



AADHARSHILA

The Annual Newsletter of the Department of Civil Engineering
Assam Engineering College

Inside this Issue

INSIGHT

- My experience in the GeoChina- 18 Conference in Hangzhou, China - Dr. Binu Sharma
- NBA Accreditation of Department of Civil Engineering, Assam Engineering College - Dr. Diganta Goswami

EVENTS

- 2nd International Conference on Civil Engineering for Sustainable Development - Opportunities and Challenges - CESDOC 2018 - Dr. Jayanta Pathak, Dr. Diganta Goswami, Dr. Bipul Talukdar
- Two-day workshop on "Computational Methods in Engineering", 22-23 February 2018
- One day seminar on "Civil Engineering Challenges in North East India", 27 February 2018
- Alumni-Student interaction meet, 28 February 2018
- Industrial Visit to Dalmia Cement Plant, Hojai, 9-10 April 2018
- Multi-stakeholder meeting with academia, industry, faculties, student representatives with their parents and alumni, 19 May-2018
- Meeting of Academic Advisory Committee of the department, 12 September 2018

ACCOLADES

- Publications
- Activities
- Students' Achievements
- Snapshots from NBA visit
- Faculty List
- Departmental Profile
- Timeline of important milestones of the Civil Engineering Department, Year-2018

Principal's Message

I am immensely pleased to know that the Civil Engineering Department, Assam Engineering College has come up with the 7th issue of its annual newsletter titled "AADHARSHILA".

With the hope that the newsletter successfully portrays the various facade of the department, I would like to extend my best compliments to all the concerned member connected with the publishing of "AADHARSHILA". I also hope that the upcoming generations of civil engineers get highly enlightened and inspired from this newsletter and hence work for the betterment of the society.



Dr. Atul Bora
Principal
Assam Engineering College

Message from the Head of Department

It gives me immense pleasure to present to you the 7th issue of Aadharshila, the annual newsletter of the Civil Engineering Department of Assam Engineering College. I would like to convey my best wishes to all the concerned members for making it a success. I hope this edition will maintain the high standards of the previous ones and will prove beneficial to all concerned. The year 2018 was significant for the Department, as the undergraduate Civil Engineering programme got NBA accredited by National Board of Accreditation (NBA) for the first time. The Department is determined to uphold the same standards in the coming years and serve the society better.



Dr. P.J. Hazarika
Professor & Head
Department of Civil Engineering
Assam Engineering College

CIVIL ENGINEERING DEPARTMENT



EDITORIAL

At the very outset, we, on behalf of the student fraternity of the department of Civil Engineering, Assam Engineering College, would like to extend our heartiest welcome to you to the Seventh Edition of AADHARSHILA, the annual departmental newsletter. This started as a dream few years back and this dream has been put into paper and ink with success due to the hard work and perseverance of all the people who have been directly or indirectly involved. This newsletter is a reminder of new developments and achievements of the department in the past year.

The history of the Civil Engineering Department of Assam Engineering College dates back to 1955 when it was known as "Assam Civil Engineering College". Since then the department has excelled in the field of research and academics and has become a pioneer in the field of technical education and development. To acknowledge and document the various developments and achievements that took place in the department, the idea of AADHARSHILA was brought to life on 25th January, 2013. The newsletter showers light on the various achievements, research developments, events and other glories of the department to the students in a nutshell so that it motivates and provides an insight to the vast opportunities in the field of civil engineering. We feel privileged to be a part of this journey while experiencing it first hand and preserving the tradition with the seventh issue of the newsletter.

Here, we would like to express our heartfelt gratitude to the people who played an inseparable role in the journey of this newsletter from our vision to black and white. First of all, we would like to express our sincere gratitude and heartiest thanks to Dr. Atul Bora, Principal, Assam Engineering College and Dr. Palash Jyoti Hazarika, Head of the Department, Civil Engineering Department, for giving us the opportunity to publish the newsletter. We feel privileged in extending our deep sense of gratitude and appreciation to Dr. Bibhash Sharma, professor-in-charge of 'AADHARSHILA' whose valuable guidance and generous help inspired us in the successful publication of this newsletter. We would also like to thank our respected faculty members and also the non-teaching staff of the department whose support and motivation have been relentless. And lastly, this whole journey of the newsletter would not have been possible without the tireless efforts of the fellow members of the Editorial board.

