



North-East Research Conclave

Sustainable Science and Technology

May 20-22, 2022

Organized by

Indian Institute of Technology Guwahati

&

Department of Education, Govt. of Assam

Venue: Indian Institute of Technology Guwahati



North-East

Research Conclave

Research and Development is one of the foundational pillars for holistic growth of the country which becomes more crucial for a fast-developing nation like India. However, at the same time, for such a diverse and dynamic nation as India, which treasures the diversity of distinct topographical, climatic, natural resources and economic characteristics, now requires holistic research and development approach to prosper North Eastern region. It is pertinent to understand that customized local research-based solutions are necessary to uplift the living standard of need-based society which can be further translated into universal solutions for similar problems elsewhere.

The North-Eastern Region (NER) comprising the Seven Sister States along with its only brother Sikkim, is one of the most decorated jewels in the crown of the Nation. Apart from being one of the most strategically important regions of the country, the region hosts the reservoir of extensive natural resources coupled with its exotic beauty. It presents itself as one of the uncharted horizons full of enchanting opportunities and sturdy potential, but simultaneously offers a plethora of unique challenges.

Overcoming the challenges is of utmost priority for exponential developmental growth of this region for which many educational and research organizations, both in the public and private sector has been engaged in cutting-edge research in a variety of disciplines starting from STEM, Medicine, Commerce, Economics, Business to Tourism, Infrastructure and Environmental Sustainability.

However, to infuse further pace into the already growing region of North-East India, there is an urgent need to bring all the research, innovation ideas and most importantly, the human resource onto a common platform.

Indian Institute of Technology Guwahati, since its inception, has steadily grown to be the ambassador of Research and Development in North-Eastern India. After engraving a prominent mark in educational and research sphere both nationally and internationally, IIT Guwahati expresses the desire to create the platform for the confluence of all the R&D activities in North-East India. It dreams to promote every important research being conducted across the disciplines from all the institutes in the region (Annexure I) including NITs, Central Universities, State Universities, Private Universities, State and Private Colleges, Central Research Laboratories and bring the best of the human resources to a common platform, with the ultimate goal of developing the launchpad and leading a new era of growth in North-East India through translational research activities.



North-East Research Conclave

As India marks 75 years of independence and celebrates Azadi Ka Amrit Mahotsav, Indian Institute of Technology Guwahati proposes to organize “The North-Eastern Research Conclave”.

The Mission of the proposed Conclave is:

1. To showcase the best R&D activities from all the educational and research institutions across the states of North-East India.
2. To create a common interface for interaction of academia and industry in North-East India.
3. To create an environment, conducive to development of local indigenous technologies and innovations, creating the scope and laying the foundation for entrepreneurship.
4. To agglomerate a vast talent pool, for promotion of Translational Research.
5. To help the country achieve the deliverables of the Sustainable Development Goals.

The “The North-Eastern Research Conclave” is the call of the hour and IIT Guwahati is committed to successfully organize the event to boost the R&D activities in North-East India, which is pivotal for its growth in the coming future.

The conclave will further include the discussion on the lines: Frontier in resources of NER, Harnessing of resources in NER, industrial and economic growth for faster and improvised agriculture in NER, processing and production of various functionalized sectors of NER. The research conclave will be dedicated towards comprehensive elaboration on production and processing of these inherent resources and their utilization. This conclave would ultimately yield to have a strong research-based consortium among renowned academic institutions, leading industries and policy makers. The recent innovations and development of novel technologies in the concerned domains will also be discussed for further applications in order to benefit the NER community. It offers the best platform for academia and industry (small, medium and large-scale) to showcase their expertise, products and technology innovations. The conclave is expected to benefit young students, researchers, teachers and industrialists on the focal themes with special reference to Northeast India.

The event will be held on the sprawling campus of Indian Institute of Technology Guwahati (IITG) which is situated on the banks of the majestic Brahmaputra River along with other Centrally funded Technical Institutes.



North-East

Research Conclave

Following societally relevance research areas will be focused during North-East Research Conclave:

- Agri and Rural, Cultural concepts, Technological Interventions
- Food Processing, preservation and sustainable utilization of resources
- Value-Added Products from Biomass/Bio-resource and Waste
- Natural Disaster Management Technologies
- Renewable and non-renewable energy resources
- Advanced manufacturing, cutting edge Technologies
- Health Care industries
- Electronic manufacturing clusters
- Tourism and eco-park development strategies
- Indian Knowledge systems focused towards NER
- Artificial Intelligence and Data science-based interventions
- Efficient Management of Natural Resources
- Other allied and focused sectors of NER

Proposed Activities for Three Day North-East Research Conclave:

1. Research & Innovation exhibition by North-East Researchers
2. Industry Startup show-case related to North-East
3. Interactive session between Industry and Researchers
4. Eminent talks by Policy makers, Industrialist and Academicians.

