



Applied Civil Engineering Group, Engineering Sciences and Technology Division (ESTD)

CSIR - NORTH EAST INSTITUTE OF SCIENCE & TECHNOLOGY, JORHAT - 785006, ASSAM

UNDER MINISTRY OF SCIENCE AND TECHNOLOGY, GOVERNMENT OF INDIA



About CSIR NEIST

CSIR–North East Institute of Science and Technology (CSIR–NEIST), Jorhat, Assam, is a premier multidisciplinary R&D institution under the Council of Scientific and Industrial Research (CSIR), New Delhi. Established in 1961 as the Regional Research Laboratory (RRL), its focus has been on harnessing the rich natural resources of the North Eastern Region and the country to develop indigenous technologies.

About Engineering Sciences and Technology Division (ESTD)

The Engineering Sciences and Technology Division (ESTD) at CSIR–North East Institute of Science & Technology (CSIR–NEIST), Jorhat, is at the forefront of multidisciplinary research and innovation in civil and mechanical engineering domains. The Division houses two core research groups: the Applied Civil Engineering Group and the Mechanical Engineering Group, each engaged in high-impact research, technical consultancy, and infrastructure solutions that address both national priorities and regional challenges.

About Applied Civil Engineering Group (ACEG)

The Applied Civil Engineering Group of Engineering Sciences and Technology Division (ESTD) is dedicated to research and development, technical consultancy, and testing and evaluation of building and road construction materials. The group's core areas of expertise lie in structural, construction technology, building materials, structural health monitoring, geotechnical and transportation engineering.

Highlights:

ACEG offers industrial research, testing and consultancy services. Further, it provides internship, project/dissertation opportunities for students. Also, PhD admissions available under AcSIR.

ACEG is currently involved in a range of R&D activities focused on sustainable and resilient infrastructure. Ongoing work includes the stabilization of Brahmaputra river bed materials for use in road construction and the development of modular bricks for building applications.

Research Areas

- Structural Engineering
 - Bamboo reinforced concrete slabs, panels, beams and columns
 - Expanded Polystyrene Core Sandwich panel construction technology
- Non-Destructive Testing (NDT)
- Road, Building and Construction Materials
 - Dry Lean Concrete, Pavement Quality Concrete, Pervious Concrete, etc.
- Sustainable and Climate-Resilient Infrastructure
- Geo Technical Engineering
- Transportation Engineering
- Construction Technology and Project Management

Students Corner

• **Applied Civil Engineering Group, CSIR-NEIST** offers summer and winter internship, sponsored project internship training program for **thesis/dissertation opportunities** for a duration up to 1 Year:

- Diploma students, B.Tech / B.E (or equivalent Bachelor's degree) students
- M.E / M.Tech students
- Internships/project/dissertation are designed to bridge the gap between academic knowledge and practical application.
- Opportunity to pursue **Ph.D.** under **Academy of Scientific and Innovative Research (AcSIR)**. Ph.D. admissions available under various categories:

- Funded (Fellowship-based)
- Self-sponsored/ Sponsored candidates (industry/organization supported)

Funding Agency

- Department of Science and Technology (DST)
- Airports Authority of India (AAI)
- Power Grid Corporation of India Limited (POWERGRID)
- Council of Scientific and Industrial Research (CSIR)
- Ministry of Housing and Urban Affairs (MoHUA)



Sponsored Research

The Applied Civil Engineering Group (ACEG) at CSIR-North East Institute of Science and Technology undertakes sponsored research projects funded by government bodies, industries, and other organizations. These projects focus on addressing real-world challenges in civil engineering, including infrastructure development, sustainable construction, and advanced materials. The group leverages its expertise and state-of-the-art facilities to deliver innovative and practical solutions.

Consultancy services

ACEG provides expert consultancy services in various domains of civil engineering such as structural assessment, design evaluation, rehabilitation strategies, and field investigations. With a team of experienced scientists and engineers, the group supports clients in decision-making, troubleshooting, and ensuring the safety and durability of structures through reliable technical guidance.

Construction Materials Testing

The group offers comprehensive construction materials testing services for quality assurance and performance evaluation. Testing facilities are available for concrete, aggregates, soil, and other building materials, following standard codes and procedures. These services help ensure compliance with specifications and enhance the reliability and longevity of construction projects. Concrete mix design services are offered to develop optimized, cost-effective, and performance-based mix proportions tailored to specific project requirements.

Facilities

- Loading frame of capacity 3000 kN
- LVDTs with Data Acquisition System
- Commercial License for Structural Analysis Software
- Oven and Weighing Apparatus
- Triaxial Shear Test Apparatus
- Impact, Crushing and Abrasion Testing Apparatus for Aggregates
- Unconfined Compression Test Apparatus
- Tile Abrasion Testing Machine
- CBR Testing Apparatus
- Soil Testing Machines
- Compression Testing Machine of 2000 kN
- Non-Destructive Testing
 - Rebound hammer and Ultrasonic Pulse Velocity Testing Machine for Steel and Concrete
 - Horizontal Alignment and Verticality Checking Machine
- Sand Siever
- Unconfined Compression Test Apparatus
- Los Angeles Abrasion Machine
- Concrete Casting Yard comprises of Mixer Machine, Power Tools and Mould Making Machines

Organizational chart

- **Dr. V. M. Tiwari**, Director, CSIR-NEIST
- **Er. J J Bora**, Scientist G, Head of ESTD
- **Dr. Sanjay Deori**, Scientist G & Group Leader of ACEG
- **Er. Tapas Das**, Scientist E
- **Er. Dipak Basumatari**, Scientist E
- **Dr. Leon Raj**, Scientist E
- **Mr. Nibir P Bora**, Senior Technical Officer
- **Mr. Rajib Das**, Senior Technical Officer
- **Mr. Amar J G**, Senior Technical Officer
- **Mr. Aasheesh Yadav**, Technical Assistant

Contact Address

Dr. V. M. Tiwari, Director, CSIR-NEIST, Jorhat, Assam 785006; Email: director.neist@csir.res.in

Contact Details of RPBD

Dr. Kalyani Medhi (9435357010) Head of RPBD, kalyanimedhi.neist@csir.res.in

Contact Details of ACEG

- **Dr. Sanjay Deori (9435492149)**, sanjaydeori.neist@csir.res.in
- **Er. Dipak Basumatari (9435357480)**, dipakbasumatari@csir.res.in
- **Dr. Leon Raj (9487607151)**, leonraj.neist@csir.res.in; leonraj.civil@gmail.com