We hope our efforts have been fruitful in providing an overview of the department and with prayer for its success we would like to present the 7th issue of AADHARSHILA to one and all.

Editors



Aadharshila Committee

President	: Dr. Palash Jyoti Hazarika
Prof-in-charge	: Dr. Bibhash Sarma
Editors	: Rohit D. Kashyap : Smita Dey : Sanjib Gohain : Sukanya Borah
Advisory Committee	: Dr. Jayanta Pathak : Dr. Diganta Goswami
Faculty members	: Mr. Bibhuti B. Bhardwaj : Ms. Rupali Sarmah : Ms. Jayshree Hazarika
Name & Logo Credits	: Priyanka Kotoky



Write to us:

Send us your comment, suggestions and feedback about the newsletter to aadharshila_ced@aec.ac.in

INSIGHT

My experience in the GeoChina- 18 Conference in Hangzhou, China

Dr. Binu Sharma

Professor, Department of Civil Engineering
Assam Engineering College

The 5th GeoChina International Conference 2018 was held in Hangzhou, China from July 23rd to 25th, 2018. Hangzhou is the capital of Zhejiang Province and one of the seven ancient capitals of China. It was described by Italian traveler Marco Polo as the finest and most luxurious city in the world. This Civil Infrastructures Confronting Severe Weathers and Climate Changes Conference is endorsed by leading international professional organizations. There were many useful and important deliberations of which two impressed me most. The talk by Dr. Musharraf Zaman who is the Aaren Alexander Professor of Civil Engineering and Environmental Science and Alumni Chair Professor of Petroleum and Geological Engineering at the University of Oklahoma was on climate-Adaptive Surface Transportation Infrastructure: Development and Implementation of Innovative Technologies and Practices. He spoke about how the Southern Plains Transportation Center (SPTC) – a consortium of eight universities in U.S. DOT Region 6 (Arkansas, Louisiana, New Mexico, Oklahoma, and Texas) – has been developing innovative technologies, materials, and methods for design, construction, maintenance, and monitoring of climate-adaptive transportation infrastructure. The next work on Next Generation Infrastructure for an Intelligent Mobility Future by Michael Caltabiano – CEO, Australian Road Research

Board (ARRB) also impressed me. He talked about how the introduction of autonomous, driverless and electric cars has the potential to revolutionize our transport system and the need for 40-year design lives for the pavement structures. Workshops were also held during the afternoons and in total there were 14 workshop speakers. Technical sessions were held in three rooms simultaneously on various themes. I presented two papers in the conference. My first paper, One Dimensional Ground Response Analysis and Identification of Liquefiable Strata of Guwahati City, was on the theme “New Developments in Materials for Infrastructure Sustainability and the Contemporary Issues in Geo-Environmental Engineering”. My second paper, Static Compaction Characteristics of Coarse and Fine Grained Soils, was on the theme “Solving Pavement and Construction Materials Problems with Innovative and Cutting-Edge Technologies”.

On the third day of the conference we were taken to the Hangzhou Bay Bridge to see the bay bridge from the Hangzhou Bay Bridge tower. The Hangzhou Bay Bridge is a 36 km long sea cross bridge in eastern China’s Zhejiang province, running from Haiyan, Jiaxing in the north to Cixi, Ningbo in the south. The bridge is a six-lane highway in both directions with a designed speed of 100 km an hour, a designed service life of 100



Aadharshila

years and a total investment of 118 billion yuan. We were given a good insight into how the bridge was constructed together with its foundations and the foundation soil properties.

I had the good opportunity to see the Lingyin Temple in Hangzhou which is a Buddhist temple of the Chan sect located north-west of Hangzhou, Zhejiang Province, China. It is notable also as one of the ten most famous Buddhist temples of China. The temple's name is commonly literally translated as Temple of the Soul's Retreat. It is one of the largest and wealthiest Buddhist temples in China, and contains numerous pagodas and Buddhist grottoes.