Target Participants for Three Day North-East Research Conclave:

1. Ministries/Departments of Govt. of India & North-East State Govt.
2. Research Councils, Organizations
3. Industries, PSUs, Startups & Private sector companies
4. Laboratories & Technical Institutes of North-East
5. Educational Institutes and Colleges of North-East



Research Areas: Parallel Technical Sessions:

- Advanced Functional Materials
- Advanced Semiconductors and Quantum Materials
- Agro & Food Processing Technologies
- Artificial Intelligence, Data Science based R&D Interventions
- Conservation of Biodiversity of North Eastern States
- Disaster Management
- Healthcare Research & Related Technologies
- Innovative Design for Societal Needs
- Low Cost Manufacturing Technologies
- Policies for Research & Innovations
- Research and Innovation for Sustainable Development Goals
- Sustainable Environment
- Sustainable Energy Generation and Storage
- Sustainable Transportations and Urban Development
- Teaching Learning Technologies
- Technologies for Rural Development



North-East

Research Conclave

Programme:

Day

Event

1. Inauguration of North-East Research Conclave
1. Patron(s) Meeting with Head of the Institutions/Vice Chancellors for Sensitization of R&D Ecosystem in the North Eastern states.
1. Head of the Institutions Meet for Enhancement of North-East Research Infrastructure
1. Inauguration of North-East Research & Innovation Exhibition
1. Plenary & Motivational R&D Talks by Acclaimed Researchers and Industrialists
1. Parallel Technical Sessions
Speakers: Research Scholars and Faculty members from all Universities and Technical Institutes of North-East India and East-India.
1. Cultural Program
2. Brain Storming Sessions & Panel Discussions
(Panellist: Directors/Vice Chancellors/ Senior Government Officials/Officials from Funding agencies)
Theme 1: Handholding Mechanism for Sustained Research & Innovations Among North-East Institutions
Theme 2: Harnessing Traditional Knowledge of North Eastern States
Theme 3: Conservation of Biodiversity through R&D Interventions
Theme 4: North East Disaster Management & R&D Interventions
Theme 5: Government R&D Policies for North Eastern States
Theme 6: A Road Map for Standardisation of Grass root Innovations through R&D practices
2. Parallel Technical Sessions Contd.
2. North-East Research & Innovation Exhibition Contd.
2. Industry- Academia R&D Session
Dedicated Session on North-East Industry-Academia R&D Ecosystem & related Policies;
Speakers: Top Industry Officials & Policy Makers
3. Session on Start Up & Perspective Entrepreneurs of North-East States
3. Open Floor Meeting of NE-Grass Root Innovators, Perspective Entrepreneurs with Government Officials, Head of the Institutions
3. PRESS Meet to convey what are the achieved milestones of the Conclave and how this model can work towards bettering and strengthening ties between Institutions be they academic, industry or policy.
3. Valedictory Session of North-East Research Conclave



North-East

Research Conclave

Chief Patron

Hon'ble Minister of Education **Shri. Dharmendra Pradhan**

Patron(s)

