substrate compatibility, nutrient enrichment and metal accumulation dynamics. *Bioresource Technology*, 266, 2018.
- Sah, R. K. and Das, A. K. Minimizing Ambiguities in stream classification of complex drainage structures. *Journal of Hydrology*, 553, 2017.
- Sah, R.K. and Das, A.K. Overcoming source limitations in drainage delineation by combining the streams of topo sheet and DEM in river morphometric studies. *Journal of Geological Society of India*, 90(2), 2017.
- Sarkar, M. and Devi, A. Analysis of medicinal and economic important plant species of Hollongapar Gibbon wildlife sanctuary, Assam, northeast India. *Tropical Plant Research*, 4(3), 486-495, 2017.
- Sarma, B., M.Farooq., Gogoi N., Katak, R., Borkotoki, B. and Garge, A. Soil organic carbon dynamics in wheat green gram crop rotation amended with vermicompost and biochar in combination with inorganic fertilizers: A comparative study. *Journal of Cleaner Production*, 201, 471-480, 2018
- Sarma, D., Baruah, K. K., Baruah, R., Gogoi, N., Bora, A., Chakraborty, S. and Karipot, A. Carbon dioxide, water vapour and energy fluxes over a semi-evergreen forest in Assam, Northeast India. *Journal of Earth System Science*, 127(94), 2018.
- Sarma, J., Roy, D.K., Sarania, B. and Devi, A. A note on extended distribution and IUCN status of *Pyrenaria khasiana* R.N. Paul var. *lakhimpurensis*. Odyuo and amp; D.K. Roy - an endemic Theaceous plant of Eastern Himalaya. *NeBIO*, 8 (2), 2017. Sarma, J., Dutta, G. and Devi, A. *Capsicum sonitpurensis* (Solanaceae) - A new species from Assam, India. *Bangladesh Journal of Plant Taxon*, 24 (2), 2017.
- Sarma, J. and Devi, A. Ethnomedicinal wisdom of Garo community from erstwhile Sonitpur District of Assam, Northeast India. *Pleione*, 11(2), 2017.
- Sarma, B. and Gogoi, N. Nitrogen management for sustainable soil organic carbon increase in inceptisols under wheat cultivation. *Communications in Soil Science and Plant Analysis*, 48(6), 2017.
- Sarma, B., Borkotoki, B., Narzari, R., Katak, R. and Gogoi, N. Organic amendments: Effect on carbon mineralization and crop productivity in acidic soil. *Journal of Cleaner Production*, 152, 2017.

### **Books and Book Chapters**

Baidya, S. and Devi, A. 2018. Role of indigenous communities in conservation of sacred plants of Assam. (In: Amirthalingam, M. (ed). C. P. R. Environmental Education Centre, MoEF, Govt. of India.

Devi, A., Sarma, J. and Kumar, A. 2017. An Appraisal of Ethno-Botanical Approaches in North Eastern States of India, in Natural resources – utilizing and conserving for human welfare and sustenance. In: Medhi, P., Roy, H., and Sarma, A. (eds). Compendium of Botanical research in Eastern India. EBH publications (India), 2017. pp. 373-408.

Gogoi, N., Baruah, K. K. and Meena, S. R. 2017. Grain Legumes: Impact on Soil Health and Agroecosystem. In: Meena, R.S., Das, A., Yadav, G.S. and Lal, R. (eds). Legumes for Soil Health and Sustainable Management, Springer Nature.

Kumar, M., Das, N. and Sarma, K. P. 2017. Tracing the significance of river for arsenic enrichment and mobilization. In: Kurisu, F., Ramanathan, A. L., Ahmad Kazmi, A., and Kumar, M. (eds). Trends in Asian Water Environmental Science and Technology, Springer Nature.

Kurisu F., Ramanathan, A. L., Ahmad Kazmi, A., and Kumar, M. (eds). 2017. Trends in Asian Water Environmental Science and Technology, Springer Nature.

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

Orientation program on Assam Biodiversity Portal organized by ASHOKA Trust For Research In Ecology and The Environment (ATREE) in collaboration with department of Environmental Science, Tezpur University on 28 March, 2018.

Workshop cum Outreach Programme supported by UGC-SAP (DRS-I), at O. P. Kanoi M. E. School (New Sirajuli, Sonitpur), 10 March, 2018.

Workshop cum Outreach Programme supported by UGC-SAP (DRS-I), at Adarsha High School (Ouguri, Nagaon), 17 March, 2018.

### **TALKS BY THE FACULTY ABROAD AND IN INDIA**

Nayanmoni Gogoi delivered a talk, Challenging Environmental Issues and Human Health Hazards, at National Science Day, organized by Lokanayak Omeo Kumar Das College, Dhekiajuli, 28 February, 2018

### **DISTINGUISHED VISITORS TO THE DEPARTMENT**

Prof. S. D. Kashyap, (UGC-SAP, external nominee)

Prof. T. K. Adhya, Professor Scholl of Biotechnology, KIIT University

### **AWARDS & HONOURS RECEIVED BY THE FACULTY/ STAFF/ RESEARCH SCHOLARS/ STUDENTS**

#### **ACHIEVEMENTS**

Ms. Pallabi Das, Research Scholar of the Department of Environmental Science and Ms. Kasturi Sarmah of Department of Chemical Sciences, Tezpur University were awarded the prestigious GYTI Award 2018 for their innovative work on large-scale synthetic routes to manufacture iron(oxalate) capped metal oxide [Fe(ox)-Fe<sub>3</sub>O<sub>4</sub> (OCIO), Fe(ox)Fe-MnOx (OCIMn), and Fe(ox)Fe-CuOx (OCICu)] nanomaterials that act as excellent soil conditioners for increasing micronutrient availability to plants with least toxicity.



Dr. Ashalata Devi was conferred Young Scientist of the year 2017 by International Foundation for Environment and Ecology (IFEE), Kolkata based on recommendation of Confederation of Indian Universities (CIU), New Delhi on the occasion of 4<sup>th</sup> International Conference on Environment and Ecology held on 12<sup>th</sup>-14<sup>th</sup> February 2018 at Gauhati University, Assam, India.

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

Department was supported by UGC-SAP and DST-FIST

World Environment Day was observed with a two-day programme on 5<sup>th</sup> June 2017

#### **NUMBER OF STUDENTS WHO PASSED NET-JRF/GATE [2017-2018]**

UGC-NET (LS) - 04

GATE - 04

#### **NOTABLE PLACEMENT OF STUDENTS [2017-2018]**

Ashmita Bharali, Assistant Professor (Guest Faculty), Cotton University, Guwahati

Banashree Sarma, Project Scientist, Assam State Biodiversity Board

Karishma Hussain, NPDF, DST-SERB, Gauhati University

Nirmali Bordoloi, Assistant Professor, Central University of Jharkhand

Nilotpal Das, NPDF, DST-SERB, IIT Guwahati

Pratibha Deka, Assistant Professor, Tezpur University

Pallavi Das, Assistant Professor, Indira Gandhi National Tribal University, Madhya Pradesh

Pranamika Bhuyan, Assistant Professor (Guest Faculty), Assam Women's University, Jorhat

Parijat Saikia, NPDF, DST-SERB, The Institute of Advanced Study in Science & Technology, Guwahati

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A K Das, PhD (JNU)

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Ashalata Devi, PhD (NEHU)

##### **Head of the Department**

*Specialization/Areas of Interest:* Forest Ecology, Wildlife and Biodiversity conservation

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**Assistant Professors**

Nirmali Gogoi, PhD (Dibrugarh)

*Specialization/Areas of Interest:* Stress Physiology & Biochemistry

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*Specialization/Areas of Interest:* Geochemistry

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*Specialization/Areas of Interest:* Hydro-geochemistry, Groundwater modelling, Contaminant transport.

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*Specialization/Areas of Interest:* Atmospheric Processes, Air and Noise pollution monitoring and modelling

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*Specialization/Areas of Interest:* Ecosystem functions, wetland productivity, nanotechnology in environmental research

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Santa Kalita, PhD (Gauhati)

*Specialization/Areas of Interest:* Insect Biology

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UDC

P P Basumatary, MTS

## DEPARTMENT OF MATHEMATICAL SCIENCES

### THE DEPARTMENT

Established in 1994, the Department of Mathematical Sciences is one of the first three departments of the University. So far 23 batches of students have successfully completed their M.Sc. in Mathematics, and 5 batches of students have successfully completed their Integrated M. Sc. in Mathematics from the department. Besides this, 44 scholars have done their Ph.D. in Mathematics from the department. The faculty of the department have published more than 150 research papers in national and international journals during the last five years.

### Academic programmes and Student intake

Academic programmes	Student Intake
MSc in Mathematics	42
Integrated MSc in Mathematics	20
Integrated BSc BEd in Mathematics	10
PhD in Mathematics	Intake variable 04 in the last Academic year 2017-18

### Major facilities and equipment available

Computer lab equipped with 01 server, 22 PC's, 03 Printers and necessary software support for researchers and students. Department has 03 photocopiers and 01 Scanner for academic and administrative usages.

### MAJOR RESEARCH FINDINGS/RESEARCH AND DEVELOPMENT ACTIVITIES

Principal Investigator	Salient research findings
N D Baruah	<ul style="list-style-type: none"> <li>Exact generating function for the number of partitions of <math>125n+26</math> into unequal (or odd) parts has been found which readily implies that for any non-negative integer <math>n</math>, the number of such partitions of <math>125n+26</math> is always a multiple of 5. Our method gives analogous results for some other partition functions.</li> <li>Resolved some conjectures posed by Song Heng Chan on Appell-Lerch Sums as well as established some new arithmetical properties.</li> </ul>
Munmun Hazarika	<ul style="list-style-type: none"> <li>We have determined the reducing and minimal reducing subspaces of a class of operator weighted shifts having invertible and non-commuting operator weights.</li> <li>We have shown that on a weighted sequence space, a slant weighted Toeplitz operator <math>T_\varphi</math> with a polynomial symbol <math>\varphi</math> can be hyponormal if and only if <math>\varphi = 0</math>.</li> </ul>
M Nath	<ul style="list-style-type: none"> <li>We proved that the eccentricity, transmission and weight functions are strictly quasiconvex for a tree. Further, we obtained that the Perron vector of the distance matrix of tree is strictly convex</li> </ul>

	<p>whereas the Perron vector of the distance signless Laplacian of tree is quasiconvex.</p> <ul style="list-style-type: none"> <li>• We obtained that dumbbell maximizes the distance Laplacian and distance signless Laplacian spectral radius over the class of all trees with a given number of pendent vertices.</li> <li>• We obtained the unique graph maximizing the distance spectral radius over the class of unicyclic graphs of fixed girth and order.</li> <li>• We found the unique graph that maximizes the distance signless Laplacian and the distance Laplacian spectral radius over the class of all unicyclic graphs of fixed order.</li> </ul>
S Dutta	<ul style="list-style-type: none"> <li>• The <math>100(1 - p)</math> percent Expected Shortfall (ES) is a well-known measure of extreme loss. Using Monte Carlo simulations, we compare the accuracy of ES estimators under the condition that <math>p \rightarrow 0</math> as <math>n \rightarrow \infty</math> for several asset return time series models, where <math>n</math> is the sample size. Our simulations and real-data analysis provide insight into the effect of varying <math>p</math> with <math>n</math> on the performance of nonparametric ES estimators.</li> <li>• We review nonparametric and extreme value theory-based extreme quantile estimators and compare their known properties. Their finite sample performance are compared using Monte Carlo simulation.</li> <li>• We propose a new estimator that exhibits encouraging finite sample performance while estimating extreme quantile in the right tail region.</li> <li>• A nonparametric kernel based estimator of the distribution function based on length biased data is proposed and asymptotic properties have been studied under i.i.d. assumptions.</li> </ul>
S Sen	<ul style="list-style-type: none"> <li>• A new algorithm has been developed for derivation of low-dissipation low-dispersion implicit Runge-Kutta schemes. Using this algorithm, a class of low-dissipation low-dispersion implicit Runge-Kutta schemes have been established.</li> <li>• Low-dispersion numerical approximation for first order spatial derivative is proposed.</li> <li>• Higher order compact schemes for time deforming grid is being studied.</li> </ul>
D K Basnet	<ul style="list-style-type: none"> <li>• We introduced Nil clean graphs of a commutative ring with unity and found many interesting results pertaining it.</li> <li>• We introduced the concept of relative commuting probability of a subring <math>S</math> in a ring <math>R</math> and obtained some nice bounds. Also we defined <math>Z</math>-isoclinism between two pairs of rings and showed that the generalized commuting probability is invariant under <math>Z</math>-isoclinism between two pairs of finite rings.</li> </ul>
R Haloi	<ul style="list-style-type: none"> <li>• We establish the existence and uniqueness of weak solution to the Navier Stokes equation with Navier boundary conditions in three dimensional bounded domain. The results are new in the field of Navier-Stokes equations.</li> <li>• The existence and uniqueness of weak solution to the Damped Navier Stokes equation with Navier boundary conditions in three dimensional bounded domain.</li> <li>• We consider the damped Navier--Stokes equations with slip boundary conditions in</li> <li>• <math>n</math>-spacial dimensions. We prove the existence of global weak solutions of the damped Navier-Stokes equations. The regularity and uniqueness of solutions with slip boundary conditions is also studied.</li> </ul>

D Kalita	<ul style="list-style-type: none"> <li>We obtained the structure of the graph minimizing the algebraic connectivity among all connected graphs made with some given blocks with fixed number of pendant blocks.</li> </ul>
P K Das	<ul style="list-style-type: none"> <li>Necessary and sufficient conditions for construction of linear codes that (i) detects repeated solid bursts (ii) locate multiple sub-blocks with burst errors.</li> <li>Error locating codes are constructed from extended Hamming code.</li> <li>Relation between the trace of matrix which is a Kronecker and Hadamard product of squares matrices with the trace of Hadamard product of square matrices is obtained.</li> </ul>
R K Nath	<ul style="list-style-type: none"> <li>We introduce the notion of relative commuting probability, denoted by <math>\text{Pr}(S, R)</math>, of a subring <math>S</math> of a finite ring <math>R</math>. We obtain several bounds for <math>\text{Pr}(S, R)</math> and characterize some finite rings through <math>\text{Pr}(S, R)</math>.</li> <li>We obtain several bounds for autocommuting probability of a finite group and characterize some finite groups through its autocommuting probability.</li> <li>We introduce the notion of super integral group and derive several examples of such groups.</li> <li>We characterize rings having four distinct centralizers.</li> <li>We generalize the notion of non-commuting graph of a finite ring and obtain various properties of generalized non-commuting graph.</li> </ul>
D Chakraborty	<ul style="list-style-type: none"> <li>Parity of the length of the continued fraction expansion for square root of a square-free natural number <math>m</math> has been well known. We have investigated the length of the continued fraction a little bit further for square root of certain particular square-free numbers related to quadratic fields of odd class number and hence having the fundamental unit satisfying some nice properties.</li> <li>Congruence properties satisfied by fundamental units of a number field has been of recent interest. Whereas, the result regarding number fields of degree 2 and 3 have already been done, we recently have been successful to derive certain congruence relations for the fundamental unit of imaginary bi-quadratic fields also.</li> <li>For the <math>\mathbb{Z}_p</math>-extension of a totally real number field, it is well known by Iwasawa Theory that <math>\mu</math>-invariant is always zero. A famous conjecture of Greenberg states that the <math>\lambda</math>-invariant also behave similarly for totally real number fields. We have constructed an explicit class of totally real bi-quadratic fields from the points of infinite order of an elliptic curve with rank at least one and investigated the properties satisfied by the points of that curve in order to support the conjecture mentioned above.</li> </ul>

## PUBLICATIONS

### In National and International Journals

Baruah, N. D. and Boruah, B. Partition identities arising from Ramanujan's formulas for multipliers. *The Ramanujan Journal*, 42, 2017.

Baruah, N. D. and Begum, N. M. On Exact generating functions for the number of partitions into distinct parts. *Int. Journal of Number Theory*, 14, 2017.

Baruah, S. and Borah, M. Inter-District Disparity in the Use of Qualitative Methods of Family Planning In Assam. *International Journal of Statistics and Systems*, 12, 2017.

Baruah, S. and Borah, M. A Reflection on disparities in level of infrastructural development among the districts of Assam. *International Journal of Mathematical Archive*, 9, 2018.

Bapat, R. B., Kalita, D., Nath, M. and Sarma, D. Convex and quasiconvex functions on trees and their applications. *Linear algebra and its application*, 533, 2017.

Basnet, D. K. and Bhattacharyya, J. Nil clean graphs of rings. *Algebra Colloquium*, 24, 2017.

Basnet, D. K., Dutta, J. and Nath, R. K. On Generalized Non-commuting Graph of a Finite Ring. *Algebra Colloquium*, 25, 2017.

Borah, M. and Hazarika, J. A New Quasi Poison-Lindley Distribution: Properties and Applications. *Journal of Statistical Theory and Applications*, 16, 2017.

Borah, M. and Hazarika, J. Poison-Sushila distribution and its Applications. *International Journal of Statistics & Economics*, 19, 2018.

Borah, M. and Bora, D. J. Regional analysis of maximum rainfall using L-moment and TL-moment: a comparative case study for the north East India. *Journal of Applied and Natural Science*, 9, 2017.

Borah, M., Bora, D. J. and Bhuyan, A. Regional analysis of maximum rainfall using L-moment and LH-moment: A comparative case study for the northeast India. *Mausam*, 68, 2017.

Borah, M. and Mahanta, D. J. A Comparative Study of Nonlinear Growth Models on Teak (*Tectonagrandis* L.) in India. *Journal of Plant Science & Research*, 04, 2017.

Borah, M. and Mahanta, D. J. An approach to estimate the parameters of Von Bertalanfy growth model in forestry. *Indian Forester*, 144, 2018.

Borah, S. and Borah, M. Fertility and Population growth in Assam. *International Journal of Engineering Development and Research*, 6, 2018.

Das, P. K. Location of Multiple Sub-Blocks with Burst Errors. *Electronic Notes in Discrete Mathematics*, 63, 2017.

Das, P. K. Error Locating Codes and Extended Hamming Code. *Matematički Vesnik*, 70, 2018.

Das, P. K. and Vashisht, L. K. Traces of Hadamard and Kronecker Products of Matrices. *Mathematics For Applications*, 6, 2017.

Dutta, J., Basnet, D. K. and Nath, R. K. On commuting probability of finite rings. *Indagationes Mathematicae*, 28, 2017.

Dutta, J. and Nath, R. K. Finite groups whose commuting graphs are integral. *Matematički Vesnik*, 69, 2017.