I also went for a cruise in the West Lake Hangzhou. West Lake is a freshwater lake in Hangzhou, China. It is divided into five sections by three causeways.

There are numerous temples, pagodas, gardens, and artificial islands within the lake. It is known for its natural beauty and historic relics. West Lake is one of the top ten scenic areas in China, getting listed as a World Cultural Heritage Site by UNESCO in 2011. From the West Lake I visited the Six Harmonies Pagoda which is located on Yuelun Hill overlooking the Qiantang River, and to the south of West Lake. The Six Harmonies Pagoda is one of the masterpieces of ancient Chinese architecture. It is octagonal in shape and some 59.89 meters (196 feet) in height. Through an architectural trick, it has the appearance of being a thirteen-story structure, though it only has seven interior stories. By climbing to the top of the pagoda, I had a spectacular bird's-eye view of the Qiantang River.



NBA Accreditation of Department of Civil Engineering Assam Engineering College

Dr. Diganta Goswami

NBA Coordinator, Department of Civil Engineering
Assam Engineering College

Undergraduate programmes of Assam Engineering College, namely the Department of civil engineering along with three other departments, Electrical Engineering, Mechanical Engineering and Chemical Engineering Department were accorded NBA accreditation for three years commencing from 2018. Self-Assessment Report (SAR) was uploaded in the month of June, 2018. The institution and the departments, which applied for the accreditation were inspected by an expert team nominated by the National Board of Accreditation (NBA). Systematic efforts were made for necessary documentation to apply for the accreditation, since 2015 onwards, as per the NBA guidelines. PSG College of Technology, Coimbatore, did the mentoring and rendered all possible help to guide us in our journey towards the accreditation process.

The *National Board of Accreditation (NBA)* is one of the two major bodies responsible for accreditation of higher education institutions in India, along with the *National Assessment and Accreditation Council (NAAC)*. NBA accredits technical programmes (engineering & technology, management, pharmacy, architecture, applied arts and crafts, computer applications and hospitality and tourism management), while NAAC accredits general colleges and universities. The National Board of Accreditation (NBA), India was initially established by AICTE (All India Council of Technical Education) under section 10(u) of AICTE act, in the year 1994. NBA in its present form came into existence as an autonomous body with effect

from 7th January 2010. National Board of Accreditation, India has become the permanent signatory member of the *Washington Accord* on 13th June 2014. Other signatory countries are – Australia, Canada, China, Hong Kong, Ireland, Japan, Korea, Malaysia, New Zealand, Pakistan, Peru, Russia, Singapore, South Africa, Sri Lanka, Taiwan, Turkey, United Kingdom, United States. Countries having provisional signatory status are Bangladesh, Chile, Costa Rica, Mexico and Philippines. The primary objective of NBA is to assess the Quality and Relevance of Education and the outcomes in line with the best international practices, through the mechanism of accreditation of programs offered by technical institutions in India. Any graduate of a program accredited by a signatory of the Washington Accord is recognised by other signatories. Recognition of graduates before the date of admission is not required under the Accord. Other signatories may, at their sole discretion, recognize graduates of accredited programs from before the admission date. While accreditation is voluntary in India, in 2017 the AICTE announced that it will not provide approval for institutes which failed to accredit at least half of their programs.

The first essence of the outcome-based education, is to formulate course curriculum of the program to map with the twelve graduate attributes (*Program Educational Objectives, PEO's*) and two to four *Program Specific Outcomes (PSO's)*, in line with departments *vision and mission* which must conform to the institutes vision and mission. Based on the *attainment levels* of the students (student