Hon'ble minister (s) of State for Education, **Dr. Rajkumar Ranjan Singh**

Hon'ble minister (s) of State for Education, **Dr. Subhas Sarkar**

Hon'ble minister (s) of State for Education, **Smt. Annpurna Devi**

Hon'ble Minister of DoNER **Shri. G. Kishan Reddy**

Hon'ble Chief Minister of Assam **Shri. Himanta Biswa Sarma**

Hon'ble Minister of Education, Assam **Shri. Ranoj Pegu**

Advisory Committee

Secretary, Ministry of DoNER **Shri. Lok Ranjan,**

Secretary, NEC council **Shri. K. Moses Chalai,**

Secretary, Higher Education, Govt. of Assam, **Shri. B Kalyan Chakravarthy**

Secretary, Govt. of Arunachal Pradesh, **Smt. Niharika Rai**

Secretary, Govt. of Mizoram, Higher Education, **Shri. Pi Esther Lalruatkimi**

Secretary, Govt. of Meghalaya, Education, **Shri. Ambrose Ch. Marak**

Secretary, Govt. of Manipur, Education(s), **Shri. P. K. Singh**

Secretary, Govt. of Nagaland, Higher Education, **Shri. Honje Konyak**

Secretary, Govt. of Sikkim, Education, **Shri. G.P.Upadhyaya**

Secretary, Govt. of Tripura, Education, **Shri. Brijesh Pandey**

Chief Coordinator, North East Research & Development Fair

Director, IIT Guwahati **Prof. T. G. Sitharam**

Co- Coordinators, North East Research & Development Fair

Director, IASST, Guwahati, **Dr. Ashis K. Mukherjee**

Director, NIPER Guwahati, **Dr. USN Murty**

Director, NEIST, Jorhat, **Dr. Garikapati Narahari Sastry**

Director, NIT Silchar, **Prof. Sivaji Bandyopadhyay**

Director, NIT Arunachal Pradesh, **Prof. Pinakeswar Mahanta**

Director, NIT Agartala, **Prof. H. K. Sharma**

Director, NIT Meghalaya, **Prof. Bibhuti Bhusan Biswal**

Director, NIT Mizoram, **Prof. Saibal Chatterjee**

Director, NIT Manipur, **Dr.Goutam Sutradhar**

Director, NIT Nagaland, **Dr. S. Venugopal**

Director, NIT Sikkim, **Prof. Mahesh Chandra Govil**

VC, Tezpur University, **Professor Vinod Kumar Jain**

VC, Mizoram University, Mizoram, **Prof. K.R.S. Sambasiva Rao**

VC, NEHU, Shillong, Meghalaya, **Prof. Prabha Shankar Shukla**

VC, Central University of Sikkim, Sikkim, **Prof. Avinash Khare**

VC, Rajiv Gandhi University, Itanagar, Arunachal Pradesh, **Prof. Saket Kushwaha**

VC, Tripura University, Tripura, **Prof. Ganga Prasad Prasain**

VC, Nagaland University, Nagaland, **Prof. Pardeshi Lal**

VC, Central Agricultural University, Imphal, **Dr. Anupam Mishra**



North-East

Research Conclave

Local Organizing Committee (IITG)

Prof. T. G. Sitharam, Director	Chairman
Prof. Vimal Katiyar, Dean R&D	Convener
Prof. Subhendu Sekhar Bag, Assoc. Dean, R&D	Co-Convener
Prof. P. Muthukumar, Assoc. Dean, II&SI	Member
Prof. Hemant B. Kaushik, ADOAA-OP	Member
Prof. Mihir Kumar Purkait, Dean, AER	Member
Prof. Achalkumar A. Sudhakar, Dean, OEP	Member
Prof. U. S. Dixit, HOC-CIKS	Member
Prof. T. V. Bharat, Civil Engineering	Member
Prof. S. N. Joshi, Mechanical Engineering	Member
Prof. A. Perumal, HoD-Physics	Member
Prof. Ramagopal V. S. Uppaluri, Chemical Engineering	Member
Dr. Bithiah G. Jaganathan, Faculty Coordinator, CCD	Member
Dr. Mahima Arrawatia, Vice-Chair HAB (Girls)	Member
Dr. Archana M. Nair, Civil Engineering	Member
Dr. John Jose, CSE	Member
Dr. Akshai Kumar Alape Seetharam, Chemistry	Member
Mr. Prakash Hazarika, HOS Administration	Member

Local Organizing Committee (IITG)



North-East Research Conclave

The following are the prominent institutions to be invited for their active participation during North-East Research Conclave:

Central Organizations

- IIT Guwahati
- IASST, Guwahati
- NIPER, Guwahati
- NEIST, Jorhat
- NIT, Agartala
- NIT, Silchar
- NIT, Sikkim
- NIT, Arunachal Pradesh
- NIT, Meghalaya
- NIT, Nagaland
- NIT, Manipur
- NIT, Mizoram
- CIT Kokrajhar
- Tezpur University
- Assam University, Silchar
- IIIT Guwahati
- Regional Dental College, Guwahati
- Silchar Medical College and Hospital, Silchar
- Tezpur Medical College & Hospital, Tezpur
- Assam Engineering College, Guwahati
- Assam Science and Technology University
- Bineswar Brahma Engineering College, Kokrajhar
- Institute of Engineering and Technology, Dibrugarh University
- Institute of Science and Technology, Guwahati University
- Jorhat Engineering College, Jorhat
- Jorhat Institute of Science & Technology, Jorhat
- NETES Institute of Technology & Science Mirza,
- Barak Valley Engineering College Nirala Karimganj
- Golaghat Engineering College Golaghat
- National Research Centre on Pig, (ICAR) in Guwahati