Dutta, J. and Nath, R. K. Spectrum of commuting graphs of some classes of finite groups. *Matematika*, 33, 2017..

Dutta, J. and Nath, R. K. Laplacian and signless Laplacian spectrum of commuting graphs of finite groups, *Khayyam Journal of Mathematics*. 4, 2018.

Dutta, P. and Nath, R. K. Autocommuting probability of a finite group, *Communications in Algebra*. 46, , 2017.

Dutta, P. and Nath, R. K. A generalization of commuting probability of finite rings. *Asian-European Journal of Mathematics*, 11, 2017.

- Dutta, P., Dutta, J. and Nath, R. K. On Laplacian Spectrum of non-commuting graphs of finite groups. *Indian Journal of Pure and Applied Mathematics*, 49, 2018.
- Dutta, P. and Nath, R. K. On generalized autocommutativity degree of finite groups. *Haceteepe Journal of Mathematics and Statistics*, DOI: 10.15672/HJMS.2017.531,2018.
- Dutta, S. and Biswas, S. Nonparametric estimation of  $100(1 - p)\%$  expected shortfall:  $p \rightarrow 0$  as sample size is increased. *Communications in Statistics-Simulation and Computation*, 47, 2018.
- Haloï, R. Approximate controllability of nonautonomous nonlocal delay differential equations with deviating arguments. *Electron Journal of Differential Equations*, 1-12, 2017.
- Haloï, R. On solutions to abstract Volterra integro-differential equations with iterated deviating arguments, *The Journal of analysis*, 1-26, 2017.
- Haloï, R. On Solutions to Fractional Neutral Differential equations with Infinite Delay. *Journal of Fractional Calculus and Applications*, 9, 2018.
- Hazarika, M. and Gogoi, P. S. Minimal reducing subspaces of an operator- weighted shift. *Annals of Functional Analysis*, 8, 2017.
- Hazarika, M. and Gogoi, P. S. Minimal reducing subspaces of the unilateral shift. *East-West J. of Mathematics*, 19, , 2017.
- Hazarika, M. and Marik, S. Hyponormality of generalized slant weighted Toeplitz operators with polynomial symbols. *Arabian Journal of Mathematics*, 7, 2018.
- Kalita, D. and Sarma K. Minimizing algebraic connectivity over graphs made with given blocks. *Linear and Multilinear Algebra*, doi.org/10.1080/03081087.2018.1438984, 2018.
- Kalita, J. C. and Sen, S.  $\alpha$ -,  $\beta$ -phenomena in the post-symmetry break for the flow past a circular cylinder. *Physics of Fluid*, 29, 2017.
- Nath, R. K. Various spectra of commuting graphs of n-centralizer finite groups. *International Journal of Engineering, Science and Technology*, 10, 2018.
- Sen, S. and Sheu, T. W. H. On the Development of a Nonprimitive Navier-Stokes Formulation Subject to Rigorous Implementation of a New Vorticity Integral Condition. *Journal of Scientific Computing*, 72, 2017.
- Sen, S., Nayer, G. D. and Breuer, M. A fast and robust hybrid method for block-structured mesh deformation with emphasis on FSI-LES applications. *International Journal for Numerical Methods in Engineering*, 111, 2017.
- Vashisht, L. K., Garg, S., Deepshikha and Das, P. K. On generalized weaving frames of Hilbert spaces. *Rocky Mountain Journal of Mathematics*, 48, 2018.

#### **Conference proceedings**

- Basnet, D. K. and Dutta, J. Relative non-commuting graph of a finite ring, in Proceedings of the 50<sup>th</sup> symposium on ring theory and representation theory, University of Yamanashi, Japan, October 2017.

#### **Books and Book Chapters**

- Dutta, J. and Nath, R. K. *Rings having four distinct centralizers: Matrix*. ISBN: 938522938-9, September 2017.

## **SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**

### **International and National**

D K Basnet attended the 50<sup>th</sup> Symposium on Ring Theory and Representation Theory at University of Yamanashi, Japan, 7-10 October, 2017.

D Chakraborty attended an International Conference on Class groups of Numbers Fields & Related Topics organized by HCRI, Allahabad, September, 2017.

P K Da, attended the Indian Science Congress organized by Manipur University, Manipur, March, 2018.

K Das attended the Workshop on Cyber Security: Issues and Challenges, organized by Department of Computer Science and Engineering, Tezpur University, January, 2018.

S Dutta attended an International Conference in Statistical Methods in Finance, organized by MCX, ISI and CMI, Chennai Mathematical Institute, 16-19 December, 2017.

S Dutta attended an International Conference in Statistics and Probability, PCM-125, organized by Indian Statistical Institute, Kolkata, 2-4 January, 2018.

D Goswami attended a refresher programme organized by FDC, IIT Dhanbad, May-June, 2017.

R Haloi attended a conference on Recent Developments in Nonlinear Partial Differential Equations and Applications organized by TIFR CAM, Bangalore, November, 2017.

R Haloi attended an International Conference on Mathematics and Computing (ICMC 2018) organized by IIT BHU, January, 2018.

R K Nath attended the 112<sup>th</sup> Orientation Programme, UGC-HRDC organized by Gauhati University, May, 2017.

R K Nath attended the foundation Program in ICT for Education, Tezpur University, organized by IIT Bombay, August- September, 2017.

R K Nath attended the Pedagogy for Online and Blended Teaching-Learning Process, Tezpur University organized by IIT Bombay, September- October, 2017.

R K Nath attended the National Conference on Advances in Science, Engineering and Technology, organized by GIMT, Tezpur, November, 2017.

R K Nath attended a workshop on Cyber Security: Issues and Challenges, organized by Department of Computer Science and Engineering, Tezpur University, January, 2018.

R K Nath attended a workshop on Development of Self Learning Materials for open and Distance Mode of Learning, organised by CODL, Tezpur University, March, 2018.

### **TALKS BY THE FACULTY ABROAD AND IN INDIA**

N D Baruah delivered a Colloquium Talk, Srinivasa Ramanujan: A glimpse of life and mathematics, at ISI NE Colloquy, ISI North East Centre, Tezpur, October, 2017.

N D Baruah delivered a Key Note Address, some new results on Frobenius partitions, at a National Conference on Advances in Science, Engineering and Technology, GIMT, Tezpur, November, 2017.

N D Baruah delivered a talk, Srinivasa Ramanujan and his mathematics, at the National Mathematics Day Celebration, GIMT, Guwahati, December, 2017.

D K Basnet delivered a talk as resource person in the Innovative and Contemporary Teachers Training Program, NIT Silchar. August, 2017.

D K Basnet delivered a talk, Current Trends in Ring Theory, at NIT Nagaland, September, 2017.

D K Basnet delivered an invited talk, Srinivasa Ramanujan, at the National Mathematics Day Celebration, GIMT, Tezpur, December, 2017.

D K Basnet delivered talk as resource person on Linear Algebra at TPM (Training Programme in Mathematics), NISER, Bhubaneswar, June, 2018.



D Kalita delivered a talk, Some Properties of Laplacian Matrix of Weighted Directed Graphs, at the 13<sup>th</sup> Annual ADMA Conference & Graph Theory day-XIII, Academy of Discrete Mathematics and Applications, SSN College of Engineering, Chennai, June, 2017.

R K Nath delivered a talk, Necessity of thinking and imagination in learning, Teachers Orientation Programme, MVMSS School, Guwahati, June, 2017.

S Sen delivered an talk. a fast and robust hybrid method for block-structured mesh deformation with emphasis on FSI-LES applications, at the Humboldt Colloquium Germany and India - Partners in Education and Research, AvH Foundation, Germany at Lela Palace, Bengaluru, India, November, 2017.

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

Mini MTTs (Mathematics Talent and Training Search), Sponsored by NBHM, January 3-8, 2018.

#### **DISTINGUISHED VISITORS TO THE DEPARTMENT**

Dr. A. Kumar, ICT- Mumbai

Prof. B. K. Sarma, IIT Guwahati

Prof. J. C. Hazarika, Dibrugarh University

Prof. R. K. Sharma, IIT Delhi

Prof. R. S. Kulkarni, IIT Bombay

Dr. S. P. Chakrabarty, Associate Professor, Department of Mathematics, IIT Guwahati

Prof. S. Kumaresan, University of Hyderabad

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

DST-FIST            2014 to 2019

UGC-SAP (DRS-II) 2018 to 2023

#### **NUMBER OF STUDENTS WHO PASSED NET-JRF/GATE**

NET-JRF:12

NET-LS : 12

SLET : 12

GATE : 01

#### **NOTABLE PLACEMENT**

Arpana Sarmah, Assam Land and Revenue Service

Banajyoti Das, Bongaigaon Refinery and Petrochemicals Ltd.

Bhagya Jyoti Nath, Assistant Professor, Bornogor College

Bidyut Pratim Das, Chemical Process Operator, Assam Petrochemical Ltd. Namrup

Chinmoyee Devi, Assistant Accounts Officer, APDCL

Ibaraj Timsina, Business Analyst, TCS

Harshajit Singha, Business Analyst, TCS

Jayanta Bhattacharyya, Assistant Professor, Kaziranga University

Jitumoni Deka, Bank of Maharashtra

Jatindra Boro, Bongaigaon Refinery and Petrochemicals Ltd.

Liza Sarmah, Teacher, Jawahar Navodaya Vidyalaya

Madhurjya Bikash Sarmah, Probationary Officer, State Bank of India

Mridusmita Sharma, Junior Administrative Assistant, Assam Secretariat, Dispur

Nijara Koch, Assistant Professor, B.Borooah College  
Nayan jyoti Kalita, Assam Secretariat, Dispur  
Pinkimoni Goswami, Assistant Professor, University of Science and Technology, Meghalaya  
Pravati Das, Office of the Deputy Commissioner, Jorhat  
Prasanta Kumar Raja, Business Analyst, TCS  
Radhasree Bora, Scientist-2, DBT Nodal Centre, Tezpur University  
Suparna Biswas Post-Doctoral Fellow, ISI Chennai  
Somnath Paul, Assistant Professor, Pandit Deendayal Upadhyaya Adarsha Mahavidalaya, Behali  
Tapash Das, Mathematics Teacher, The Assam Valley School, Balipara  
Udit Basnet, Business Analyst, TCS  
Zakir Ahmed , Assistant Professor, Bornogor College

## THE FACULTY OF THE DEPARTMENT

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N Ali  
MTS



## **DEPARTMENT OF MOLECULAR BIOLOGY AND BIOTECHNOLOGY**

### **THE DEPARTMENT**

The Department of Molecular Biology and Biotechnology (MBBT) completed twenty years since its inception in 1997. Presently the department is running programs for human resource development at undergraduate, postgraduate and Ph.D. levels. One of the M.Sc. programs i.e. M.Sc. in Molecular Biology and Biotechnology is Department of Biotechnology, Government of India sponsored with 33% seats reservation for North East India domiciles where as another M.Sc. program i.e. Integrated M.Sc. is Bioscience & Bioinformatics was introduced looking into the increasing demands in the field and to provide University level teaching to undergraduate students. The present faculty strength of the department is twenty (20) with highly experienced professors served the country as Vice-Chancellor of other university to newly joining assistant professors trained well in abroad and India. The department hosts a vibrant research programs in diverse areas which include microbiology, molecular biology, biochemistry, genetics, virology, cell biology, plant biology, immunology, toxicology, nanotechnology, bioinformatics and structural biology.

In this year one of the notable achievements is that our Master degree students have qualified PhD admission programmes in the reputed research institutions such as IISc, IGIB, NCCS, NISER, NBRC, IICB, IMTECH etc. Like the earlier years, this year too several students had qualified in the national level test such as NET-JRF/LS, DBT-JRF and GATE. In term of research, several publications have come in high impact journals such as Scientific Reports, Oncotarget, PLoS One, Journal of Proteomics, Frontiers in Immunology, etc.

### **Academic programmes and Student intake**

<b>Academic programmes</b>	<b>Student Intake</b>
MSc	30
Integrated MSc in Bioscience and Bioinformatics	20
PhD	Intake variable

### **Major facilities and equipment available**

#### Genomics/Transcriptomics facility

- DNA sequencers (4 capillary)
- Bioanalyzer
- Quantitative PCR

#### Proteomics facility

- Fast protein Liquid Chromatography (FPLC)
- UHPLC systems

Biochemistry/Metabolomics facility

- Ultracentrifuge
- GC/MS
- HPLC
- FTIR
- Spectrofluorometer

Cell biology/Cell imaging facility

- Fluorescence microscope

Animal cell culture facility

Plant tissue culture facility

Microbiology lab

Bioinformatics infrastructure facility

ONGC CPBT Centre for Petroleum Biotechnology

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

Principal Investigator	Salient Research Findings
B K Konwar	<ul style="list-style-type: none"><li>➤ In silico studies on the molecular interaction analysis of dietary flavonols as a potent inhibitor of heat shock protein 90 enzyme in fighting against cancer. This study is on dietary flavonols (viz- quercetin, myricetin and kaempferol) shows that they effectively help in degradation of Hsp90 protein which helps in stabilization of several proteins responsible for tumour and cancer. These flavonols through competitive inhibition block the N terminal site of the Hsp90, thereby degrading the protein and preventing cancer cell growth. These flavonols are known to have anti-cancer property and study reveals that they can be orally ingested as they have less lethal dose.</li><li>➤ Exploitation of <i>Pongamia glabra</i> deoiled cake (PGDC) for alternate energy: physico chemical characterization and thermogravimetric studies. PGDC is identified as a potential alternate energy generating compound. The above experiment checks the property of PGDC which proves it to be easily available and economical and renewal source of energy.</li></ul>
A K Mukherjee	<ul style="list-style-type: none"><li>➤ Biochemical, pharmacological, and proteomic characterization of the "Big Four" snake venoms of India. Deciphered the venom proteomes of these venomous snake species from different locales of the country and demonstrated the role of geographical disparities in venom variation.</li><li>➤ Detail immunological profiling of these venom samples against commercial antivenom and identified the pharmacologically active poorly immunogenic venom toxins.</li><li>➤ Purification and detailed characterization of snake venom proteins for</li></ul>

	<p>their development as potential therapeutic and diagnostic agents.</p> <ul style="list-style-type: none"> <li>➤ Purification and characterization of candidate drug molecules from natural resources including microbes and plants for prevention and/or treatment of cardiovascular-associated diseases.</li> </ul>
Sashi Baruah	<ul style="list-style-type: none"> <li>➤ Clinical and serological features of SLE patients from Assam which was distinct from Mumbai patients, with higher renal manifestations have been reported. Both the patient cohorts share different genetic makeup and environmental conditions among other factors. The autoantibody profiles of the patients of Assam were more heterogeneous and suggestive of overlap of Sjogren's syndrome. Antibody predictive of active SLE in case of patients from Assam was determined.</li> <li>➤ Studies from the laboratory identified KIR-2DL1+C2+ genotype to be a risk factor in HNSCC particularly in patients with family history of cancer. The allelic diversity of KIR-2DL1 was comparable to that of the Chinese population and cancer associated KIR2DL1 allotype determined.</li> </ul>
S K Ray	<ul style="list-style-type: none"> <li>➤ Molecular plant microbe interactions: standardization of a methodology to study <i>R. solanacearum</i> pathogenicity in tomato seedlings by root inoculation under gnotobiotic conditions. <i>R. solanacearum</i> colonization in seedling tissues has been studied by mCherry tagged <i>R. solanacearum</i>.</li> <li>➤ Molecular evolution: analysis of 15 genes of <i>E. coli</i> to study the intra-species substitution pattern. A link between non-synonymous mutation in genes and amino acid codons such as cysteine, leucine and tryptophan were observed. It has been hypothesized that these three amino acids are likely to be contributing more towards protein structure by interacting with other amino acids.</li> </ul>
M Mandal	<ul style="list-style-type: none"> <li>➤ A total of 25 ethno medicinal plant samples were screened from different geographical locations of Assam and Mizoram to evaluate their potency to inhibit biofilm and/or Quorum sensing. Good antibiofilm activity was found in them.</li> </ul>
A Ramteke	<ul style="list-style-type: none"> <li>➤ Identification of unique miRNAs with differential expression in exosomes secreted from hypoxic PCa cells and suggests their potential usefulness as a biomarker of hypoxia in PCa patients.</li> <li>➤ Screening and identification of partially purified polyphenols from medicinal plants endemic to northeastern India against breast and lung cancer both <i>in vitro</i> and <i>in vivo</i>.</li> </ul>

R Doley	<ul style="list-style-type: none"> <li>➤ Isolation, Identification and characterization of an anticoagulant PLA2 enzyme named Daboxin P, from the Indian <i>Daboia russelii russelii</i> venom that targets Factor X and Factor Xa for Its activity.</li> <li>➤ Purification and partially characterization of an anticoagulant PLA2 from the venom of Indian <i>Daboia russelii</i> that induces inflammation through upregulation of pro- inflammatory mediators under in-vitro condition.</li> <li>➤ Overexpression and characterization of two anti-thrombin peptides named haemathrin 1 and haemathrin 2 identified in the salivary gland of tick <i>Haemaphysalis bispinosa</i> (Acari: Ixodidae).</li> </ul>
T Medhi	<ul style="list-style-type: none"> <li>➤ Insecticide resistance: Development of one synthetic and two biological pesticides merged with biofertilizer attributes for the management of <i>H. theivora</i>, a major tea pest.</li> <li>➤ Biosensor: Development of a novel ISFET based biosensor for hydrocarbon detection using cytochrome P450 as transducing element.</li> <li>➤ MEOR: Development of a standard biosurfactant based slug for the recovery of residual oil in porous media, collected from Upper Assam oil field.</li> </ul>
E Kalita	<ul style="list-style-type: none"> <li>➤ GIS based impact assessment of ground water quality across 21 districts of Brahmaputra Valley.</li> <li>➤ Development of molecular markers for identification of <i>Exobasidium vexans</i>.</li> </ul>
S P G Ponnamp	<ul style="list-style-type: none"> <li>➤ Molecular genetics analysis of Keratoconus patients from Northeastern region of India for the first time. This work is currently in progress.</li> </ul>
A N Jha	<ul style="list-style-type: none"> <li>➤ Study of interaction between antimicrobial proteins and silver nanoparticle using molecular dynamics simulation.</li> </ul>
R Mukhopadhyay	<ul style="list-style-type: none"> <li>➤ Study of mechanism of noncanonical function of a ribosomal protein during inflammation.</li> <li>➤ Mechanistic details of anti-cancer activity of three common traditional medicinal plant extracts has been elucidated.</li> <li>➤ Development of vermi-remediation technology for tannery industry effluent.</li> <li>➤ Identification of multiple natural adsorbents for removal of synthetic dyes.</li> <li>➤ Elucidation of mechanistic details of action of a common medicinal plant extract against breast cancer cells.</li> </ul>