Aadharshila

performance) for each course, the *Gap* with that of a set *target* can be identified. Depending on the identified gap, corrective measures need to be formulated. While assessing the student's performance, *Rubrics* play a very important role. Rubric means a scoring guide used to evaluate students' performance and contains evaluative criteria, quality definitions for those criteria at particular levels of achievement and a scoring strategy. In the outcome-based education, the final step is to see how the students after completing the program, have been placed or have gone for higher studies. For NBA accreditation, one qualifying criterion is that a minimum of 40% of the passed-out students must have been placed or have gone for higher studies, averaged over last three years. Thus, NBA examines right from the course curriculum, students' intake quality, their performances during various semester examinations (with or without backlogs, percentage scores etc.) to finally their placement and/or higher studies for last seven years together with various other parameters, such as number and quality of the faculties, laboratory, library and other infrastructural facilities provided to students. NBA also likes to see that the entire functioning of the department running a program is transparent and all the stakeholders namely, the students, faculties, parents and guardians, employers are actively involved and well informed about the functioning

of the program, department as well as the institute. All these qualitative parameters, necessary to maintain the best international standard in technical education are converted in a quantitative scale and the department running the program must score above a set benchmark in order to obtain NBA accreditation.

For smooth running of the civil engineering undergraduate program, the department has eighteen committees such as - Academic advisory committee, Project-I & Project-II committee, Summer Training/ Internship Committee, Faculty Appraisal Committee, Feedback Evaluation Committee, Placement Committee etc. all either headed by the head of the department or senior faculty members of the department and supported by three to five other faculty members.

Department of Civil Engineering, Assam Engineering College has been able to meet the criteria set by NBA to get NBA accreditation, thanks to all the students and the faculties and staff, who have always been committed and fully devoted to impart quality education and necessary motivation to shape the students in the field of civil engineering so that they can prove themselves to be amongst the best of civil engineers, not only in the country but also anywhere in the world.



EVENTS

2nd International Conference on Civil Engineering for Sustainable Development-Opportunities and Challenges - CESDOC 2018

Dr. Jayanta Pathak
Organising Secretary

Dr. Diganta Goswami
Joint Organising Secretary

Dr. Bipul Talukdar
Joint Organising Secretary

The “2nd International Conference on Civil Engineering for Sustainable Development-Opportunities and Challenges - CESDOC 2018” was organised by the Civil Engineering Department, Assam Engineering College on 18th & 19th December, 2018.

Dr. Atul Bora, Principal AEC and Conference President, welcomed the delegates and spoke about shared vision for the paradigm within which



Inauguration : lighting of the lamp



Welcome speech by Principal, AEC

different stakeholders work has significant impact on progress toward sustainable development. The inaugural function was attended by Dr. Dhiraj Bora, Honourable Vice Chancellor of Assam Science & Technology University as the Chief Guest. The function was also attended by Bhaskar Jyoti Phukan, Director (Technical) Numaligarh Refinery Limited (NRL) and Dr. Dominik. H. Lang, Director, Norwegian Geotechnical Institute, Oslo, Norway as guest of honour. Dr. Dhiraj Bora in his speech urged upon the participants to derive recommendation from the conference for

Sustainable solutions toward improving quality of life of people in general. Dr. P.J.Hazarika, Prof. & Head, Civil Engineering Dept. spoke about the vision of the department to have complete synergy between teaching and learning for producing civil engineers, who are competent and socially responsible to contribute to the sustainable development of the state, the region and the nation, with global perspective. Dr. Jayanta Pathak, Professor, Civil Engineering and organising secretary of the conference informed that, the second version of the conference CESDOC 2018 had accepted over 70 research papers for presentation and more than 200 delegates from



Dr. Dhiraj Bora, VC-ASTU



Dr. D. H. Lang, Director, NGI, Norway

more than 20 institutions attended the conference. There were nine (9) technical sessions covering themes ranging from Sustainable Infrastructure, Sustainable Urban Development, Sustainable Rural Development, Sustainable Energy Solutions, and Sustainable Ecosystem Management. The conference saw a confluence of eminent experts from various fields participating from institutions



Mr. B. J. Phukan, Director (Tech.), NRL Dr. P.J. Hazarika, Working President, CESDOC

and industries from Australia, India, Nepal, Norway and USA. A topical volume of selected papers from this conference will be published by Springer Nature, The Netherlands. Dr. Dominik H. Lang stressed upon the need for international scientist and research workers to visit and work in the northeast India as the region has multiple



Dr. D. Goswami, Jt. Organising Secy., CESDOC Dr. B. Talukdar, Jt. Organising Secy., CESDOC

engineering challenges for study and sustainable solutions for development. Dr. Bhaskar Jyoti Phukan urged upon the scientific community to work for building up informed discussion and scientific opinion to guide and foster appropriate environment for development of the state. The inaugural session was conducted by Dr. Diganta



Prof. B. Bhattacharjee, IIT Delhi Mr. B. Das, Soma Enterprise Ltd.