Assam Universities/Institutions

- Assam Agricultural University, Jorhat
- Assam Science and Technology University, Guwahati
- Assam Women's University, Jorhat
- Bodoland University, Kokrajhar
- Cotton University, Guwahati
- Dibrugarh University, Dibrugarh
- Gauhati University, Guwahati
- Kaziranga University, Jorhat
- Krishnaguru Adhyatmik Vishvavidyalaya
- Assam Medical College, Dibrugarh
- Gauhati Medical College and Hospital, Guwahati
- Jorhat Medical College and Hospital, Jorhat



Tripura Universities/Institutions

- ICFAI University, Tripura
- Maharaja Bir Bikram University
- Tripura University
- Engineering and Polytechnic Institutes
- Dhalai District Polytechnic
- Gomati District Polytechnic
- North Tripura District Polytechnic
- TTAADC Polytechnic Institute, Khumulwng
- Women's Polytechnic
- National Institute of Electronics & Information Technology
- Techno India, Agartala
- Tripura Institute of Technology
- Agartala Government Medical College
- Tripura Medical College
- College of Veterinary Sciences and Animal Husbandry
- Tripura Institute of Paramedical Sciences
- Tripura College of Nursing
- Institute of Nursing Science
- Government Degree College, Dharmanagar
- Government Degree College, Santirbazer
- Government Degree College, Longtharai Valley
- Government Degree College, Teliamura
- College of Agriculture, Tripura
- College of Fisheries, Tripura
- Regional Institute of Pharmaceutical Science and Technology

- Institute of Advance Studies in Education
- Bhavan's Tripura College of Teacher Education
- Bhavan's Tripura College of Science and Technology

Sikkim Universities/Institutions

- Central university, Sikkim
- National Institute of Technology, Sikkim
- Sikkim Manipal University
- Centre for Computers and Communication Technology
- National Institute of Electronics & Information Technology

Mizoram

- Central University (Mizoram University)
- National Institute of Technology Mizoram
- Institute of Chartered Financial Analysts of India
- Zoram Medical College

Nagaland

- Nagaland University
- National Institute of Technology Nagaland
- St. Joseph University, Nagaland
- St. Joseph's College, Jakhama
- Kohima Science College
- Patkai Christian College



Meghalaya Universities

- North Eastern Hill University (NEHU), Shillong
- Techno Global University, Meghalaya
- University of Technology and Management, Meghalaya
- University of Science and Technology, Meghalaya (USTM), Meghalaya
- National Institute of Technology, Meghalaya
- Acheng Rangmanpa College, Mahendraganj
- Don Bosco College, Tura
- Indian Institute of Management, Shillong
- Kiang Nangbah Government College, Jowai
- Lady Keane College, Shillong
- National Institute of Technology, Meghalaya,
- National Institute of Fashion Technology,
- Northeast Adventist College, Thadlaskien
- North Eastern Indira Gandhi Regional Institute of Health and Medical Sciences,
- North Eastern Institute of Ayurveda and Homeopathy
- Nongtalang College, Nongtalang
- Nongstoin College, Nongstoin
- Raid Laban College, Shillong
- Regional Institute of Science and Technology
- Ri-Bhoi College, Nongpoh

- St. Anthony's College, Shillong
- St. Edmund's College, Shillong
- Saint Mary's College (Shillong)
- Sankardev College, Shillong
- Seng Khasi College, Shillong
- Shillong College, Shillong
- Shillong Commerce College Shillong
- Shillong Law College, Shillong
- Sohra Government College, Cherrapunjee
- Synod College, Shillong
- Tikrikilla College, Tikrikilla W.Garo Hills
- Tura Government College, Tura
- Tura Law College, Tura
- Union Christian College, Meghalaya
- Women's College, Shillong

Manipur

- Manipur University
- Central Agricultural University
- National Institute of Technology, Manipur
- Indian Institute of Information Technology, Manipur
- Jawaharlal Nehru Institute of Medical Sciences
- Regional Institute of Medical Sciences and Indira Gandhi National Tribal University



North-East Research Conclave



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