S Saha	<ul style="list-style-type: none"> <li>➤ Investigation of protein arginylation important for heat stress response that play a protective role during heat stress by stabilization of HSP70 transcript and increased HSP70 expression. Heat shock protein 70 (HSP70) is one such protein which protects cells from many stress conditions including heat stress and other stress conditions like oxidative stress or radiation.</li> </ul>
N D Namsa	<ul style="list-style-type: none"> <li>➤ Development of a routine protocol for detection and typing of rotavirus, adenovirus, astrovirus and norovirus. These are common enteric viruses often associated with acute gastroenteritis in infants. A peak increase in occurrence of rotavirus-led diarrhoea was observed mainly in the cooler months during the study period. A high association of rotavirus-led diarrhea in children who between 6 -12 months was observed. The findings revealed the presence of commonly detected G genotypes such as G1, G9, G3, G2 and G4.</li> <li>➤ <i>In silico</i> analysis of rotavirus proteins has led to the identification of potential B and T-cell epitopes for designing and expression of multi-epitope chimeric antigen in bacteria and develop rapid test for diagnosis and application in rotavirus surveillance studies.</li> </ul>
S Dasgupta	<ul style="list-style-type: none"> <li>➤ Investigation of 143 potential anti-diabetic compounds of different categories like flavonoid, alkanoids, terpenes and sulfonylurea for its binding efficacy with the agonist conformation of A2AR and attenuation of lipid induced adipocyte inflammation. It was observed that vanillin, a phenolic aldehyde, efficiently bind and activate A2AR which leads to attenuation of lipid induced adipocyte inflammation and insulin resistance.</li> <li>➤ Using a combination of in-silico and in vitro study, that vanillin was determined through A2AR activation markedly prevents lipid induced impairment of insulin signalling pathway in adipocytes by inhibiting NF-<math>\kappa</math>B dependent proinflammatory cytokines expression and augments anti-inflammatory state with increased expression of IL-10 through cAMP dependent CREB activation.</li> </ul>

M V Satish Kumar	<ul style="list-style-type: none"> <li>➤ Research on Alzheimer's disease: Prediction of the seed structure of Amyloid beta 1-42 peptide responsible for aggregation that is the major risk factor in Alzheimer's disease and investigation of interactions that stabilize the toxic intermediates. Three approaches have been devised to inhibit the aggregation of Amyloid beta 1-42 peptide. ss-oligonucleotide, Amyloid beta 1-40 and small 6-mer peptide were found to act as potent inhibitor in the aggregation of Amyloid beta 1-42 peptide.</li> <li>➤ Research on Parkinson's disease: Finding a probable method to control the aggregation in <math>\alpha</math>-synuclein which is responsible for Parkinson's disease. Basic region of Tau protein strongly interacts with C-terminal acidic regions of <math>\alpha</math>-synuclein fibrils and undergo conformational change resulting in the formation of seed for assembly of Tau into amyloid like fibrils. Targeting the Tyr residue at the position 133 may provide better solution to significant delay in the early stage of aggregation in <math>\alpha</math>-synuclein. It was observed that predominant transient interactions between <math>\alpha</math>S and <math>\beta</math>S can be used to drive inhibition of <math>\alpha</math>S aggregation.</li> <li>➤ Research on Breast Cancer: We obtained the salient structural features of human Lemur Tyrosine Kinase 3 (LMTK3) which is considered as a novel therapeutic target for breast cancer, then characterized its probable interaction with different proteins such as ER<math>\alpha</math>, CDK5 and GRB2 and identified probable interface interacting residues between them. Then ATP competitive potential inhibitors were designed against LMTK3 to control breast cancer.</li> </ul>
J P Saikia	<ul style="list-style-type: none"> <li>➤ Stimulating and evaluating the mechanism of germination stimulation using NaBH<sub>4</sub> in green gram seed. Finding the best weight of imbibition for optimum germination in green gram.</li> </ul>
A Kumar	<ul style="list-style-type: none"> <li>➤ Characterization of sequence dependent DNA structural features in the regulatory regions using in-silico tools</li> </ul>
P Barah	<ul style="list-style-type: none"> <li>➤ Developing Next Generation Sequencing based Big data analysis platforms to analyze tumor samples from cancer patients from North East India to identify personalized disease biomarkers.</li> <li>➤ Using Next Generation Sequencing technologies to identify disease biomarkers associated with Rice sheath blight. Already customized and benchmarked a robust computational pipeline for analyzing Next Generation Sequencing- RNAseq data.</li> </ul>

**Research projects, ongoing and new**

Project Title	Funding agency	Amount (in INR)	Duration	Principal Investigator
Development of a cost-effective, novel antithrombotic anticoagulant herbal drug and	DBT-BIRAC, under BIG	49.75 Lakh	2016-2018	A K Mukherjee

standardization of its biomarker assisted quality control	scheme			
Discovering novel drug formulations from non-toxic, potent anticoagulant components of snake venom for the prevention and/or treatment of cardiovascular disease (CVD)	DBT	15.00 Lakh	2014-2017	A K Mukherjee
Venomics and antivenomics of Indian Cobra and Russell's viper: implications in drug discovery and quality control of antivenoms	DBT under unit of Excellence in NER-2013	132.20 Lakh	2014-2017	A K Mukherjee
Development of synthetic derivatives of natural compound, Noscapine as tubulin binding chemotherapeutic agent and evaluation of its synergistic effect with Taxotere for management of human breast cancer	DBT	70.50 Lakh	2018-2021	A Ramteke
Studies on exosomal lipidomics and microRNAs and their clinical utility in the management of metastatic and multiple drug resistant breast cancer	DST	54.032 Lakh	2016-2020	A Ramteke
Studies on proteome and lipidome and their clinical implications in the management of drug resistant and recurrent head and neck squamous cell carcinoma (HNSCC)	ICMR	19.950 Lakh	2016-2019	A Ramteke
Towards identification isolation and characterization of <i>Exobasidium vexans</i> strains and their pathogenic determinants/effectors from Blister blight infested tea plantations of Assam and development of future road-map for effective management practices.	DBT	90.27 Lakh	2015-2018	E Kaliita
Bio-refinery Approach for Generation of Platform Chemicals and Bioethanol from Indigenous Lignocellulosic Agro-waste And Algal Bioresources.	DBT	75.67 Lakh	2017-2020	E Kaliita
Studies on antimicrobial and anti-biofilm activities of medicinal plant, West Bengal	DBT	52.97 Lakh	2017-2020	M Mandal
Molecular Epidemiology of Group A rotavirus (RVA) Infections in the North-eastern region (NER)	DBT	75.18 Lakh	2016-19	N D Namsa
Estimation of the diversity of endophytes in subtropical forest of Arunachal Pradesh and creation of a genetic resource	DBT	12.40 Lakh	2016-19	N D Namsa
Cloning, expression and structural characterization of anti-thrombin from cattle	DST	41.06 Lakh	2014-2018	R Doley

tick salivary gland: designing of novel anti-thrombin peptide				
Role of non-canonical function of ribosomal proteins in inflammation	DBT	152.07 Lakh	2014-2017	R Mukhopadhyay
Studies on the efficacy of flavonoid and non-flavonoid polyphenols against chronic inflammation induced disease pathogenesis	DBT	48.60 Lakh	2014-2017	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	25.94 Lakh	2015-2018	R Mukhopadhyay
Systemic Lupus Erythematosus (SLE) - An investigation into diagnostics and disease pathogenesis.	DBT	234.00 Lakh	2015-2017	Sashi Baruah
Polymorphism of Toll like and Nod Like receptors and their role in inflammasome activation in Head and Neck Squamous Cell Carcinoma	ICMR	49.81 Lakh	2017-2019	Sashi Baruah
Diagnosis and Immunopathogenesis of Dengue Virus Infections; a longitudinal investigation into genotype diversity, diagnosis and immune response to dengue infections in Assam, Northeast India.	DRDO	61.59 Lakh	2017-2019	Sashi Baruah
Study on the role of protein arginylation in regulation of adipo-osteogenic differentiation	DST-SERB	50.70 Lakh	2017-2020	S Saha
Role of protein arginylation in cellular stress responses: A study using heat stress and oxidative stress models in arginylation deficient cell culture system	DST-SERB	48.70 Lakh	2017-2020	S Saha
Identification of exercise induced myokine(s) and its role on white to brown/beige adipocyte conversion and suppression of obesity induced adipose tissue inflammation and insulin resistance	DBT	116.59 Lakh	2016-2019	S Dasgupta
To investigate the role of toll-like receptor 4 (TLR4) in lipid induced impairment of adipogenesis and adipose tissue function implementing insulin resistance	DBT	42.30 Lakh	2015-2018	S Dasgupta
Exploring the effects of peroxisome proliferator-activated receptor beta/delta activation in lipid induced adipocyte inflammation and insulin resistance	DST-SERB	25.20 Lakh	2015-2018	S Dasgupta

Role of fetuin-A gene and protein expression in obesity induced impairment of adipogenesis and stimulation of adipose tissue inflammation implementing insulin resistance and type 2 diabetes	UGC	14.025 Lakh	2015-2018	S Dasgupta
Role of transcription factors IRF8 and KLF4 in lipid induced adipose tissue inflammation and insulin resistance	INSA	15.00 Lakh	2014-2017	S Dasgupta

## PUBLICATIONS

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- Makarova, Y. V., Shelukhina, I. V., Mukherjee, A. K., Kuznetsov, D. V., Tsetlin, V. I., & Utkin, Y. N. Detection of human neuronal  $\alpha 7$  nicotinic acetylcholine receptors by conjugates of snake  $\alpha$ -neurotoxin with quantum dots. *Doklady Biochemistry and Biophysics*, 475(1), 2017.
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Pergolizzi, G., Kuhaudomlarp, S., Kalita, E. & Field, R. A. Glycan phosphorylases in multi-enzyme synthetic processes. *Protein and Peptide Letters*, 24(8), 2017.

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Barman, A., Buragohain, C. & Ray, S. K. Disruption of comA homolog in *Ralstonia solanacearum* does not impair its twitching motility. *Journal of Basic Microbiology*, 57, 2017.

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### **Books and Book Chapters**

Deka, K. & Saha, S. Regulation of Mammalian HSP70 Expression and Stress Response. *In Regulation of Heat Shock Protein Responses* (eds Asea, A. A. A. & Kaur, P.) Springer, Cham, 2018, 13, pp. 3-25.

Meher, B. R., Mattaparthi, V. S. K., Patel, S. & Kaushik, S. Mutation effects on 3D-structural reorganization using HIV-1 protease as a case study. *In Encyclopedia of Bioinformatics and Computational Biology* (eds Ranganathan, S., Kenta Nakai, K., & Schonbach, C.) Elsevier, 2018, DOI: 10.1016/B978-0-12-809633-8.20279-3.

Utkin, Y. N., Cherepakhin, I. Y., Kryukova, E. V., Shelukhina, I. V., Makarova, Y. V., Kasheverov, I. E., Mukherjee, A. K., Gusev, A. A. & Kuznetsov D. V. Conjugates of  $\alpha$ -Cobratoxin with CdSe Quantum Dots: Preparation and Biological Activity. *In: Nano Hybrids and Composites* (eds Gusev, A., Dyatchek, T. & Godymchuk, A.), 2018, 13, pp. 3-8.

### **List of Patents**

Indian Patent on *Synthetic Anticoagulant Peptides Derived from Naja Naja Snake Venom*, Patent Application No. 201831010001; Filing date: March 19<sup>th</sup>, 2018.

Indian Patent on *Toxin Epitope-Based Detection of Species-Specific Snake Envenomation*, Patent Application No. 201831010002; Filing date: March 19<sup>th</sup>, 2018.

Enhancement of stability of acetylcholine esterase in ethyl acetate through the use of Lipase and L-serine and hence a method for pesticide biosensing in QuEChERS, 2018.

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

Outreach programme associated with awareness campaign on snakebite prevention and treatment, detection and diagnosis of systemic lupus erythematosus (SLE) and imparted on basic genetic and immunological tools, 2018.

GIAN International workshop on Molecular Evolution in Bacteria, December 5-12, 2017.

Two days national seminar on Petroleum Biotechnology and Bioenergy, March 3-4, 2017.

Snake Venom: an Evolutionary adaptation with multiple mission, InSCIgnis 2k17. An Annual Event of School of Science on event of National Science Day, organized by under Graduate Students of School of Sciences, Tezpur University, February 28 -March 1, 2017.

9<sup>th</sup> NEBInet Annual Co-ordinator's Meet, January 19-21, 2017.

National Symposium on Diarrhoeal Disease Burden and Management: Special Reference to North Eastern India, March 10 -11, 2017.

National Workshop on Basic Bioinformatics Tools and Techniques in Structural Biology, March 18-19, 2017.

National Workshop on Networks in Biological Systems, February 18-19, 2017.

National seminar on Diarrhoeal disease burden and management: Special reference to North Eastern India", sponsored by NEC, DBT, DST, ICMR and Bharath Biotech International Ltd, Hyderabad, March 10-11, 2017.

One day Continuing Medical Education (CME) on Infantile diarrhoea and its prevention and management, sponsored by NEC, in collaboration with 155 Base Hospital, Tezpur and Tezpur Medical College and Hospital, Tezpur, March 11, 2017.

#### **SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**

E Kalita presented a poster, Glycoscience Symposium, organized by The Glycobiology Training, Research and Infrastructure Centre (GlycoTRIC), Imperial College, London, UK , April 4, 2017.

#### **TALKS BY THE FACULTY ABROAD AND IN INDIA**

S K Ray delivered a lecture, *Ralstonia solanacearum* pathogenicity in tomato seedlings, at Hands on Workshop on Gene expression and function analysis for crop improvement, organized by IIT Guwahati, January 16, 2018.

S K Ray delivered a lecture, Endophytes Isolated from Tomato Seedlings can Protect Tomato Seedlings Against *Ralstonia solanacearum* Infection, at Biodiverse 2018, An International Symposium Silver Jubilee of ADNAT Meeting organized by IIT Guwahati, January 27-29, 2018.

S K Ray delivered a lecture, *Ralstonia solanacearum* pathogenicity in tomato seedlings, at Molecular Intricacies of Plant Associated Microorganisms (MIPAM), organized by Department of Botany, IGNTU, Amarkantak, October 27-29, 2017.

S K Ray delivered a lecture, Sequence Variation in Some Genes Across *Escherichia coli* Strains, at SMBE satellite Meeting, Evolution of microbes in Natural and Experimental populations-Synthesis and Synergies, organized by Society for Molecular Biology and Evolution, Borgos Resort, Kaziranga, December 14-16, 2017.

N D Namsa delivered a lecture, *In silico* mapping of B- and T-cell epitopes of rotavirus proteins, at 5<sup>th</sup> International Conference on Molecular Signaling: Basics to Applications, organized by AU - KBC Research Centre Anna University, Chennai, India, January 10– 12, 2017.

N D Namsa delivered an invited lecture, Exploring rotavirus proteins to design B and T cell multi-epitope subunit vaccine using immunoinformatics approach, in the 26<sup>th</sup> Annual Conference of Indian Virological Society (IVS), organized by Nitte University, Mangalore, December 7-9, 2017.

E Kalita delivered a talk at the IBCarb sponsored UK & Latin America workshop on Glycobiotechnology Tools for Human Health organized by the University of Manchester, Manchester, UK, May 2 -3, 2017.

#### **DISTINGUISHED VISITORS TO THE DEPARTMENT**

Dr. A Dutta, AAU, Jorhat  
Prof A Varma, ACTREC, Mumbai  
Prof George M. Varghese, Professor of Infectious Diseases Department, CMC, Vellore  
Prof L Bora, AAU, Jorhat  
Prof N Hoda, JMI, New Delhi  
Prof S Banerjee, University of Hyderabad, Hyderabad  
Dr. S Chacku, University of Bombay, Mumbai  
Prof S Kumar, CCMB, Hyderabad  
Prof S C Mande, Director, NCCS Pune  
Prof U Bora, IIT Guwahati, Guwahati  
Prof W G J Hol, University of Washington, USA

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

A K Mukherjee awarded Doctor of Science (D.Sc.) in Biotechnology from Calcutta University for snake venom research, 2018.  
E Kalita was awarded the Biotechnology Overseas Associateship Award by the Department of Biotechnology, Ministry of Science and Technology, Government of India, 2018.

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

Department is supported by UGC-SAP, DST-FIST AND DBT  
Industry-Academia linkage/interface, ONGC-CPBT

#### **NUMBER OF STUDENTS WHO PASSED NET-JRF/GATE**

UGC-NET (JRF):	08
UGC-NET (LS):	02
GATE:	13

#### **NOTABLE PLACEMENT**

02 (Havells India Ltd.)

#### **THE FACULTY OF THE DEPARTMENT**

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K Basfor, MTS

## DEPARTMENT OF PHYSICS

### THE DEPARTMENT

Eighteen years since its commencement in January 1998, 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 with adaptation to new developments within the course content. The areas of specialization for post-graduation are: Condensed Matter Physics; Electronics and Photonics; High Energy Physics; and Nano Science and Technology. To develop the students from the graduate level, the Department also started an Integrated M.Sc. in Physics in 2009. Keeping in mind the need of teachers at the school level, the Department has also been running a B.Sc.-B.Ed. programme since July 2011.

Major thrust areas of research of the Department are, Astrophysics, High Energy Physics (Theoretical), Nanoscience, Neutrino, Optoelectronics, Plasma Physics, Microwaves and Solid State Ionics.