Goswami and the vote of thanks was proposed by Dr. Bipul Talukdar, joint secretaries of the conference.

The first day witnessed keynote presentations by eminent experts from various fields championing the mandate for sustainable development. Dr. Dominik H. Lang, Director, Natural Hazards,

Norwegian Geotechnical Institute, Oslo, Norway, presented on monitoring the built environment towards more efficient Disaster Risk Reduction. Prof. S. K. Deb, Department of Civil Engineering, IIT Guwahati presented his work on U-STI: a low-Cost base isolation system for Seismic



Dr. J. Pathak, Organising Secretary, CESDOC Section of the audience

response control of low-rise buildings. Using *Unbonded Scrap Tyre Isolator* (U-STI) as a seismic isolation device developed from Scrap tyres at a low price. Prof. B. Bhattacharjee presented his work on Durability for Sustainable Concrete in North-East India. As precipitation and environmental conditions of North-East India (NE) are significantly different from rest of the Indian subcontinent, durability concrete in North-East needs to be addressed differently with specific conditions. Mr.



Dr. D. H. Lang, Director, NGI, Norway Prof. S. K. Deb, IIT Guwahati

Biswajit Das, Executive Director, Soma Enterprise Ltd spoke about Sustainable Development of Water Resources In view of emerging challenges in India due to climate change. Analysis shows that India will face most serious threat by 2050 and some of its affects are already visible in repeated and aggravation of floods and drought. Unfortunately in past 3 to 4 decades there is a sharp decline in water resources development for various reasons. Dr. Hemanta Doloi from the University of Melbourne, Australia, spoke on Evaluating



Dr. H. Doloi, University of Melbourne



Dr. K. Sarma, Sr. Bridge Engineer, USA

Infrastructure Projects through the lens of Sustainability and accurate assessment of the social dimensions in the project specific context is an important area for investigation, which is most of the time overlooked. Dr. Kamal Sarma, PE from



Prof. Manoj Datta, IIT Delhi



Dr. I.K. Pateriya, NRRDA

USA spoke on infrastructure development & attitudes as the two key elements for sustainable development of Assam.

The second day of the conference had a keynote session by eminent speaker and leaders in civil engineering. Dr. Abdelghani Meslem from NORSAR, Norway presented the Recent Efforts toward Earthquake Risk Reduction in India. The most recent one, is the undergoing Earthquake Damage and Loss Information System (ELIAS) project, in collaboration with Assam Engineering



Delegates



Exhibition

College (Guwahati, India), and funded by Assam State Disaster Management Authority (ASDMA). The main objective of this project is to develop an

earthquake scenarios-based damage and loss model for the City of Guwahati. Dr. Shailesh Kr. Agrawal, Executive Director, Building Materials & Technology Promotion Council, Ministry of Housing & Urban Affairs, Government of India, presented on Emerging Construction Systems for



Dr. A. Meslem, Sr. Engineer, NORSAR



Dr. S. K. Agrawal, BMTPC, GoI

Sustainable Mass Housing. He said that, urban India is transforming at an unprecedented rate as regards urban revival is concerned. Besides, Atal Mission for Rejuvenation and Urban Transformation (AMRUT), there are other flagship programmes run by Ministry of Housing & Urban Affairs such as Smart Cities Mission, Swachh Bharat (Urban) Mission, Heritage City



Dr. Diganta Barman, NESAC, ISRO



A glimpse of the audience

Development & Augmentation (HRIDAY) Scheme, Urban Transport & Pradhan Mantri Awas Yojna - Urban (PMAY-U). The PMAY-U has been the landmark in the annals of India history where it is dreamt to provide shelter security to one and all by the 75th year of Independence. He said that, the world over, building construction has been shifted from site to the factory where building components partially or fully are manufactured and then transported to the site for their erection, assembly and finishing. Prof. Manoj Datta, Department of Civil Engineering, IIT Delhi, presented his work on Sustainability of Landfills for Hazardous Waste



Closing Function



Closing Function

and Municipal Solid Waste – Some Case Studies. He said that, landfills are the final repositories of all hazardous solid waste and municipal solid waste. These are not sustainable in the long run because their size keeps increasing as more and more waste accumulates at such sites. Sustainability requires that such landfills become incrementally smaller and smaller by progressive waste reduction. This, in turn, requires new waste management technologies to be adopted in industries and cities to recycle or re-use most of the waste products. Dr. Diganta Barman, Scientist from NESAC, ISRO gave an overview on Space Based Technology Paradigm in Flood Management. The overall gamete of activities associated with flood management throughout the globe in general and specifically to Indian conditions, is generally divided into three categories of pre-flood, during - flood & post flood activities. While flood hazard zonation, flood plain regulations, weather watch, flood early warnings etc are the prime activities in the pre-flood category; the set of during flood activities comprises of inundation monitoring, relief & rescue operation etc. Dr. Barman deliberated briefly on some of the critical applications of space-based technologies for different components of flood management in general with some specific examples from Brahmaputra and Barak valley in Assam.

Dr. I.K. Pateriya, Professor in Civil Engineering, Government College of Engineering, Aurangabad Maharashtra & Former Director (Technical),

National Rural Roads Development Agency, New Delhi, presented on Initiatives in Research and New Technologies application under PMGSY. He provided a glimpse of such activities and summarises significant achievements. Pradhan Mantri Gram Sadak Yojana (PMGSY) which was launched as a poverty reduction programme and as a fully funded centrally sponsored scheme to provide all weather road connectivity in rural areas of India. While substantial numbers of unconnected habitations have been connected by all-weather roads under the program, efforts have been made for adoption of various new technologies and development of techniques by partnership in research/ studies. The focus is on adoption of local materials/ waste materials for achieving economy in construction and protection of environment. The conference ended with a plenary session with discussion on the presentations made and draft recommendations as a derived output of the conference.

The conference also hosted an exhibition by a group of architects SIX from Guwahati showcasing the works of various architects on sustainable architectural design from various geographical locations encouraging traditional form of construction with local materials.



Moments from CESDOC-2018





Two-day workshop on "Computational Methods in Engineering", 22nd to 23rd February-2018

The workshop on "Computational Methods in Engineering" was made open to all students of Assam Engineering College fraternity (B.E. 6th semester onwards). Mr. Ritukesh Bharali, expert in this field who happens to be a Computational Mechanics Group Alumni, TU Delft, Netherlands was invited to deliver a lecture as well as give a hands-on training to the participants. A registration link to enrol for the workshop was created 4 days prior to the workshop. The link was circulated across various social media platforms as well as in the brochures. The numbers of participants were limited to 100. However, a few extra students were accommodated at the eleventh hour respecting their eagerness and enthusiasm to attend the workshop.

The workshop commenced as per schedule. It started with the welcome address by Dr. Sasanka Borah, Assistant Professor, Department of Civil Engineering, Assam Engineering College at 9:30 am followed by the first lecture by Dr. Diganta Goswami, Associate Professor, Department of Civil Engineering, Assam Engineering College. He taught the basics of Finite Element Method and demonstrated a few software like ANSYS, Geo-Studio and PLEXIS. After that the lunch was organized at Assam Engineering College Canteen. 118 footfalls were counted including the staff of the Department of Civil Engineering.

The 2nd session started sharp at 1:30 pm where the invited speaker, Ritukesh Bharali gave a vast overview of Finite Element Method with some examples. He discussed the importance of computational methods in the field of engineering. The day ended with his concluding lecture at 5:30pm.

The second day of the workshop focused on the hands-on training provided to the participated students. The participants brought their laptops and installed the required softwares

(M A T L A B , P A R A V I E W ,

GMSH and OCTAVE). Then the invited speaker demonstrated the software and then gave them hands on training on each of the software. The session ended at around 2 pm with the concluding speech delivered by Dr. Jayanta Pathak, Professor, Department of Civil Engineering, Assam Engineering College.