### Academic programmes and Student intake

Academic programmes	Student Intake
MSc in Physics	30
Integrated MSc in Physics	20
Integrated BSc BEd	10
PhD	Intake variable 35 in the last Academic year

### Major facilities and equipment available

- Scanning Electron Microscope (SEM)
- LB Film Depositor
- Millipore water Purification system
- UV-VIS Spectrophotometer
- Fluorescence Spectrometer
- XRD
- CNC Milling Machine
- Optical Microscope
- High Vacuum Coating Unit

### MAJOR RESEARCH FINDINGS/RESEARCH AND DEVELOPMENT ACTIVITIES

Principal Investigator	Salient Research Findings
A Kumar	<ul style="list-style-type: none"><li>• Synthesis of Ni based Metal-Organic Framework (MOF), incorporated with ionic liquid at varying weight ratios to use as nanofiller in the polymer matrix</li></ul>

	<p>of Poly (vinylidene fluoride-co-hexafluoropropylene) (PVdF-HFP).</p> <ul style="list-style-type: none"> <li>• Synthesis of PEDOT film over GCE by electrochemical polymerization of EDOT monomer by applying standard oxidation potential vs. Ag/AgCl.</li> <li>• Development of Reduced graphene oxide (RGO) and polypyrrole nanotubes (PPyNTs) nanocomposites by in situ reduction of graphene oxide (GO). by varying concentration of GO with respect to PPyNTs..</li> </ul>
M K Das	<ul style="list-style-type: none"> <li>• Constructed several neutrino mass and dark matter models which has been tested with observed phenomenon like neutrino oscillations and Baryon asymmetry of the universe.</li> </ul>
Nilakshi Das	<ul style="list-style-type: none"> <li>• A study done on proton acceleration due to interaction of ultra-intense short pulse circularly polarized laser with an over dense plasma target using Particle in Cell (PIC) simulation shows that a circularly polarized laser can accelerate protons in presence of magnetic field upto high energy ( 30-40 MeV) with good collimation due to dominant effect of radiation pressure.</li> <li>• Evaluation of trapped ion phase space vortices involving regular as well as singular trapped ion distributions in plasma and calculate the free energy of such system by using fully nonlinear Vlasov equation.</li> <li>• Using Linear response formalism, a 2-D expression for attractive wake potential is derived in a magnetized flowing dusty plasma. The theory also introduces the modified Debye Huckel potential, thereby allowing an explicit diagnosis over the behaviour of dust – dust interaction in the given model. The significant impact of ion flow velocity and magnetic field strength on the nature of effective potential, operative between the dust grains is also highlighted in our work.</li> </ul>
R Biswas	<ul style="list-style-type: none"> <li>• Developed U-shaped fiber optic sensor for volatile liquid sensing to heavy metal ion detection.</li> </ul>

#### Research projects, ongoing and new

Project Title	Funding Agency	Amount (in INR )	Duration	Principal Investigator
SHI effects on graphene based conducting polymer nanocomposites for electrode applications.	IUAC	6.03 lakh	2015-2018	A Kumar
Development of grapheme based conducting polymer nanocomposites for electrochemical energy storage applications.	SERB	50.10 lakh	2016-2019	A Kumar
Study of interactions of Ionic Liquid ions with unsaturated metal centers in Metal Organic Framework based polymer electrolyte nanocomposites incorporated with Ionic Liquids through Neutron Scattering and Raman Spectroscopy.	UGC-DAE -CSR	10.71 lakh	2018-2021	A Kumar
Design and realization of light weight shields to reduce electromagnetic interference (EMI) at microwave ranges (C and X band) with different geometries for	DeitY	216.04 lakh	2016-2019	Nidhi S Bhattacharyya



customized applications like anechoic chamber, as terminations and stealth for strategic device camouflaging.				
Miniaturized flexible planar antennas for body worn applications as health monitoring systems in L and S band using nano magneto-dielectric composite as substrate.	DST	86.962 lakh	2017-2020	Nidhi S Bhattacharyya
Studies on bifunctional (wetting-dewetting and biophotonic colouration) properties of certain natural systems of biological origin.	DST	40 lakh	2017-2020	D Mohnata
Studies on photo-catalytic, photo-luminescence and mechanical properties of WS <sub>2</sub> /C-dot nano scale systems subjected to irradiation	IUAC	6.75 lakh	2017-2020	D Mohnata
Smart phone based optical microscope for clinical applications.	ICMR	29.58 lakh	2017-2020	P Nath
Study of the Abundance and Characteristics of Interstellar Dust	SERB	19.65	2018-2021	R Gogoi

## PUBLICATIONS

### In International and National Journals

Aideo, S. N., Haloi, R. and Mohanta, D. Exploring structural color in uni and multi- colored butterfly wings and Ag<sup>+</sup> uptake by scales. *Europhysics Letters*, 119, 2017.

Bora, N., Biswas, R., and Bora, D. Assessing attenuation characteristics prevailing in a seismic prone area of NER India. *IOP: Journal of Geophysics and Engineering*, 14, 2017.

Bayan, S., Pegu, L and Mohanta, D. Catalyst-free growth and luminescence response of single-crystalline ZnO nanorods. *Indian Journal of Pure and Applied Physics*, 55, 2017.

Boruah, M. J. and Ahmed, G. A. Visible light scattering properties of irregularly shaped silica microparticles using laser based laboratory simulations for remote sensing and medical applications. *Laser Physics*, 28, 2018.

Boruah, M. J., Gogoi, A., Nath, B. C. and Ahmed, G. A. Light scattering studies of randomly oriented polycrystalline fayalite micro particles as interstellar dust analogues. *Journal of Quantitative Spectroscopy & Radiative Transfer*, 196, 2017.

Chetia, L., Kalita, D. and Ahmed, G. A. Enhanced photocatalytic degradation by diatom templated mixed phase titania nanostructure. *Journal of Photochemistry and Photobiology A: Chemistry*, 338, 2017.

Biswas, R., Karmakar, P.K., Gogoi, C., and Sarma, D. A Comparative Analysis of Hetero Core Spliced MSM and SMS System in terms of Transmittance, *International Journal of Photonics and Optical Technology*, 3, 2017.

Bora, N., Biswas, R. and Dobrynina, A. Regional variation of coda Q along Kopili fault and its implications. *Tectonophysics*, 722, 2017.

Baruah, B. S. and Biswas, R. Selective detection of arsenic (III) based on colorimetric approach in aqueous medium using functionalised gold nanoparticles unit. *Material Research Express*, 5, 2018.

Begum, M. and Das, N. Effect of ion streaming on diffusion of dust grains in dissipative system. *Plasma Physics Reports*, 44, 2018.

- Borgohain, J. M., Borah, K., Biswas, R. and Bora, D. Seismic b-value anomalies prior to the 3rd January 2016, Mw=6.7 Manipur earthquake of northeast India. *Journal of Asian Earth Sciences*, 154, 2018.
- Chamuah, N., Chetia, L., Zahan, N., Dutta, S., Ahmed, G. A. and Nath, P. A naturally occurring diatom frustule as a SERS substrate for the detection and quantification of chemicals. *Journal of Physics D: Applied Physics*, 50, 2017.
- Chetia, L., Kalita, D. and Ahmed, G. A. Synthesis of Ag nanoparticles using diatom cells for ammonia sensing. *Sensing and Bio-Sensing Research*, 16, 2017.
- Dutta, R. and Kumar, A. Dielectric Relaxation Dynamics and AC Conductivity Scaling of Metal Organic Framework (MOF-5) based Polymer Electrolyte Nanocomposites incorporated with Ionic Liquid. *Journal of Physics D: Applied Physics*, 50, 2017.
- Devi, M. and Kumar, A. Structural, thermal and dielectric properties of in-situ reduced graphene oxide -polypyrrole nanotubes nanocomposite. *Materials Research Bulletin*, 97, 2017.
- Devi, M.M, Dighe, A., Indumathi D. and Lakshmi, S.M. Simulation studies of reconstruction of hadron shower direction in INO ICAL detector. *Journal of Instrumentation*, 13, 2018.
- Devi, M. and Kumar, A. Thermal, Electrical and Dielectric Properties of Reduced Graphene Oxide – Polyaniline Nanotubes Hybrid Nanocomposites Synthesized by In-Situ Reduction and Varying Graphene Oxide Concentration. *Journal of Applied Polymer Science*, 135, 2018.
- Devi, M. and Kumar, A. 85 MeV C6+ swift heavy ion irradiation of in-situ reduced graphene oxide-polypyrrole nanotubes nanocomposite films for supercapacitor electrodes. *Electrochimica Acta*, 261, 2018.
- Devi, M. and Kumar, A. Enhanced electrochemical performance of in-situ reduced graphene oxide – polyaniline nanotubes hybrid nanocomposites using redox-additive aqueous electrolyte. *Journal of Physics D: Applied Physics*, 51, 2018.
- Bezbaruah, P. and Das, N. Wake potential in 2-D magnetized complex plasma. *The European Physical Journal D*, 71, 2017.
- Francis, Ng. K. Study of Neutrino Oscillations at DUNE & LBNO. *International Journal of Innovative Research in Science. Engineering and Technology*, 6, 2017.
- Francis, Ng. K. Validity of neutrino mass models through thermal leptogenesis. *International Journal of Advanced Technology in Engineering and Science*, 5, 2017.
- Hazarika, J. and Kumar, A. Scalable and Low Cost Synthesis of Highly Conducting Polypyrrole Nanofibers Using Oil-Water Interfacial Polymerization under Constant Stirring. *Journal of Physical Chemistry B*, 121, 2017.
- Hazarika, S. and Mohanta, D. Noticeable red emission and Raman active modes in nanoscale gadolinium oxyfluoride (Gd<sub>4</sub>O<sub>3</sub>F<sub>6</sub>) systems with Eu<sup>3+</sup> inclusion. *Applied Physics A*, 123, 2017.
- Hazarika, S. J. and Mohanta, D. Inorganic fullerene type WS<sub>2</sub> nanoparticles: processing, characterization and its photocatalytic performance on Malachite Green. *Applied Physics A*, 123, 2017.
- Kumar, S. and Kumar, A. Enhanced photocatalytic activity of rGO-CeO<sub>2</sub> nanocomposites driven by sunlight. *Materials Science and Engineering B*, 223, 2017.

Kumar, S., Baruah, B. and Kumar, A. Tunable degree of oxidation through variation of H<sub>2</sub>O<sub>2</sub> concentration and its effect on structural, optical and supercapacitive properties of graphene oxide powders synthesized using improved method. *Materials Today Communications*, 13, 2017.

Kuri, K. D., Das, N. and Patel, K. Formation of periodic magnetic field structures in over dense plasmas. *Laser and Particle Beams*, 35, 2017.

Kuri, K. D., Das, N. and Patel, K. Role of target thickness in proton acceleration from near-critical mass-limited plasmas. *Applied Physics B*, 35, 2017.

Mohanta, Y.K., Biswas, K., Bandyopadhyay, J., Tamang, A. De, D., Mohanta, D., Panda, S.K., Jayabalan, R., Mohanta, T.K. and Bastia, A. K. Abutilon indicum (L.) Sweet Leaf Extracts Assisted Bio-Inspired Synthesis of Electronically Charged Silver Nano-Particles with Potential Antimicrobial, Antioxidant and Cytotoxic Properties. *Materials Focus*, 7, 2018.

Nath, B. C., Mohan, K. J., Saikia, B. J., Ahmed, G. A. and Dolui, S. K. Designing of platinum free NiS anchored graphene/ polyaniline nanocomposites based counter electrode for dye sensitized solar cell. *Journal of Material Science: Materials in Electronics*, 28, 2017.

Paul, D., Dutta, S., Saha, D. and Biswas, R. LSPR based Ultra-sensitive low-cost U-bent optical fiber for volatile liquid sensing. *Sensor and Actuators B (Chemical)*, 250, 2017.

Paul, D., and Biswas, R. Highly sensitive LSPR based photonic crystal fiber sensor with embodiment of nanospheres in different material domain. *Optics and Laser Technology*, 101, 2018.

Paul, D. and Biswas, R. Multiple material domains based modal parameter analysis of photonic crystal fiber, *Laser Research and Applications Journal*, 1, 2018.

Schamel, H., Das, N. and Borah, P. The privileged spectrum of cnoidal ion holes and its extension by imperfect ion trapping. *Physics Letters A*, 382, 2018.

Sharma, A., Kumar, A. and Khan, R. Electrochemical Immunosensor based on Poly (3,4-ethylenedioxythiophene) modified with Gold Nanoparticle to detect Aflatoxin B1. *Materials Science and Engineering C*, 76, 2017.

Sharma, A., Kumar, A. and Khan, R. A highly sensitive Amperometric Immunosensor probe based on Gold nanoparticle functionalized Poly (3, 4-ethylenedioxythiophene) doped with Graphene oxide for efficient detection of Aflatoxin B1. *Synthetic Metals*, 235, 2018.

#### **Conference proceedings**

Francis, Ng. K. In Proceedings of the XXXI International Workshop on High Energy Physics: Critical Points in the Modern Particle Physics International Journal of Modern Physics: Conference Series Volume 42, 2018.

Paul, N., Borah, J. P., and Mohanta, D. Temperature responsive gadolinium oxide nanoparticles for hyperthermia application, in proceedings of AIP Conference, 2017.

#### **Books and Book Chapters**

Francis, Ng K. *Neutrino Models and Baryogenesis*, Scientific Research Publishing, 2017.

## **SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**

### **International and National**

A Kumar attended an International Baltic Conference on New Age Technology and Innovations, Stockholm, Sweden, October 8-11, 2017.

A Kumar attended a National Conference on Nanomaterials Science, Technology and Applications, Department of Physics, Dibrugarh University, November 10-11, 2017.

A Kumar attended the 12<sup>th</sup> National Conference on Solid State Ionics, Department of Physics, BITS Pilani (Rajasthan), December 21-23, 2017.

D Mohanta attended the Condensed Matter Days-2017, Tezpur University, August 29-31, 2018.

D Mohanta attended an International Conference on Sculptured Thin Films, GLAD-2018, IIT Delhi, March 30-31, 2018.

D Mohanta attended the 35<sup>th</sup> International Cosmic ray conference, BEXCO, Busan, Korea, July 12-20, 2017.

D Mohanta attended a National Symposium on Particles, detectors and Instrumentation, TIFR, Mumbai, India, October 4-7, 2017.

D Mohanta attended a Workshop in High Energy Physics Phenomenology XV, IISER Bhopal, India, 14-22 December, 2017.

Ng. K. Francis attended the Nu HoRizons 2018, HRI, Allahabad, India, February 21-23, 2018.

Ng. K. Francis attended the XXXI International Workshop on High Energy Physics "Critical points in the modern particle physics," Protvino, Moscow region, Russia, July 5-7, 2017.

### **TALKS BY THE FACULTY ABROAD AND IN INDIA**

A Kumar delivered a talk, Conducting polymer core-sheath nanofibers for electrical stimulation of neuronal like cells, at an international Baltic Conference on New Age Technology and Innovations, Stockholm, Sweden October 8-11, 2017.

A Kumar delivered a talk, Redox-additive assisted enhanced Electrochemical Performance of Graphene based Conducting Polymer Nanocomposite Electrodes, at a National Conference on Nanomaterials Science, Technology and Applications, Department of Physics, Dibrugarh University, November 10-11, 2017.

A Kumar delivered a talk, Charge Carrier Dynamics in MOF-5 based Polymer Electrolyte Nanocomposite incorporated with Ionic Liquid, at the 12<sup>th</sup> National Conference on Solid State Ionics, Department of Physics, BITS Pilani (Rajasthan), December 21-23, 2017.

D Mohanta delivered an invited lecture, An overview on radiation induced phenomena and associated aspects in materials science, January 30, 2018.

D Mohanta delivered a talk, From artificial films to natural scales in biotemplates: Emerging concept, challenges and scope, IIT Delhi, March 30-31, 2018.

G A Ahmed delivered a talk, Light scattering from nanomaterials, at a UGC sponsored National Conference on Nanomaterials and its Applications (NCNA-17) in the Dept of Physics, D.R. College, Golaghat, Assam, September 20-21, 2017.

G A Ahmed delivered a talk, Fayalite microparticles as interstellar dust analogue: Laboratory simulation and study of light scattering properties, at the North East Meet of Astronomers (NEMA-3), St. Anthony's College, Shillong, Meghalaya, October 5-7, 2017.

G A Ahmed delivered a talk, Light scattering from interstellar dust, at the SERB School on Observational Astronomy, Tezpur University, Tezpur, Assam, October 25 –November 14, 2017.

Moon Moon Devi delivered a talk, UHECR primary identification using the lateral profile of muons in EAS, at the 35<sup>th</sup> International Cosmic ray conference, BEXCO, Busan, Korea, July 12-20, 2017.

Moon Moon Devi delivered a talk, The muons in UHECR EAS, at the National Symposium on Particles, detectors and Instrumentation, at TIFR, Mumbai, October 4-7, 2017.

Moon Moon Devi delivered a talk, Neutrino decoherence in atmospheric sector, at the Workshop in High Energy Physics Phenomenology XV, IISER Bhopal, December 14-22, 2017.

Moon Moon Devi delivered a talk, DIREXENO: An Effort to Enhance Direct Detection of Dark Matter, at the ANP Colloquium Seminar at Saha Institute of Nuclear Physics, Kolkata, India, October 16, 2017.

Moon Moon Devi delivered a talk, Extensive Air Showers: Study of the muon component to find UHECR primary, at the TPSC HEP Seminar at Institute of Physics, Bhubaneswar, India, March 27, 2018.

Nilakshi Das delivered a talk, Strongly Correlated Complex (Dusty) Plasma, at an International Conference on Complex Dynamical Systems and Applications, IIT Guwahati, Assam, India, December 4-6, 2017.

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

National Conference on Hard and Soft Condensed Matter Physics-2017, March 2-4, 2017.

ASTROSAT data analysis workshop, May 3-5, 2017

Condensed Matter Days-2017, August 29-31, 2017

#### **DISTINGUISHED VISITORS TO THE DEPARTMENT**

Prof. A K Chakraborty, Head, Department of Medicinal Chemistry, NIPER, Mohali

Dr. D K Dutta, Material Science Division, CSIR-NEIST, Jorhat

Dr. G Kosmambetova, National Academy of Science, Kyiv, Ukraine

Dr. Ishwara Chandra CH, NCRA, TIFR, Pune

Prof K S Goswami, Centre Director, CPP-IPR, Sonapur, Assam

Prof Pabitra K Chakraborti, University of Burdwan, Kolkata

Dr. Suresh Chand, Emeritus Scientist, CSIR-NPL, New Delhi

Prof S N Sarkar, Emeritus Professor, Calcutta University, Kolkata

Prof Seeni Pandian Ravi, Department of Physics, IIT Guwahati

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

##### **Research Scholar/Student**

Deep Kumar Kuri was awarded the Buti Young Scientist Award 2017 in the Buti Young Scientist Session of the PLASMA-2017 organized by the Plasma Science Society of India (PSSI) and the Institute for Plasma Research, Gandhinagar, Gujarat, November 7-10, 2017.