One-day Seminar on “Civil Engineering Challenges in North East India”, 27th February-2018

A seminar titled “Civil Engineering Challenges in North East India” targeting the B.E. 4th semester students of the Civil Engineering Department were organized under TEQIP-III. The seminar was held on 27th February, 2018 in Room no. 2, Civil Engineering Department, Assam Engineering College. The 4th semester Civil Engineering students of Assam Engineering College were the target audience for this seminar. The 4th semester Civil engineering class has a strength of 97 students. It was mandatory for the students to attend the seminar. However, out of the 97 target students, only 94 students attended the seminar. The resource persons of the seminar were Dr. Diganta Goswami, Associate Professor, Assam Engineering College; Dr. Bibhash Sarma, Associate Professor, Assam Engineering College; Mr. Bibhuti B. Bhardwaj, Assistant Professor, Assam Engineering College and Mr.



Engineering College; Dr. Bibhash Sarma, Associate Professor, Assam Engineering College; Mr. Bibhuti B. Bhardwaj, Assistant Professor, Assam Engineering College and Mr.

Diptojit Datta, Assistant Professor, Assam Engineering College. The overall development objective of the Seminar was to give an insight to the civil engineering challenges and introduce the students to the challenges peculiar to the North-East Region.

The seminar was divided into two sessions where each session contained two lectures by the speakers. The seminar started soon after the inaugural speech by Ms. Rupali Sarmah, Asst. Professor followed by the lecture given by Mr. Bibhuti B. Bhardwaj on the topic of “Lower Subansiri Dam: Myths and Facts” at 9:30 am which was followed by the lecture of Dr. Bibhash Sarma on “Brahmaputra Basin-Challenges and Opportunities” which continued till lunch time.

The lunch was provided for the participants and departmental staff in the AEC canteen. The afternoon session was started by Mr. Diptojit Datta with his lecture on the topic of “Structural Health Monitoring” followed by Dr. Diganta Goswami’s lecture on “Landslide in Assam”. The seminar was concluded after taking feedback from the students and with the concluding remarks by Ms. Jayshree Hazarika, Asst. Professor at 4:30 pm.



TEQIP III sponsored
One-day seminar on
Civil Engineering Challenges
in
North East India
Date: 27th February, 2018

Hosts: Department of Civil Engineering
Assam Engineering College,
Dispur-781013

Speakers:
Dr. Diganta Goswami, Assoc. Prof., AEC
Dr. Bibhash Sarma, Assoc. Prof., AEC
Bibhuti B. Bhardwaj, Asst. Prof., AEC
Diptojit Datta, Asst. Prof., AEC

Organized by
Department of Civil Engineering
Assam Engineering College
Guwahati-781013

Registration:
• Only for B.E. in Structural Civil Engg. AEC students
• All B.E. in Civil Engineering of various branches of Assam Engineering College are not mandatorily required for the seminar and hence it is mandatory for them to attend it
• Registration card is attached back to the students of the seminar (per branch and post) kindly to get the participation certificate
• Venue: Room No. 02, Civil Engineering Dept.

Time	Topic	Speaker
9:30 am - 9:45 am	Inaugural	Rupali Sarmah
9:30 am - 9:45 am	Inaugural Address	Bibhuti B. Bhardwaj
9:45 am - 10:45 am	Lecture: Lower Subansiri Dam: Myths and Facts	Bibhuti B. Bhardwaj
10:45 am - 12:00 pm	Tea break	
12:00 pm - 1:30 pm	Lunch	
1:30 pm - 2:30 pm	Lecture: Brahmaputra Basin-Challenges and Opportunities	Dr. Bibhash Sarma
2:30 pm - 4:30 pm	Lecture: Structural Health Monitoring	Dr. Diptojit Datta
4:30 pm - 5:00 pm	Remarks and Vote of Thanks	Dr. Diganta Goswami