#### **NUMBER OF STUDENTS WHO PASSED NET-JRF/GATE**

NET: 3

GATE: 7

#### **NOTABLE PLACEMENT**

Dr. Pragyan Jyoti Gogoi, Assistant Professor, Dindayal Upadhyay College, Behali, Assam

Dr. Paragjyoti Chutia, Assistant Professor, Kamrup College, Guwahati, Assam

Dr. Samiran Hazarika, Post-Doctoral Fellow, IIT, Madras, Madras, India

Dr. Sibasish Dutta, Assistant Professor, Dindayal Upadhyay College, Karimganj, Assam

Dr. Rupam Kalita, Assistant Professor, Dindayal Upadhyay College, Goalpara, Assam

Dr. Hari Prasad Goutam, Assistant Professor, Dindayal Upadhyay College, Goalpara, Assam

Ms. Lakhi Chetia, Assistant Professor, Dindayal Upadhyay College, Dalgaon, Assam

Mr. Arunav Phukan, Assistant Professor, Dindayal Upadhyay College, Behali, Assam  
Ms. Archana Haloi, Assistant Professor, Darrang College, Tezpur, Assam  
Mr. Dipangkar Borah, Assistant Professor, B.N. College, Dhubri, Assam  
Ms. Madhabi Devi, Assistant Professor, Majuli College, Majuli, Assam  
Dr. Rajiv Borah, Inspire faculty, IIT, Guwahati, Assam

## THE FACULTY OF THE DEPARTMENT

### Professors

A Kumar, PhD (IIT, Kanpur)  
*Specialization/Areas of interest:* Materials Science/Condensed matter Physics, GPS  
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J K Sarma, PhD (Gauhati)  
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Nilakhi Das, PhD (Gauhati)  
**Head of the Department (from November 14, 2017)**  
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P Deb, PhD (Jadavpur)  
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### Associate Professors

G A Ahmed, PhD (Gauhati)  
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D Mohanta, PhD (Tezpur)  
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**Assistant Professors**

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**DST INSPIRE FACULTY**

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M Gohain, Diploma in E&T (AICTE)  
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B Boro, BSc (Dibrugarh)  
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D Deka, BSc (Guwahati)  
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MTS



## **DBT NODAL CELL**

### **THE CELL**

The unique and ongoing biotechnology based health care-academia initiative carried out through DBT-Tezpur University collaboration represents a significant opportunity of growth in the North Eastern Region of India. From the nucleus of existing base of 21 projects and the over 300 MD/MS students from medical institutions across NER, the DBT Nodal Cell, TU has the potential and experience in NER Project Management to broaden the scope of the programme.

The Impact Analysis carried out by Biotech Consortium India Limited (BCIL) in mid 2017 clearly stated that DBT should continue its medical infrastructure and research grant programmes which are highly regarded amongst all the concerned beneficiaries and stakeholders. Thus the DBT Nodal Cell of the University has taken relevant steps to move its two projects in to Phase 2 of the programme.

1. Development/Upgrading Infrastructure in Medical Colleges in North Eastern States of India
2. Research Grant to support MD/MS thesis in Medical Colleges in North Eastern States of India.

As a preliminary step, the Executive Committee Meeting for Second Phase of “Development/Upgrading Infrastructure in Medical Colleges in North-Eastern States of India” and “Research Grants to Support MD/MS Thesis to Medical Students in North Eastern Region” was held at the University Guest House, Maligaon, Guwahati, Assam on 15 December, 2017. It was chaired by the Vice Chancellor, Tezpur University. Stake holders from collaborating institutions were present at the meeting.

The Vice Chancellor and Chairman of the Executive Committee, along with members and stakeholders supported the Phase 2 of DBT Nodal Cell and its programmes for next 5 years.

Thus a detailed proposal has been submitted to DBT for with following salient points

- Taking the Development/Upgrading Infrastructure in Medical Colleges Institutes of North Eastern States of India to all 8 NER states and new Medical Colleges
- Extending the reach of the Research Grants to Support MD/MS Thesis to Medical Students in North Eastern Region of India within existing and new medical institutions in NER
- Biotechnology Based Skill Development Programmes for medical practitioners of NER
- Strengthening DBT Nodal Cell, Tezpur University

The DBT Nodal Cell is actively involved in all processes related to the completion of Phase 1 of the programme

<b>SALIENT OUTPUT FIGURES FROM THE TWO PROJECTS UNDER DBT NODAL CELL</b>			
<b>Project 1</b>	<b>Outcomes</b>		
Development/Upgrading Infrastructure in Medical Colleges in North Eastern States of India	ENHANCED PATIENT CARE FROM INFRASTRUCTURE UPGRADED LABORATORIES	6,00,000 (approx.)	Diagnostic tests carried out
	RESEARCH	114	Publications in peer reviewed journals
	CAPACITY BUILDING	231	Training programmes

		102	Project personnel recruited
<b>Project 2</b>			<b>Outcomes</b>
Research Grant to support MD/MS thesis in Medical Colleges in North Eastern States of India	CAPACITY BUILDING	310	180 Students have completed & 130 students are ongoing
	RESEARCH	41	Publications in peer reviewed journals
		100	Presentations in national conferences

#### TALKS BY THE FACULTY ABROAD & IN INDIA

Gaurangi Maitra delivered a lecture on "Nathaniel Wallich from Copenhagen, in Calcutta, Assam & London" at the International Conference on Molecular Signaling Dept. of Animal Sciences, University of Hyderabad, Hyderabad, February 8-10, 2018.

Gaurangi Maitra was a panelist for the National Science Day, Exploring Science, Beyond Boundaries, organized by SCInis, Tezpur University, Assam, February 28, 2018.

#### SEMINARS/WORKSHOPS/SYMPOSIA/INVITED LECTURES ORGANIZED BY THE CELL

- Meeting of the Screening Committee for Evaluation of the MD-MS Thesis for Research Grant Support in NER, DBT New Delhi, October 9, 2017.
- Executive Committee Meeting of DBT Nodal Cell, Tezpur University and Release of Annual Report 2016-17 & presentation of Impact Analysis Report, December 15, 2017
- Meeting with stakeholders of DBT Infrastructure Projects Guwahati Medical College Hospital, Guwahati, August 9, 2017.

#### DISTINGUISHED VISITORS TO THE CELL

Dr. M S Lakshmi Priya, IAS, Deputy Secretary to Government of Assam, Dept. of Health & Family Welfare.

#### CURRENT PERSONNEL OF THE CELL

##### Head and Coordinator

A K Mukherjee, PhD (Burdwan)  
Professor, Dept of Molecular Biology and Biotechnology  
E-mail: dbt\_nc@tezu.ernet.in, akm@tezu.ernet.in

##### Scientists

Gaurangi Maitra, PhD (Visva Bharati)  
E-mail: gmaitra@tezu.ernet.in

##### Joint Coordinator

R C Deka, PhD (NCL, Pune)  
Professor, Dept of Chemical Sciences  
E-mail: ramesh@tezu.ernet.in

Radhashree Bora, MSc (Tezpur)  
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##### Financial Advisor

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## ADVANCED INSTITUTIONAL LEVEL BIOTECH HUB

Institutional Biotech Hub (IBT Hub) is an initiative of Department of Biotechnology, Government of India with a view to promote research and for manpower development. The mandate of Institutional Biotech Hub is to create trained manpower in the field of Biotechnology. The IBT Hub at Tezpur University was established in the year 2011 (Sanction no. BT/22/NE/11) at the Department of Molecular Biology and Biotechnology for a period of five years with the mandate to contribute to the advancement of the emerging area of Disease Biology with area of specialization Human Diseases. It has now been upgraded to Advanced Level Biotech Hub on the basis of its performance rated as "Very Good". IBT Hub, Tezpur University besides conducting trainings, workshops, seminars and outreach programs in basic and advanced areas of Biotechnology, has also been extending support to the research and teaching programs of the Department of MBBT. IBT Hub has also been extending infrastructure, technical and consumable support to the Department of MBBT. IBT Hub has one completed Ph.D. thesis, one on going Ph.D. thesis, nine M.Sc. dissertations and seven publications to its credit.

### Objectives of the Hub

- To conduct hands on trainings and workshops in the area of disease biology
- To support teaching and research programs of the University
- Extension of facility for research activity of the departments of the University
- Extend teaching and training facilities to neighbouring institutes of the region

### Major facilities and equipment available

IBT Hub, TU provides laboratory, equipment and research facilities to Undergraduate, Post-graduate students and Research Scholars.

### Equipment present in IBT Hub

- SDS PAGE gel running and transfer apparatus
- Purification system for ultra pure water
- Freeze Dryer
- Real Time PCR

### MAJOR RESEARCH FINDINGS/RESEARCH AND DEVELOPMENT ACTIVITIES

Title of research projects	Persons involved	Status	Remarks
Understanding Immune Suppression in Head & Neck Squamous Cell Carcinoma (HNSCC)	01	Ongoing	<ul style="list-style-type: none"><li>• Data obtained is being shared with NECHRI (North East Cancer Hospital and Research Institute) for effective treatment protocol.</li><li>• Initiated the process of technology transfer with the support of BCIL</li></ul>
A study on FoxP3 polymorphisms in HNSCC	01	Ongoing	Integrated M.Sc. dissertation

## **PUBLICATIONS**

### **In International and National Journals**

Mahanta, A., Ganguly, P., Sarkar, R., Borah, P., Sarmah, N., Phukan, S., Bora, M. & Baruah, S. Integrative approaches to understand the mastery in manipulation of host cytokine networks by protozoan parasites with emphasis on *Plasmodium* and *Leishmania* species. *Frontiers in Immunology*, **9**(296), 2018.

### **Conference proceedings**

Sarmah, N., Baruah, S. and Baruah, M. Cytokine and Chemokine profile differs with Human Papilloma Virus (HPV) positivity in head & neck squamous cell carcinoma (HNSCC), Immunocon, organized by Nirma University, Ahmedabad, 2017.

Baruah, S., Mahanta, A. and Shaham, S. Understanding intense inflammation in *P. falciparum* Malaria, Immunocon, organized by Nirma University, Ahmedabad, 2017.

### **SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED**

Neelanjana Sarmah presented a paper, Cytokine and Chemokine profile differs with Human Papilloma Virus (HPV) positivity in head & neck squamous cell carcinoma (HNSCC), at Immunocon, organized by Nirma University, Ahmedabad, 2017.

Sashi Baruah presented a paper, Understanding intense inflammation in *P. falciparum* Malaria, at Immunocon, organized by Nirma University, Ahmedabad, 2017.

### **TALKS BY THE FACULTY ABROAD AND IN INDIA**

Dr. P Barah delivered an invited lecture, Synthetic life: myth and reality, at B. Baruah College, Assam, India, October 26, 2017.

Dr. R Mukhopadhyay delivered an invited lecture on PCR and its applications at Darrang College, Assam, India, November 3, 2017.

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

Training program on Finishing school on Trends in Food and Biotechnology: Analytical Approach, sponsored by the Department of Biotechnology, Government of India, March 19-24, 2018.

Seminar on Careers in Science and Biotechnology sponsored by Department of Biotechnology, Government of India on March 27, 2018.

### **DISTINGUISHED VISITORS TO THE BIOTECH HUB, TU**

Dr. Pawan Sharma, Consultant, Health care, DBT

Dr. Prabodh Borah, Coordinator, State Biotech Hub

Dr. Smita Jain, Associate Director, India Biosciences, NCBS

Dr. Suman Govil, Former Adviser, DBT

Dr. T. Madhan Mohan, Former Adviser, DBT

### **THE PERSONNEL OF THE CELL**

#### **Coordinator**

Sashi Baruah

Professor, Dept of Molecular Biology and Biotechnology

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#### **Co-Coordinator**

S K Ray

Professor, Dept. of Molecular Biology and Biotechnology

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# CENTRE FOR OPEN AND DISTANCE LEARNING

## THE CENTRE

The Centre for Open and Distance Learning was established in the year 2011 with an aim to disseminate and impart education through open and distance mode in chosen areas. The Centre offers various post-graduate, undergraduate, diploma and certificate programmes in emerging areas of science & technology, social sciences, management and humanities with flexible system to cater to the needs of the learners facing difficulty in availing regular mode of education. Ongoing programmes under the Centre are MSc in Mathematics and MA in Mass communication. Post graduate diploma courses are offered in thrust areas such as Human Resource development, Environment and Disaster management and Renewable Energy and Energy Management. New programmes initiated from Autumn Semester, 2018 are MA in English, MA in Sociology, Post Graduate Diploma in Child Right and Governance, a diploma programme sponsored by UNICEF.

## Academic programmes and Student intake

Programme	Student Intake
MA in Mass Communication	23
MSc in Mathematics	26
PG Diploma in Human Resource Management	36
PG Diploma in Environmental and Disaster Management	12
PG Diploma in Renewable Energy and Energy Management	25

## PUBLICATIONS

### Books and Book Chapters

Goswami, Suchibrata. *A Text Of One's Own: Re/Writing The Self In Nirupama Borgohain's Biswas Aru Sansayar Majedi. Women's writing in the North East: a Critical Spectrum*. MRB Publishes (India), 2017.

### Other publications

Suchibrata Goswami 2017. "Bouddhik Sampadar Adhikar", cover story in *Purbachal*, the Sunday special issue of *Amar Asom*.

## SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED

### International and National

Suchibrata Goswami attended an International Conference as a Panelist on Locating Northeast India: Human Mobility, Resource Flows, and Spatial Link ages, organized by the Department of Sociology, Tezpur University, January 9-12, 2018.

Pragya Sharma attended a National Conference on Historicizing Indian Television: People, Programs and Processes Post 1990, organized by the Department of Media and Communication Studies, Pune

University, and presented a paper, News presentation in Assam: A study of the hybridization of Assamese language post the privatization of Television channels in India, February 8 - 10, 2018.

Pragya Sharma attended a National Seminar on Urbanisation and Folklore: Emerging Issues and Perspectives, organized by the Department of Folklore Research, Gauhati University and presented a paper, Tele-visualization of Politics and use of folk culture as an instrument of political advertisement: With special reference to Electronic Media of Assam and politics of the state, March 23-24, 2018.

#### **WORKSHOP ORGANISED BY THE CENTRE**

Workshop on Development of Self Learning Materials for Open and Distance Mode of Learning in collaboration with TLC (PMMMNTT), Tezpur University, March 6-7, 2018.

#### **DISTINGUISHED VISITORS TO THE DEPARTMENT**

Prof CRK Murthy, STRIDE, IGNOU, New Delhi  
Prof S Panda, STRIDE, IGNOU, New Delhi

#### **THE PERSONNEL OF THE CENTRE**

##### **Director**

D Das, PhD (RGU)  
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##### **Assistant Professors**

Suchibrata Goswami, PhD (Dibrugarh)  
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R Bora  
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# TEACHING LEARNING CENTRE

## THE CENTRE

The Teaching Learning Centre (TLC), Tezpur University was established in 2015 as a Centre of Excellence for Curriculum and Pedagogy under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) scheme. The scheme is funded by Department of Higher Education, MHRD. TLC envisages developing and promoting a responsive and relevant teaching-learning system for higher education communities and contributing to excellence in teaching and learning as an innovative and resourceful Centre through reflective research-based practice and the optimal use of technology. The centre has conducted 09 programs in this financial year and trained more than 400 teachers and prospective teachers. Through these programs TLC has been providing assistance and support for promoting best practices in teaching learning environment among higher education communities. Main focus areas of the conducted activities are teaching learning pedagogy, learning through second language, generating resources in specific fields of pedagogy and professional development through various skills.

## Major facilities and equipment available

One ICT Lab.

## SEMINARS/CONFERENCES/WORKSHOPS/SYMPOSIA ATTENDED

### International and National

Bhushita Patowari attended Hands-on Workshop on Public Health Analytics and Disease Modelling, NEHU, Shillong, May 2-5, 2017.

Bhushita Patowari attended 2<sup>nd</sup> Hands-on Workshop on Public Health Analytics and Disease Modelling, NEHU, Shillong, December 8-10, 2017.

I H Ahmed attended Faculty Induction Programme held at IQAC, Tezpur University, Tezpur, September 21-22, 2017.

I H Ahmed attended an Intensive Workshop on Microsoft Excel- Advanced organized by Dept. of Commerce, Tezpur University Tezpur, Tezpur, October 13-15, 2017.

M J Deka attended a weeklong in-house Training Programme for the non-teaching (technical and non-technical) staff organized by Tezpur University, Tezpur, January 8-12, 2018.

M J Deka attended a workshop on Knowing Cyber Attack-Adopting HoneyNet, organized by Tezpur University, Tezpur, March 6-7, 2018.

Swapnarani Bora attended a Faculty Induction Programme held at IQAC, Tezpur University, Tezpur, September 21-22, 2017.

Swapnarani Bora attended an Intensive Workshop on Microsoft Excel-Advanced organized by Dept. of Commerce, Tezpur University, Tezpur, October 13-15, 2017.

Swapnarani Bora attended the 13th International Conference of South Asian Languages and Literature organized by Central Institute of Indian Languages, Mysuru & Indian Institute of Language Studies, Delhi, January 8-10, 2018.

Swapnarani Bora attended a Workshop on Development of Self-Learning Materials for Open and Distance mode of Learning held at CODL, Tezpur University, Tezpur, March 6-7, 2018.

Swapnarani Bora attended a National seminar on Ethnic Languages and Literatures of the North East: Problems and Prospects organized by the Dept. of Assamese, Dibrugarh University, March 27-28, 2018.

#### **SEMINAR/WORKSHOP/SYMPOSIA/INVITED LECTURES ORGANISED BY THE CENTRE**

Workshop on Research Methodology, June 19-24, 2017.

Short-term Training Program on Developing Teaching Competencies of Teachers in Higher Education (At LTK College, Lakhimpur, Assam), December 2-4, 2017.

Induction Training of Faculty-I during November 23 - December 22, 2017.

Short-term Training Program on Addressing the Problems in Second Language Learning: Special Focus on Assamese and English Teaching in Assam (At HPB Girl's College, Golaghat, Assam), January 18-20, 2018.

Short-term Training Program on Motivating Undergraduate Students to Acquire Reading and Writing Skills at North Guwahati College, Assam, February 14-16, 2018.

One Week Faculty Development Program on Advances in Renewable Energy Technologies and Systems (In Collaboration with Department of Energy, Tezpur University), February 19-24, 2018.

Short-term Training Program on Innovative Practices in Teaching Learning Process at B. H. College, Barpeta, Assam, February 21-23, 2018.

Two Day Workshop on Development of Self-Learning Materials for Open and Distance Learning System In Collaboration with the Centre for Open and Distance Learning, Tezpur University, February 23-24, 2018.

Short-term Training Program on Exploring Ways for an Outcome Based Approach to Revitalize the Teaching-Learning Processes in Higher Education at Jagiroad College, Morigaon, Assam, March 8-10, 2018.

#### **DISTINGUISHED VISITORS TO THE CENTRE**

Prof. K Srinivas, NEUPA, New Delhi

Prof. N C Talukdar, Director, IASST, Guwahati

Prof. Santosh K. Panda, Indira Gandhi National Open University (IGNOU), New Delhi

#### **OTHER IMPORTANT ACTIVITIES OF THE CENTRE**

E-Content Development: 117 Minutes of Video Content Developed  
Repository of E-resource support for Teaching Learning (Ongoing)  
Experimental Action Research (Ongoing)



## THE PERSONNEL OF THE CENTRE

### Director-in-Charge

M K Sarma, PhD (Tezpur)

Professor, Dept. of Business Administration & Coordinator MTTM

*Specialization/Areas of Interest:* Research Methodology, Services Marketing, Tourism Marketing

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### Assistant Professors

I H Ahmed, MPhil (Delhi)

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Swapnarani Bora, PhD (Dibrugarh)

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### Research Associate

Bhushita Patowari, PhD (Gauhati)

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### Technical Staff

M J Deka, BTech (Gauhati)

Technical Assistant

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# COMMUNITY COLLEGE

## ABOUT THE COLLEGE

The Community College of Tezpur University started functioning from July, 2015. The primary objective of Community 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 offer different levels of programmes to meet demands of various target groups with provision for horizontal as well as vertical mobility, to allow recognition of prior learning skills (certification of skills acquired informally) effectively and to integrate relevant skills into the higher education system.

## 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 Programme in Income Generation in Financial Services Sector, a Diploma programme in Repair, Installation and Maintenance of Electronic Appliances and a Certificate programme in Repair, Installation and Maintenance of Electronic Appliances are proposed to be started by July, 2019.

## DISTINGUISHED VISITORS TO THE COLLEGE

Prof B K Chakravarty, Retired Professor of the Department of Law, Gauhati University & HOD, Department of Law, TU

Nilay Dutta, Senior Advocate of the Gauhati High Court.

G N Sahewala, Senior Advocate of the Gauhati High Court.

Debojit Senapati, Advocate of the Gauhati High Court.

Dr Anurag Deep, Associate Professor of the Indian Law Institute, Delhi.

## THE PERSONNEL OF THE COLLEGE

### Nodal Officer

A Baishya, PhD, (Jadavpur)

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### Office Staff

Bidisha Baishya, BCom (Gauhati)

Office Assistant

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### Guest Faculty

B Kalita, Advocate, District and Session Court, Tezpur.

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Krishna Das, Technical Assistant, Dept. of Mathematical Science, Tezpur University.  
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Pinky Dutta, Research Scholar, Dept. of Business Administration, Tezpur University.  
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B J Kalita, Research Scholar, Dept. of Business Administration, Tezpur University.  
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## **CENTRAL FACILITIES**

**Central Library**

**Centre for Inclusive Development**

**Centre for Innovation, Incubation and Entrepreneurship**

**Computer Centre**

**Engineering Cell**

**Health Centre**

**Horticulture Cell**

**Internal Quality Assurance Cell**

**International Office**

**Sophisticated and Analytical Instrumentation Centre**



# CENTRAL LIBRARY

## THE LIBRARY

The Central Library of Tezpur University was established in 1994 along with the establishment of the University. The library with its diverse collection of more than one lakh books and journals can be regarded as an ideal University library of the region as well as the country. The library boasts of the latest information resources on all areas of Engineering, Science, Management, Social Science, Humanities. It also provides access to e-resources & databases through the e-ShodhSindhu Consortia of INFLIBNET Centre and DelCon Consortium. The library is also a member of DELNET and utilizes its services. Members can access book databases, theses, journal databases, e-journals and other e-resources from any computer within the University campus. The Central Library is an invaluable resource for students, researchers and faculties of the University. It delivers innovative information products, services and programmes of the highest quality that are integrated with teaching, learning and research activities. The mission of the Central 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 management of the Library and the committee consists of the Vice-Chancellor of the University as the Chairperson and the Librarian as the Member-Secretary. All Deans and nominees of the Academic Council and two students are also members of the Committee.

## OPENING HOURS

The Library is open from 9 am–12 midnight on all working days and from 10 am to 9.00 pm. on Saturdays and Sundays.

## RESOURCES OF THE LIBRARY

Books	85711
Books added during (2016-2017)	8290
Journals (Print)	212
E-Journals	10360
Direct Purchased	1702
Through e-ShodhSindhu Consortium	7523
Through DBT e-Library Consortium (DeLCON)	1135
Back volume of journals	9616
Online Databases	41
Theses	595
Dissertations	1330
CD	2559
VCDs	81
VHS Cassettes	36
Newspapers/Magazines	10
Manuscripts	32

## LIBRARY SERVICES

The Library provides the following services:

- 365 days 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
- Online Document Delivery Service
- Document delivery service (DELNET, JCCC)
- Separate reading facility for Children
- Reprography services (outsourcing)
- Library & Information Services to outsiders on request
- Plagiarism check

## VISITORS TO THE LIBRARY (2017-2018)

Visitor Category	Students	Research Scholars	Faculty members	Staff	Outsiders	Total
Average daily visitor	409	31	09	5	7	461

## DEVELOPMENTAL ACTIVITIES IN THE LIBRARY

The following developments took place during 2017-2018.

- **Digital Resource Centre (DRC):** Established new Digital Resource Centre with 40 computer system for the users.
- **New Reading Hall:** New reading hall for research Scholars and faculty members was created and one group discussion room has been setup for the users for discussion purpose.
- **New Reference Section:** A separate reference and special collection section is established for the users.
- **CD Library Catalogue:** Designed and developed online CD catalogue database through KOHA open source software.
- **Library QR Code:** For access of Central Library RQ Code is introduced for mobile computing library.
- **Children's Library Corner:** Children's Library Corner has been renovated with added 1100+ books for children.
- **Physically Impaired Section:** Setup multimedia Lab with Braille Embosser, Tactile Reader & Braille keyboard. The system enables visually impaired to browse internet using minimum key combinations.



Prof. Bijoy Boruah, Department of Humanities and Social Sciences, IIT Guwahati has inaugurated the Section in the presence of the university fraternity in the Central Library.

#### **SEMINAR/WORKSHOP/SYMPOSIA/INVITED LECTURES ORGANIZED BY THE LIBRARY**

The following events were organized during 2017-2018.

##### **User Awareness Workshop on Web of Science and EndNote**

Central Library, Tezpur University organised a User Awareness Workshop on Web of Science and EndNote on Wednesday 28 February, 2018 at the Conference Hall, Central Library.

##### **Library Orientation Program**

Central Library conducted department wise Library Orientation Programme for the newly admitted students, research scholars during 01-14 August, 2017. The main objective of the programme was to introduce the students to the library facilities, resources, services and library techniques and to motivate them to be a regular user of the library.

##### **Librarian's Day Celebration at Central Library**

National Librarians' Day was celebrated at Central Library on 12 August, 2017 on the occasion of the birthday of S. R. Ranganathan, who is considered to be the father of Library Science in India.

##### **Walk to the Library Programme**

The Central Library conducted the annual Walk to the Library Programme on 28 July, 2017. Tezpur University annually organizes 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 amongst the students.

##### **Workshop on Web of Science and EndNote**

The Central Library organised a Workshop on *Web of Science and EndNote* on Tuesday 29 August, 2017 in the Conference Hall, Central Library under the information literacy programme. The main objective of the workshop was to create awareness and uses of Web of Science. It also covered citation analysis and h-Index of authors & institutions and how to use EndNote as a reference tool in research.

#### **PUBLICATIONS**

##### **In National and International Journals/Conference Proceedings/ book Chapter**

Eqbal, M. *Improving Library Programmes & Services in TQM Perspective*. In *Emerging Trends and Human Resource Management in Library and Information Centres*. ISBN:978-93-81893-11-1 (Shankars Book Agency Pvt. Ltd., New Delhi, 2017) 29-36.

Eqbal, M. *Knowledge without Borders: An Initiative of Open Courseware Worldwide for Dissemination of Knowledge*. In *Knowledge Generation, Discovery, Sharing and Networking in 21st Century*. ISBN: 978-81-8329-876-6 (Shree Publishers & Distributors, Delhi, 2017) 138-153.

Das, J. M. *E-Resources and Services of Central Library Tezpur University: A Case Study*. In *Expanding Digital Footprints: Role of Libraries and Information Centres*. ISBN: 978-81-934825-0-6 (Asian Library Association, New Delhi, 2017) 149-155.

Talukdar, G. C. and Gohain, A. *Trends in acquiring knowledge through web resource: a study among the research scholars in the school of engineering Tezpur University*. In *Recent Trends in Academic Libraries*:

*issues and challenges*. (eds Roy, S and Borthakur, J) ISBN NO-978-9381563-694. (Global Publishing House India, Visakhapatnam, 2018) 159-177.

Borkakoti, R, Gohain, A., and Saikia, M. *Use and user's satisfaction on online public access catalogue (OPAC) service among the Research Scholars of Tezpur University: a survey*. In S. Brahma, P.K. Deka and I, Singh, I (Eds.). 2017.

Gohain, A. and Borkakoti, R. 2017. Awareness and Use of Electronic Information Resources among the Research Scholars of Tezpur University: a Survey. In Thakuriya, J. (ed.). *Modern Trends and Services of Libraries in Digital Era*. Nagaon: Central Library, Dr. Birinchi Kumar Barooah College.

#### **TRAINING/WORKSHOP/CONFERENCE ATTENDED**

Das, J. M. and Sarma, D. *attended a one week KOHA program* New Delhi: NISCAIR, 18-22, June, 2018.

Gogoi, D. K. (SPA) and Sarma, R. K. , (LA) *attended six days KOHA Training Program* Ghaziabad: Raj Kumar Goel Institute of Technology, 11-16 December, 2017.

M Eqbal attended the 1st International Conference on Transforming Library 2017 as a resource person, at Central Institute of Technology Kokrajhar, BTC, Assam, India, July 8-10, 2017.

M Eqbal attended the National Workshop-Cum-Training Program on Application of Cloud Technology in Library and Information Center (NW-ACTL-2018) and delivered a lecture, Application of Open Source Software in Libraries: with special reference to Cloud Computing Environment, Assam University, Silchar, March 26-30, 2018.

Sahoo, S attended *National Conference on ETD-2017 and training on Shodhganga* Gandhinagar: INFLIBNET Centre, 13-15 December, 2017.

#### **Editorial Board**

M Eqbal, nominated as member of editorial board, *Professional Journal of Library and Information Technology*, Ghaziabad.

M Eqbal, nominated as member of Editorial Advisory Board in *TKM International Journal of Multidisciplinary Research (TIJMR)*, Kerala

#### **Future Plans**

- Design and Develop Subject Gateway
- RFID implementation
- Remote login access of E- Resources
- Establishment of separate competitive examination section (CES)
- Design and develop Children Library Portal.
- Establishment of Manuscript archival section / museum
- To organize workshops, seminars and conferences in the library and information science field.
- Developing the physically impaired section.

#### **THE PERSONNEL OF THE LIBRARY**

##### **Librarian**

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**MTS**

D Ahmed

D Bhuyan

Kanaka Das



# CENTRE FOR INCLUSIVE DEVELOPMENT

## THE CENTRE

As provided in the Tezpur University Act 1993, one of the prime objectives of the University is to pay special attention to the weaker sections and take appropriate measures for their improvement. The Centre for Inclusive Development takes care of such activities within the University and also outside it. 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 those under Equal Opportunity including remedial and supportive programmes, employability enhancement programmes, career counseling and 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 makes efforts for their development by sharing various 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	25
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

## PUBLICATIONS

### In International and National Journals

Dhar, S., and Sarkar, A. Education of the Girl Child: A Study of Santhal Dominated Villages of Puruliya, West Bengal, The Indian Journal of Social Work, 78(4), 2017.

### SEMINAR/WORKSHOP/SYMPOSIA/INVITED LECTURES ORGANISED BY THE CENTRE

One Day Training Programme on Child Rights, was organized by the Centre for Inclusive Development and the Department of Law with financial support from UNICEF-Assam, on November 23, 2017.

One Day Training Programme on Human Rights, was organized by the Centre for Inclusive Development on March 26, 2018, sponsored by the National Human Rights Commission (NHRC).

### TALKS BY THE FACULTY ABROAD AND IN INDIA

R K Doley acted as a Resource Person and delivered a lecture in the National Seminar on “Problems and Rights of Girl Child in the North East India” organized by the Department of Sociology, Mizoram University, November 17 – 18, 2017.

R K Doley delivered a lecture on “Teaching Profession and Public Relations” on 24.11.2017 as a part of the Month-long Orientation Programme for new faculty members organized by the Teaching Learning Centre, Tezpur University, November 23 - December 22, 2017.

S Dhar delivered a lecture on Child Rights, in an NHRC sponsored One-Day Training Programme on Human Rights, Centre for Inclusive Development. Tezpur University, 26 March, 2018.

#### **Outreach programme organized**

- Four-day training for Tea garden managers on MIS during 20-23 June, 2017.
- Observational visit to an orphanage, Nabaprabhat Ashram, Tezpur, on November 14, 2017.
- Students of *PG Diploma in Child Rights and Governance* (PGDCRG) participated in the child protection and child rescue programme of the North East Research & Social Work Networking (NERSWN), an NGO operating in the Kokrajhar district of Assam, during December 25-28, 2017.
- PGDCRG students paid a field visit to the Army Training Camp, Balipara, Sonitpur, on February 22, 2018, and participated in a programme named “The role of Indian Army in the implementation of Armed Forces Special Power Act and Child Rights”.
- One-day special orientation workshop on the “Child budget of Govt. of Assam 2018” for the students of Napam Model High School and the PGDCRG students of CID on March 28, 2018.

#### **NOTABLE PLACEMENT**

- Advocacy in Tezpur Courts (expert in child related cases).
- Computer Operator, Circle Office, Dudnoi, Assam
- Cluster Resource Coordinator, Sarba Shiksha Abhiyan, Dhakuakhana Block, Assam.

#### **OTHER IMPORTANT ACTIVITIES /ACHIEVEMENTS OF THE CENTRE**

- Conducted two awareness camps on (1) Child protection; and (ii) Swachch Bharat Abhiyan involving the students of Napaam ME School and Amolapam village.
- 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/appeared at the Board examinations.

## 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 2017-2018.

### **Programmes Organized by the SC/ST Cell**

- Monitored admissions and recruitments of the University to ensure that govt. guidelines are strictly adhered to with regard to reservation of seats/positions for SCs and STs.
- Coordinated with the Government of Assam for Post-Matric Scholarships for SC and ST students.
- 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.
- Special programmes on employability enhancement and personality development programmes were organized in association with the Training & Placement Cell.

## THE PERSONNEL OF THE CENTRE

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M Baruah,  
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M Saikia  
Multi-Tasking Staff



# CENTRE FOR INNOVATION INCUBATION AND ENTREPRENEURSHIP

## THE CENTRE

The Centre for Innovation, Incubation and Entrepreneurship was established in September 2013 which was merged with the Entrepreneurship Development Cell (EDC) initially funded by AICTE. The objectives of the cell are to:

- Create awareness among the students of the University and the educated unemployed youths of North east India regarding entrepreneurship as a career option.
- Conduct training programmes in the field of entrepreneurial skill development
- Develop entrepreneurship related course curriculum to incorporate in management and engineering programmes
- Provide guidance and facilities to first time entrepreneurs during gestation.
- Explore the possibility of commercialization of some of the potential technologies developed by the faculty members and students of TU
- Form a Technology Development group in Tezpur University comprising enthusiastic former students of the university and thereby motivating towards self-employment

## Major facilities and equipment available

Facility	Number
Laboratory	01
TUNOVATION ( A display room for developed research items)	01

## Research projects, ongoing and new

Project Title	Funding Agency	Amount (INR)	Duration	Principal Investigator
Design of a dehulling/deseeding machine for all types of oil bearing seeds	MSME	5.20 lakh	2 years	U K Bharali and D Deka
Design, development and testing of a green fuel powered energy efficient vehicle	MSME	6.25 lakh	2 years	P P Dutta
Production of natural Antioxidant Enriched Sandesh using Single Screw Extruder	MSME	6.25 lakh	2 years	K K Dash
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	M K Hazarika
Portable peripheral nerve testing instrument	MSME	5.90 lakh	2 years	M Bhuyan
Polluted Air Purification Machine	MSME	2.50 lakh	2 years	P Laskar
Low cost and user friendly portable Lift for home – for elderly person and patient	MSME	6.25 lakh	2 years	U K Bharali
Development of a cost effective, novel antithrombotic anticoagulant herbal drug and	Biotechnology Industry	49.00 lakh	18 months	A K

standardization of its biomarker assisted quality control	Research Academia Council (BIRAC), Govt. of India			Mukherjee
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#### THE PERSONNEL OF THE CENTRE

##### Head

S Roy, PhD (Tezpur)

Associate Professor, Department of Electronics and Communication Engineering

E-mail: xoumik@tezu.ernet.in

##### Office Staff

U Roy

UDC

# COMPUTER CENTRE

## THE CENTRE

The University has a well-equipped Computer Centre (CC) with latest configured Desktop Personal Computers (PCs) spread over three units of laboratories supported by high-end servers and a host of latest software packages. The resources procured through the CC is used mostly for computational works & practical courses and at times for skill tests, online interviews, workshops, etc.

The ICT-enabled Campus of the University is well supported by the Computer Centre. It acts as a support system for the University Community in the form of Hardware, Software and Network related activities. The extent of Local Area Network (LAN) is spread throughout the campus and have been augmented for 10Gig connectivity with Optical Fiber Cable (OFC) and high speed Switching Network Devices. A robust state of the art Core Switch have been included into the system.

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 in-house by the CC Staff are used extensively in automation aspect of Administration as well as in Academic Departments.

Other important services rendered by the CC are 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).

The much awaited *Campus Connect WiFi* Project launched by the MHRD was operational from August 2017. Currently there are over 4000 users enrolled into the system comprising of Students, Faculty members and Staff. The WiFi services are fully maintained and managed by M/s RailTel Corporation of India Ltd. with dedicated onsite engineers.

## SERVICES PROVIDED BY THE COMPUTER 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
- Organizing practical sessions for various workshops and refresher courses of various Academic Departments.
- Organizing training programmes for the University 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.
- 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 administration and others sections of the University.
- Software maintenance Services.
- Providing presentation assistance in the auditorium and conference halls.
- EPABX system administration and maintenance.
- IP CCTV Surveillance Management.

#### Academic programmes

Name of the programme	PG / UG	Duration
DOEACC 'O' Level Diploma	UG	1 Year
DOEACC 'A' Level Diploma	UG	1 Year

#### Student intake

Programme	Student Intake
DOEACC 'O' Level Diploma	20
DOEACC 'A' Level Diploma	20

#### Major facilities and equipment available

##### Equipment

SL	Particulars	Hardware (Make/Model)	Qty
1	Video Conferencing System	Polycom 8000 Series	1
2	VoIP Telephony Server with 1200 Extension capacity	Avaya S8500 with Avaya Media Gateways G650 (2Nos), G450(2Nos), G700(5Nos), G430(2Nos)	1
3	Core Switch with 64 10G Ports	Cisco C6807-XL	1
4	Distribution Switch with 32 10G Ports	Cisco WS-C3850-24XS	16
5	Access Switches	Cisco WS-C2960X-24TD-L	80
		Extreme X350 48T	56
		Extreme X350 24T	19
		Allied Telesis AT-x510L-28GT	11
		Allied Telesis AT-x510L-52GT	3
		HP 2520G	9
10	Firewall	Huawei Eudemon 200E-X7	1
11	Router (NKN)	Cisco ASR 1000	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	Dell PowerEdge R730xd	CentOS 6.4/ Sendmail, Bind
3	Proxy/NAT/Firewall Server	Dell PowerEdge R730xd	CentOS 6.4/ Squid Proxy 4.0
4	Email Storage Server	Dell NX 3220	Windows Storage Server 2012 R2
5	Proxy Storage Server	Dell NX 3220	Windows Storage Server 2012 R2
6	Aruba NMS Server	HP / DL-380G5	CentOS/Aruba Airwave
7	Oracle 10g Database (old)	HP / DL-380G5	Windows 2003 Server/ Oracle 10g Suite
8	Oracle 10g Database	IBM/X3560	Windows 2008 R2 Server/ Oracle 10g DB
9	Application Server	IBM/X3560	Windows 2008 R2 Server/ MySql-XAMPP
10	File cum Kaspersky Antivirus Admin Server	HP ML350 G5	Windows 2003 Server/ Kaspersky Total Space Security Admin
11	File Server cum Programming	HP DL 180G5	Redhat Enterprise Linux ES 4.0/ Open Source
12	Video Streaming Server with Storage	IBM/X3650 + IBM/DS3524	Windows 2008 R2 Server/ Adobe Media Server 5
13	Web Server	IBM/X3560	RHEL 6/Apache

## 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./Windows 10 Pro. Desktops) Laser Printer =2 Scanner = 2 Projector =1
Unit-1	Computer Centre-Cluster-1 (SoE Complex)	Terminals = 100 (Core i5 / Windows 10 Pro. Desktops) Laser Printer =1 Scanner = 1 Projector = 1
Unit-2	Training Room (SoE Complex)	Terminals = 12 (Core i5 / Windows 10 Pro. Desktops) Projector = 1

## Software Subscriptions

SN	Packages	Renewal Period
1	Microsoft Campus Agreement	Yearly
2	Kaspersky Total Space Security	Yearly

### OTHER IMPORTANT ACTIVITIES OF THE CENTRE

- Campus Connect WiFi Project (MHRD Initiative) started its operation since August 2017.
- The Campus backbone network have been upgraded from 1G to 10G.
- A new set of Email & Proxy Server started operating since June 2017.
- The Computer Centre Cluster-2 located at the SoE Complex have been augmented to 100 PC lab from 68PC lab.

### THE PERSONNEL OF THE CENTRE

#### Head

S Saharia, PhD (Tezpur)

Associate Professor, Department of Computer Science & Engineering

*Specialization/Areas of Interest:* Pattern Recognition, Image procession & Machine Intelligence

E-mail: sarat@tezu.ernet.in

#### Technical Staff

##### Computer Engineer

D K Sarma, MS (Tezpur)

*Specialization/Areas of Interest:* Computer Networks and Security

E-mail: dhiraj@tezu.ernet.in

##### Junior Programmer

D C Choudhury, MCA (Tezpur)

##### Senior Technical Assistant

A K Das, Diploma in Engg. (CSE)

##### Technical Assistants

M Baruah, Diploma in Engg (CSE)

N K Deka, Diploma in Engg. (Electronics & Telecommunication)

P Borah, DOEACC-A Level, MS(IT)

R Choudhary, Diploma in Engg (CSE), CCNA

##### Other Support Staff

Multi Tasking Staff: 03

EPABX Technicians: 01 (Contractual)

Part-time Student Assistants: 05

# ENGINEERING CELL

The Engineering Cell of the university was established in March 1995. The Cell develops and maintains the infrastructure in the University campus, covering an area of about 262 acres of land. The following are the major duties and responsibilities entrusted on the Engineering Cell:

1. Allotment and execution of construction projects involving civil, electrical, water supply and sanitary works
2. Maintenance and repairing of buildings and roads
3. Maintenance of power supply to the university campus
4. Maintenance of water supply to all the buildings including hostels and canteens
5. Preparing of agenda notes and writing minutes of Building Committee meetings
6. Maintenance and development of the University campus.

## CONSTRUCTION ACTIVITIES

The following construction activities were accomplished during 2017-18.

1. Construction of 50 m×21 m×1.80 m Swimming Pool
2. Construction of 2-storied RCC building for Teaching Learning Center(TLC)
3. Construction of 04nos. of Bicycle stand and a Bus Stop Shed.

## WORKS DONE THROUGH TENDER PROCESS

The following projects are expected to commence shortly:

1. Construction of RCC 3storied 100 capacity SC Girls Hostel
2. Renovation of Academic Building No. I & II

## 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 1500 KW (1.5MW) 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 2017-18, the total hours of interruptions in supply of power to the university was 233.30 hours. Out of this maintenance shut down availed by the university was 12 hours, which was rather insignificant considering the present power crisis in Assam.

## WATER SUPPLY

Four deep tube wells, each 102 meters deep, associated with submersible pumps were installed in the University campus to access ground water. The treatment plant consisting of aretor, flush mixture, sedimentation tan, filter unit, chlorination, underground clear water was constructed for proper treatment of raw water.

Two overhead reservoir ( OHR) of capacity 3.0 lakh liter and 3.50 lakh liters were constructed to store treated water . Water from the OHR reaches the consumer points through a pipe-line network under the gravity flow.

The present requirement of water in the university campus is more than 9.00 lakh liters per day . The demand is likely to increase with the increase of new Academic Buildings , Hostels and Residential Buildings. There was no instance of interruption in supply of treated water during the concerned year.

#### **PROPOSALS OF THE YEAR**

Planning and designing of the following projects have been taken up and construction works of these projects are awaited as these are placed under HEFA

1. Lecture Hall complex-I for School of Engineering and School of Management Sciences
2. Lecture Hall complex-II for Schools of Humanities & Social Sciences, Education, and Sciences
3. RCC 4 storied Academic Building for the Department of Physics
4. RCC 4 storied Academic Building for the Department of Electrical Engineering
5. RCC 4 storied Academic Building for the Department of Commerce
6. RCC 4 storied Academic Building for the School of Law
7. RCC 4 storied Academic Building for the School of Design
8. RCC 4 storied 500 capacity Boy's Hostel
9. RCC 4 storied 500 capacity Girl's Hostel
10. RCC 3 storied 100 capacity International Hostel
11. Type-C Residential Building
12. Type-D Residential Building
13. RCC 2 storied 120 capacity Security Barrack
14. RCC 2 storied Animal House for Department of MBBT
15. RCC 3 storied Working Women Hostel

#### **THE STAFF OF THE CELL**

##### **EXECUTIVE ENGINEER**

R R Hazarika, BE (REC, Silchar)

E-mail: rrrhz@tezu.ernet.in

##### **ASSISTANT ENGINEER**

J C Nath (Civil)

G Kalita (Electrical)

##### **JUNIOR ARCHITECT**

Rashmi Dutta

##### **JUNIOR ENGINEER**

D Borkotoki

S Goswami

S Talukdar

D Kalita, Assistant

T Das MTS



# HEALTH CENTRE

## THE CENTRE

The Health Centre of Tezpur University has been functioning since 1995. It provides health care services to the students, faculty members, staff and their families. At present there are over 5000 beneficiaries of the Health Centre which also include people involved directly or indirectly with the University.

## SERVICES /FACILITIES AVAILABLE

The Health Centre offers OPD services but ten indoor beds are also available to provide initial care to the indoor patients, 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- From 10 AM to 12 NOON		

One Medical Officer is always available for 24 hrs 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 second ambulance is also available for the PWD candidates to attend their classes.

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.

An Autoanalyser (fully automatic) and a Hormone Analyser (Mini-Vidas) are available for routine investigations. Ultrasound scanning, ECG and X-ray facilities are also available at the Health Centre for the benefit of the University community. We also keep a set of appliances for person with disabilities.

Visit by Specialists:

The University has engaged Specialists of different disciplines (Paediatrics, Obstetrics and Gynaecology) who visit the Health Centre on different days of the week on regular basis for the benefit of the University community.

A Psychiatrist from LGBRIMH also visits the University regularly for offering counselling on stress related problems. A Sonologist visited the health centre once a week for ultrasound scanning till January, 2018. A Physiotherapist visits the health centre twice a week for offering physiotherapy to the differently abled students as well as other patients.

## Important activities

- 1) The Medical Officers visit the hostels and canteens periodically to assess the prevailing hygiene of the dining hall, the drainage system and the surroundings in order to prevent the outbreak of waterborne diseases among the boarders.
- 2) Annual Health Checkup programme for employees was conducted in the current year which started from 16/10/17.
- 3) Fogging in the campus was done on 04-08-2017 to prevent outbreak of mosquito borne diseases.
- 4) Pulse Polio Immunization camps were organized on 02-04-17, 28-01-18 and 11-03-18 in the campus as per directive of the Govt.
- 5) A health camp was organised at Orang national park on 03-01-18.
- 6) Blood donation camps were also organized on different occasions.
- 7) A BMD test was conducted on 19-03-18 for the benefit of the University community.

**Other activities:**

- 1) A health camp was organized at Napaam MV school during this period for the benefit of the students.
- 2) A lecture cum demonstration was given to PGDT students.

**THE PERSONNEL OF THE CENTRE**

**Chief Medical Officer**

Jonali S. Goswami, MBBS, DLO

**Medical Officers**

P K Saharia, MBBS

S K Yadav, MBBS (On Contract)

**Nurse**

Eliza H. Barla, GNM

Amrita Purty, GNM

**Pharmacist**

P Baruah, D.Pharm.

**Lab. Technician**

A Baruah, BA, CMLT

Niramoni Das, ANM

**Radiographer**

H Debnath, DMRT (On Contract)

M K Saikia

J Rajbongshi

MTS

# 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 the Horticulture Section looks after the entire horticultural/ landscaping activities under the supervision of a Campus Horticultural Committee with a teacher as Coordinator. He is assisted by two supervisors along with 28 daily wage labourers and a tractor driver. The annual horticultural activities during the concerned period are as follows:

## PLANTATION PROGRAMMES

A total of 540 seedlings of different ornamental plants/shrubs, fruit trees and medicinal plants etc. were planted in different parts of the University campus, which include the Tezpur University Botanical Garden, Administrative Building, Community hall, Takshashilla Vidyapeeth, the garden near a waterbody, Kendriya Vidyalaya, Cafeteria, Guest House, Health Centre, Shopping complex, VC's residence, Auditorium, Library, Additional plot, Sophisticated Analytical Instrumentation Centre, HSS Building, School of Engineering, Academic Building II, Dept. of Energy, Dept. of Chemical Science, Dept. of Environmental Sciences, School of Management Science, School of Engineering, plot near the entrance gate, the roads of residential colonies etc.

## NEW DEVELOPMENTAL WORK

The field (about 4.5 bighas) located in the School of Engineering premises was developed to a levelled area with grass after ploughing, laddering and removing of weeds.

The area (about 0.29 bighas) located at the Eastern side of Quarter No. B-16 was ploughed, cleaned, levelled and beautified by plantation of different ornamental plants and shrubs.

## MAINTENANCE OF THE EXISTING TREES

Maintenance of all existing earlier planted trees (like road side and other plantation) other than garden area was done with cleaning, fertilization and watering etc.

## MAINTENANCE OF THE EXISTING GARDENS

Essential maintenance work on all the flower gardens which are located in the front of the Administrative Building, the Auditorium, the Guest House, the Library, the Community Hall, the Health Centre, the Student Activity Centre, Dept. of Energy, Dept. of Chemical Science, Dept. of MBBT, Dept. of Environmental Sciences, Dept. of Mass Communication and Journalism, HSS Building, Dept. of Business Administration, Academic Buildings I and II, School of Engineering, VC's residence, Garden near waterbody, 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, Kendriya Vidyalaya, the Children Park, Botanical Garden, Citrus 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 950 in number) placed in the Administration Building, the Academic buildings, the Library, the 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 VERMICOMPOST UNIT

A Vermicompost Unit has also been running successfully and has fulfilled the need of organic manure to some extent. About 19.35 quintals of vermicompost 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, cleaning (by jungle cutting) of different parts of the University campus like surroundings of the Administrative Building, different Offices and Academic Buildings, Library, Auditorium, Guest House, Chandraprabha Saikianee Bhavan, Community hall, Sports Complex, Shopping Complex/Day Care Centre, Children park, Takshashilla Vidyapeeth, Kendriya Vidyalaya, Car parking area and both sides of different roads including boundary footpath etc. were done from time to time.

#### **THE PERSONNEL OF THE SECTION**

##### **Coordinator**

U K Pegu, PhD

Associate Professor, Department of Mass Communication and Juranalism

E-mail: [uttamkp@tezu.ernet.in](mailto:uttamkp@tezu.ernet.in)

##### **Asstt Horticulturist**

G Hazarika, MSc (AAU)

E-mail: [gin@tezu.ernet.in](mailto:gin@tezu.ernet.in)

## INTERNAL QUALITY ASSURANCE CELL

The Tezpur University Internal Quality Assurance Cell (TU IQAC) is engaged in a series of activities required to foster the spirit of quality among the members of the University Community. The IQAC carried out verification of applications for the promotion of faculty members under CAS as per norms specified by the UGC. Further, as per the mandatory requirement of National Assessment and Accreditation Council (NAAC), IQAC prepares the Annual Quality Assurance Report (AQAR) based on the inputs received from all the Departments/Centres/Cells/Offices of the University.

Highlighted below are some of the notable activities during the period 2017-2018:

1. IQAC Committee meets to deliberate on some important issues on 04 August 2017. Besides other issues, the formation and functioning of Quality Circles (QC) is emphasized in the meeting.
2. A *Faculty Induction Programme* is organized for the new faculty members of the University during 21 to 22 September 2017. The faculty members are sensitized on various aspects of teaching-learning, evaluation and research.
3. The philosophy and objectives of *Quality Circles* is deliberated in a meeting held on 04 October 2017.
4. *Assessors' Orientation Programme (AOP)* on Revised Accreditation Framework of NAAC is jointly organized by National Assessment and Accreditation Council (NAAC) and TUIQAC during 14 to 15 December 2017. The AOP is attended by 40 delegates comprising of Vice-Chancellors, Professors of Universities and Principals of Colleges.
5. The need for sensitization of faculty/staff on *Revised Accreditation Framework of NAAC* is assessed through consultations with the Deans and the Registrar on 20 February 2018.
6. IQAC Committee meets on 14 March 2018. Vice-chancellor, Professor V K Jain, chaired the 1<sup>st</sup> meeting of the year 2018 where several important matters are deliberated.

### THE PERSONNEL OF THE CELL

#### Director

D C Baruah, PhD (PAU)  
Professor, Department of Energy  
E-mail: baruahd@tezu.ernet.in

#### Data Entry Assistant

S Mahanta  
E-mail: santanu@tezu.ernet.in

## **INTERNATIONAL OFFICE**

The International Office of Tezpur University was established in February 2013. The International Office is presently manned by a part-time Director, Professor PK Das, Dept. of English and Foreign Languages, and a part-time Deputy Director, Dr Rupak Mukhopadhyay, Assistant Professor, MBBT. The International Office handles the admission of international students, organizes talks and seminars on overseas education and research opportunities and facilitates collaboration between the university and institutions abroad.

### **ACTIVITIES**

An MoU was signed with Avans University, Netherlands on December 16.

An MoU was signed with National Chung Hsing University, Taiwan on February 22.

### **THE PERSONNEL OF THE OFFICE**

#### **Director**

P K Das, PhD (Gauhati)

Professor, Department of English and Foreign Languages

E-mail: [prsntdas@tezu.ernet.in](mailto:prsntdas@tezu.ernet.in)

#### **Deputy Director**

R Mukhopadhyay, PhD (Jadavpur)

Assistant Professor, Department of Molecular Biology and Biotechnology)

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# SOPHISTICATED ANALYTICAL INSTRUMENTATION CENTRE

Instrumental methods of analysis form an indispensable aspect of Research and Development. Tezpur University has a number of departments and centers working on areas which require sophisticated analytical equipment. 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 within the North East region and even beyond, as many of them do not have the resources to procure and maintain sophisticated analytical instruments. The Centre also provides demonstration of instruments and their utility in different fields of research to the graduates/non-graduate students of colleges of North-East and even beyond.

The SAIC was established in 2010 with two equipment, namely, High-performance liquid chromatography (HPLC) and Gel permeation chromatography (GPC). Now SAIC boasts of thirty- nine equipment. The Centre also intends to install other sophisticated equipment like XPS, HR-MS, Confocal Microscope etc.

## CENTRE MANAGEMENT COMMITTEE

The Centre Management Committee (CMC) composed of faculty members from different departments chaired by Dean R & D is the apex body for the management of sophisticated instrument facilities in an efficient way to support the research community. Following are the members of the CMC:

1. Prof. A. K. Mukherjee, Chairperson, Dean, R&D
2. Prof. A. Kumar, Convener, Head, SAIC
3. Prof. Charulata. Mahanta, Dean, SoE
4. Prof. A. J. Thakur, Dept. of Chemical Sciences
5. Prof. K. P. Sarma, Dept. of Environmental Sciences
6. Prof. D. Deka, Dept. of Energy
7. Prof. N. Karak, Dept. of Chemical Sciences

## Details of Equipment under SAIC

Sl. No.	Name	Model/Date of Installation
1	Transmission electron Microscopy (TEM)	Model: TECNAI G2 20 S-TWIN (200KV) Date of Installation: 22.10.2013
2	Single crystal XRD	Model: AXS SMART APEX-I Date of Installation: 04.07.2012
3	Powder XRD	Model: D8 FOCUS Date of Installation: 02.11.2012
4	BET (Surface and Pore size analyzer)	Model: NOVA 1000E Date of Installation: 15.06.2011
5	Raman Spectrometer	Model: RENISHAW BASIS SERIES WITH 514 LASERS Date of Installation: 12.10.2012
6	Atomic absorption spectrometer (AAS)	Model: AAS-ICE 3500 Date of Installation: 18.09.2012
7	High Performance Liquid Chromatography (HPLC)	Model: UV VISIBLE DETECTION-2489,

		REFRACTIVE INDEX DETECTOR-2414, HPLC PUMP-515 Date of Installation: 08.06.2011
8	GPC (Gel Permeation Chromatography)	Model: UV/V VISIBLE DETECTION-2489, REFRACTIVE INDEX DETECTOR-2414, HPLC PUMP-515 Date of Installation: 09.06.2011
9	Scanning Electron microscopy (SEM),	Model: JSM 6390LV Date of Installation: 18.11.2008
10	Photoluminescence	Model: LS-55 Luminescence Spectrometer Date of Installation: 13.06.2008
11	UV-VIS	Model: UV 2450, 206-55672-34 Date of Installation: 13.06.2008
12	NMR (multi-nuclei)	Model: ECS-400 Date of Installation: 08.04.2010
13	Thermal Analyzer (TGA-DSC)	Model: TGA-50 & DSC-60 Date of Installation: 26.05.2006
14	CHN analyzer	Model: 2400 SERIES 2 Date of Installation: 24.09.2006
15	Gas Chromatography –Mass Spectrometer	Make: PERKINELMER, USA Model No.: CLARUS 600 Date of Installation: 04.02.2009
16	Gas Chromatography	Make: Chromatography & Instrument Company, India Model: GC2010 Date of Installation: 22.01.2011
17	Fourier Transform Infrared Spectrometer	Make: Perkin Elmer Date of Installation: 29.01.1998
18	Inductively Coupled Plasma Optical Emission Spectrophotometer	Make: Perkin Elmer, USA Model No.: optima 2100 DV Date of Installation: 04.11.2009
19	DNA Sequencer	Make: Applied Biosystem Model No.: 3130 Genetic Analyzer Date of Installation: 05.07.2010
20	Fluorescence Spectrometer	Make: Perkin Elmer Date of Installation: 12.05.2010
21	Bomb Calorimeter	Make: MS. CHANGSHA KAIYUAN INSTRUMENTS CO. LTD., CHANGSHA, CHINA Model: SE-1AC/ML Date of Installation: 02.04.2008
22	Oxidation Stability Apparatus	Make: METROHM, USA Model: RANCIMAT 743 Date of Installation: 05.03.2008

#### Services provided by SAIC

The center provides the following services:

- Analysis of sample as per user defined protocol
- Instrument facility is available for internal as well as external user also.



- 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.
- Demonstration and presentation on the use and application of various spectroscopic and analytical techniques for students, teachers and scientists from different Laboratories, Universities and Industries.

#### Visitors to the centre

Visitor Category	Internal User	External user	Total
Average visitor/day	200	20	220

#### Future/Developmental Plans

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 for research and development in science and technology.

#### Plans to procure the new Equipment

Apart from providing the research facilities as well as other related activities in this domain to in-house and others, with a view to augment the research activities, the Centre has drawn up a plan to procure the following equipment based on demand of user community:

- Confocal Microscope
- HRMS (High Resolution Mass Spectrometer)
- GC-MS (Gas Chromatography Mass Spectrometer)
- XPS (X-Ray Photoelectron Microscope)
- AFM (Atomic Force Microscope)

#### Facilities/services extended to the User community

- The central facility is extending the analytical facilities to the targeted user groups effectively. Moreover, the Centre is managing an inventory of analytical gases and liquid nitrogen to ensure a reliable and regular supply of these to the university users.
- Keeping in view the requirements of users, a *glass blowing workshop* is already being set up as part of the central facility under SAIC. Different types of laboratory glass apparatus are repaired in this facility and new apparatus are also designed as per user requirements.
- The Centre also provides power point presentation of instruments operation as and when required with due permission. It is worth mentioning that we have presented the power point presentation of operation/importance in research etc of all facilities under SAIC in the Faculty Development Program organized by Tezpur University under School of Engineering. We also organized glass blowing workshop program for school level students.

## THE PERSONNEL OF THE CENTRE

### **Head, SAIC**

A Kumar, PhD (IIT-Kanpur)  
Professor, Department of Physics  
E-mail: ask@tezu.ernet.in, asktezu64@tezu.ernet.in

### **Technical Officer**

A Hazarika  
E-mail: anilh@tezu.ernet.in

### **Technical Assistant**

P Kurmi  
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T R Nath

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N K Gogoi

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### **Glass Blower**

P Bharali  
E-mail: pankaj@tezu.ernet.in

## Programmes organized by the University

1. **25<sup>th</sup> Foundation Day and Inaugural Silver Jubilee Celebration of Tezpur University:** Amidst ecstatic fervor and enthusiasm, Tezpur University observed its 25th foundation Day and inaugurated the year long (January 21, 2018- January 21, 2019) Silver Jubilee celebrations on January 21, 2018. The event started with hoisting of the University's flag by the Vice-Chancellor (acting) of Tezpur University, Prof. Madan M Sarma in the presence of other dignitaries and guests. Founder Vice Chancellor of the University, Prof. Kishori Mohan Pathak inaugurated the Silver Jubilee celebrations. Former Pro Vice-Chancellor of the University, Prof. Amarjyoti Choudhury delivered the Silver Jubilee oration. Mr. Utpal Bora, CMD, OIL and chief guest of the occasion released the Silver Jubilee Celebrations Calendar and delivered the Foundation Day Oration.
2. **XV Convocation of Tezpur University:** The XV Convocation of the University was held on December 21, 2017 where 64 research scholars received their PhD degrees, 679 and 248 students were awarded the Masters and Bachelor degrees respectively. In addition, PG Diploma was awarded to 45 students, and 22 degree and diploma under the Open and Distance Learning Programmes were also given away. Prof. Anil Kakodkar, former Director of BARC, former Chairman, Atomic Energy Commission and Secretary to the Government of India, Department of Atomic Energy, was the Chief Guest, while Hon'ble Governor of Assam Prof. Jagdish Mukhi presided over the Convocation as the Chancellor of the University.
3. **Resonance - the Festival of Ideas:** As part of the year long Silver Jubilee Celebrations (January 21, 2018- January 21, 2019), the University organised an event titled "Resonance: the Festival of Ideas" where noted actors, Seema Biswas and Boloram Das along with novelists Dhruva Hazarika and Ankush Saikia were present and interacted with the students and participated in a lively panel discussion.
4. **XIV Convocation of Tezpur University:** The 14<sup>th</sup> convocation of the University was held on April 07, 2017, where Professor Goverdhan Mehta, former Vice Chancellor, Hyderabad University and a lead scientist in the area of Chemical Sciences graced the occasion as Chief Guest and delivered the Convocation address. Shri Banwarilal Purohit, Governor of Assam and the Chancellor of the University presided over the Convocation ceremony and conferred the student's degrees, diplomas and medals. During the Convocation, 56 Doctoral degrees, 618 Master's degree, 251 Bachelor's degree, 31 diplomas were conferred on the students' who passed out in 2016. In addition, 30 students were honored with gold medals, for being topper in their concerned subjects. The "T & I Best Post Graduate Award" and "Best Graduate Award" along with "Polymer Science Award" were also conferred during the Convocation. Overall, 962 students were conferred degrees on the occasion.
5. **Power Purchase Agreement for 1 MW Scale Solar Power Plant:** The University has signed a Power Purchase Agreement with M/s Arunachal Pradesh Power Corporation Pvt Ltd for Design, Manufacture, Supply, Erection, Testing and Commissioning including Warranty, Operation & Maintenance of 1MW rooftop solar photovoltaic system at Tezpur University Campus. The agreement was signed after, Solar Energy Corporation of India, New Delhi had approved the Tezpur University's proposal to install the photovoltaic based power plant at the University Campus, under the Grid Connected Rooftop Solar Photovoltaic Power Plant Scheme at Government Buildings.
6. **Yeh India Ka Time Hain orgnized:** The University organised *Yeh India Ka Time Hai*, a celebration of 70 years of Independence and 75th year of Quit India Movement at the University campus on September 09,

2017. A brainstorming session was organised among the students of Tezpur University on the topic: "New India 2022: Prospects and Challenges of Higher Education, on the occasion. A "Sankalp Se Sidhi" pledge and a rock performance from "Voodoo Child" were also organised.

7. **Summer camp for school students:** The University jointly with Kaliabor Sub-Divisional Administration organised a 3-day summer camp during July 16-18, 2017. The summer camp was attended by nearly 150 students from 30 different schools of Kaliabor subdivision. Various programmes and activities were organised as part of the camp, such as workshop on introduction to Robotics, Night Sky Viewing by the Astronomy Club and a virtual tour of the university. The students also interacted with Prof. Madan M Sarma, Vice-Chancellor (acting) of the university, and noted journalist Samudra Gupta Kashyap in a special session. The students also visited various departments, laboratories and the central library and got acquainted with the state-of-the-art facilities in the University.
8. **"InSCIgnis" organised on the occasion of National Science Day:** On the occasion of National Science Day observed every year throughout the country to commemorate the invention of the Raman Effect by the noted Indian physicist, Sir C.V. Raman, the University too celebrated the day with great enthusiasm and joy. This year the theme was "Science and Technology for a sustainable future" and keeping in tune with this year's theme, "InSCIgnis," Tezpur University's annual science fest showcased an array of activities ranging from experimentation and designing, astronomy exhibition, quizzes, workshops, fun events and lecture series from eminent scientists from around the globe. Apart from the lecture series, workshops and other mentioned activities, a book fair was also being organized during the event.
9. **Birth Centenary of Pandit Deendayal Upadhyay:** The University celebrated Birth Centenary of great Indian Philosopher, political scientist Pandit Deendayal Upadhyay with great enthusiasm from 06/09/2017 to 25/09/2017. The faculty members, research scholars, students, staff members of the University all participated in the centenary celebrations of the great man.
10. **International Day of Yoga:** The University celebrated the 3rd International Day of Yoga with great enthusiasm on the University campus. Various Yoga related activities, such as, demonstration and exhibition of various yoga asanas and postures, online essay competition on the theme "Yoga for healthy living", quiz competition on Yoga were held during the day. A week-long yoga camp for different age groups was also organised under the guidance of Yoga coach Mr. Pawan Kumar Sarmah and Yoga coordinator of the University, Prof Papori Baruah from June 15th to June 20th, 2017.
11. **Annual Meet:** The University organised the 21<sup>st</sup> Annual Meet with lots of enthusiasm and with a large number of participation of the students. The event started with lighting of the Olympic Torch, followed by Flag Hoisting and University song. A host of sporting/cultural activities, such as, march past competition, inter-hostel chorus competition, one act play, visual /fine arts, literary events etc were organised. The annual meet concluded with a Gala cultural Evening.
12. **Independence Day:** The University community celebrated the 71<sup>st</sup> Independence Day with a daylong programme. Prof. Madan M Sarma, Vice-Chancellor (Acting) hoisted the National Tricolour in the playground of the University. The unfurling of the flag was followed by a program of patriotic songs, dances presented by the University students and students of Taxashila Vidyapith and Kendriya Vidyalyaya, CUT.
13. **Matribhasha Diwas:** The University celebrated the *Matribhasha Diwas* (International Mother Language Day) on February 21, 2018 at the Centre for Assamese Studies, Tezpur University with great enthusiasm. An elocution competition in two languages, Hindi and Assamese was organized amongst its students. The topic

of the competition was “Importance of Mother Tongue for Mental and Intellectual Development”. Top 3 position holders in each category were awarded with cash prizes and certificates. The celebrations were also marked by a chorus performance and a one act play by the non-Assamese speaking students.

14. **Republic Day:** The University celebrated the 69<sup>th</sup> Republic Day with great fervor and joy with a daylong programme. The day started with a cycle rally by the students followed by hoisting of the National Flag in the playground of the University by the Vice Chancellor (Acting), Prof. Madan M Sarma. It was followed by a program of patriotic songs/chorus/group dance by the students of the University, Takshashila Vidyapeeth and Kendriya Vidyalaya. A friendly cricket match by the employees of the University was also played along with various other sporting activities.
15. **Health camp for Forest Guards of Orang National Park:** The University organised a day long health camp at the Rajiv Gandhi Orang National Park on 3rd January, 2018. The Camp was aimed at addressing the health issues of the forest guards as well as preparing themselves for dealing with common health issues, which they are prone to. The forest guards were also apprised of basic “Do’s and Don’ts” in facing the health challenges of working in such remote and forest environment. The team provided valuable counselling to the forest guards, provided medicines and tried to understand the challenging situation which the guards face on day today basis. A total of 78 forest guards took part in the camp. Baptist Christian Hospital, Tezpur also provided its support by deputing two nurses in the camp.
16. **Kalaguru Bishnuprasad Rabha remembered on Rabha Divas:** On the occasion of death anniversary of Kalaguru Bishnuprasad Rabha, the University organized the day on 20th June, 2017 in the Seminar Hall of the Department of Mass Communication and Journalism. Nrittacharya Sri Jatin Goswami and renowned singer Smt Durgamoyee Bora graced the occasion as Guests of Honour.
17. **Nobel Laureate lecture series organised:** A series of lectures delivered by faculty members of the University on Frontier knowledge, Imagination and Initiatives based on the works of Nobel Laureates of the year 2017 was organised during November 15-17, 2017 at KBR auditorium.
18. **Hindi fortnight:** To promote the official language of the country, Hindi, Hindi fortnight was organised at the University during September 01-14, 2017. Various competitions such as essay writing, quiz, recitation etc were organised amongst employees and students of the University.
19. **10<sup>th</sup> edition of TechXetra:** Tezpur University’s annual, national-level technical festival “TechXetra” was organised during November 3-5, 2017. The tenth edition of the technical fest exhibited an array of events ranging from robotics, technical workshops, innovative construction, lecture series delivered by eminent personalities, a captivating cultural night, gaming etc.
20. **Silpi Divas:** Like previous years, the University paid rich tributes to Rupkonwar Jyoti Prasad Agarwala by observing 'Silpi Divas', the death anniversary of, the icon of Assamese culture, on January 17 with a befitting programme organised at the University. Sri Hemanta Baruah, President, Tezpur Sahitya Sabha, graced the occasion as Guest of Honour.
21. **Rabindra Jayanti:** The University paid rich tributes to Kaviguru Rabindranath Tagore on his Birth Anniversary by observing Rabindra Jayanti at the screening hall of the Dept of Mass Communication and Journalism.
22. **Tithi of Shrimanta Shankardeva:** The death anniversary of Srimanta Sankaradev, the great social reformer, Vaishnava saint and doyen of Assamese culture and literature was observed in a befitting manner. Shri Mayur Bora, a noted writer, thinker, and a faculty of the Indian Institute of Bank Management, Guwahati delivered a talk on Srimanta Sankaradeva's relevance in present day context on the occasion.

23. **Death anniversary of Bhupen Hazarika:** The University paid fitting tribute to the legendary Bhupen Hazarika on his 6<sup>th</sup> death anniversary by organizing a cultural program at KBR auditorium of the University. Shri Kamal Kotoki, noted instrumentalist graced the occasion as guest of honour.
24. **National Education Day:** National Education Day was observed by the University on November 11, 2017 by organizing a host of activities, such as, Cycle rally, student seminar, debate, poster making competition, and essay writing on topic, Role of value education in contemporary society.
25. **Ek Bharat Shrestha Bharat (EBSB) programs:** The University organised a series of activities under EBSB, such as, blog, quiz, photography competition etc. A workshop on national integration was also organized.
26. **Assessors' Orientation Programme:** The University jointly with National Assessment and Accreditation Council (NAAC), Bengaluru (An Autonomous Institution of the UGC) organised Assessors' Orientation Programme during December 14 & 15, 2017.
27. **Vigilance Awareness Week, 2017:** The University, like previous years organised Vigilance Awareness Week to create awareness on corruption from October 27-November 04, 2017.

## The Year in Figures

### Statistics :: Employees Teaching

Employees	As on 31.03.2017	Joined during 2017-18	Left during 2017-18	As on 31.03.2018
<b>Professor</b>	<b>56</b>	<b>14</b>	<b>01</b>	<b>69</b>
<b>Associate Professor</b>	<b>45</b>	<b>07</b>	<b>11</b>	<b>41</b>
<b>Assistant Professor</b>	<b>118</b>	<b>29</b>	<b>08</b>	<b>139</b>
Total	219	50	20	249

### Non-Teaching

Employees	As on 31.03.2017	Joined during 2017-18	Left during 2017-18	As on 31.03.2018
<b>Group-A</b>	<b>36</b>	<b>02</b>	<b>00</b>	<b>38</b>
<b>Group-B</b>	<b>54</b>	<b>01</b>	<b>00</b>	<b>55</b>
<b>Group-C</b>	<b>101</b>	<b>04</b>	<b>01</b>	<b>104</b>
<b>Group-C (MTS)</b>	<b>73</b>	<b>00</b>	<b>00</b>	<b>73</b>
Total	264	07	01	270

### Statistics: SC/ST Employees, Female / Male Employees (as on 31 March, 2018)

#### Teaching:

Employees	SC	OBC	ST	Gen	Female	Male	Total
<b>Professor</b>	<b>04</b>	<b>13</b>	<b>05</b>	<b>47</b>	<b>11</b>	<b>58</b>	<b>69</b>
<b>Associate Professor</b>	<b>05</b>	<b>11</b>	<b>02</b>	<b>23</b>	<b>07</b>	<b>34</b>	<b>41</b>
<b>Assistant Professor</b>	<b>24</b>	<b>36</b>	<b>13</b>	<b>66</b>	<b>44</b>	<b>95</b>	<b>139</b>
Total	33	60	20	136	62	187	249

#### Non-Teaching:

Employees	SC	OBC	ST	Gen	Female	Male	Total
<b>Group-A</b>	<b>05</b>	<b>10</b>	<b>02</b>	<b>21</b>	<b>03</b>	<b>35</b>	<b>38</b>
<b>Group-B</b>	<b>10</b>	<b>20</b>	<b>04</b>	<b>21</b>	<b>11</b>	<b>44</b>	<b>55</b>
<b>Group-C</b>	<b>17</b>	<b>40</b>	<b>11</b>	<b>36</b>	<b>09</b>	<b>95</b>	<b>104</b>
<b>Group-C (MTS)</b>	<b>13</b>	<b>25</b>	<b>05</b>	<b>30</b>	<b>05</b>	<b>68</b>	<b>73</b>
Total	45	95	22	108	28	242	270

### STATISTICS: STUDENTS (as on 31 December, 2018)

Total	Male	Female	General		SC		ST		OBC/MOBC		PWD	
			Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
<b>3731</b>	<b>2135</b>	<b>1596</b>	<b>1093</b>	<b>862</b>	<b>275</b>	<b>166</b>	<b>136</b>	<b>149</b>	<b>605</b>	<b>407</b>	<b>26</b>	<b>12</b>