Faculty Members:
Dr. Bibhuti Sarma, Assoc. Prof., Civil Engg., AEC
Dr. Bibhash Sarma, Assoc. Prof., Civil Engg., AEC
Dr. Diptojit Datta, Asst. Prof., Civil Engg., AEC
Dr. Jayshree Hazarika, Asst. Prof., Civil Engg., AEC
Dr. Dipankar Barua, Asst. Prof., Civil Engg., AEC
Dr. Dipankar Barua, Asst. Prof., Civil Engg., AEC
Dr. Jayshree Hazarika, Asst. Prof., Civil Engg., AEC

Contact Details:
Email: nae@aecguwahati.ac.in
Phone: 0361-2510131/2510132/2510133



Alumni-Student Interaction Meet 28th February-2018

A TEQIP-III sponsored alumni-student interaction meet, organized by the Department of Civil Engineering at Assam Engineering College (AEC), was held on 28th February, 2018. Mr. Anand Dharmapuri was invited as an alumnus of the 1991 batch from the Department of Electronics and Telecommunication Engineering at AEC. This Alumni-Student Interaction meet was made open to the entire student fraternity of Assam Engineering College. However, majority of the students were from Civil Engineering Department and a few Electrical Engineering students too participated in the interaction meet.

Mr. Dharmapuri, an ex-serviceman of the Indian Navy, highlighted the opportunities offered by the Indian Armed Forces for engineering graduates. He interacted with the students at a personal level to understand how motivated the students are in joining the armed forces. He clearly pointed out how students need to prepare for the entrance examinations for joining the armed forces. Having served the Nation for more than 22 years, Mr. Dharmapuri is well-versed with the challenges of working as an Indian Navy Officer. He gave a brief overview regarding the life of an Indian Navy Officer, starting from the challenges offered by the unknown tides of the sea, to the unpredictable enemies around us. He inspired the students to join the armed forces, despite the challenges it has to offer, by virtue of the pride and honour one gets in serving the Nation. Having served as the General Manager and Vice President of well-established companies, Mr. Dharmapuri also inspired the students to join the corporate world or start their own businesses. He stressed on the importance of communication skills, whether one decides to join the corporate world or pursue higher education. The fact that nurturing one's communication skills is as important as having the analytical and problem-solving skills required by an engineering graduate was clearly demonstrated by Mr. Dharmapuri.

In all, this alumni-student interaction was very beneficial for the students since it helped them to get a glimpse of what life would be like after they graduate. Mr. Dharmapuri successfully inspired the students to think about the various career opportunities that awaits them and to decide what motivates them the most. After this interaction, it is hoped that the students would keep their eyes open for the different career opportunities and start preparing for the same.



Industrial Visit to Dalmia Cement Plant, Hojai 9th-10th April-2018

An Industrial visit for students of B.E. 6th Semester, Civil Engineering, had been organised by the Department of Civil Engineering, Assam Engineering College on 9th and 10th April, 2018 to Dalmia Bharat Cement Plant, situated in Lanka of Hojai district, Assam. Students had been divided



into two groups. Group 1 consisted of 37 students. They visited the plant on 9th April, along with two faculty members- Mrs. Rupjyoti Bordoloi and Mr. Bibhuti B. Bhardwaj. The other group (Group 2) consisted of 27 students, accompanied by three faculty members, Ms. Jayshree Hazarika, Ms. Rupali Sarmah and Mr. Diptojit Datta, who visited the plant on 10th April. Time schedule for both days were same. Students gathered near the canteen of Assam Engineering College at around 7 am, where two buses were arranged for the trip. They started at around 7.45 am from the campus and reached the destination before 12



noon. After doing the necessary paper work, students and the faculty members were taken to the plant. HR Manager Mr. Yusuf Alamgir, who was the main co-ordinator of the visit from Dalmia group, addressed the students with a warm welcome. General Manager of the plant- Mr. Uday Singh Rajput, Senior Manager (Quality Control)- Mr. Promod Jena and Assistant General Manager (Civil)- Khimji Karena were also present in the meeting. After a short introductory session, a brief introduction was given about Dalmia Cement (Bharat) Limited, its history and



achievements throughout the years. This was followed by consecutive presentations on manufacturing processes of cement by Mr. Pranjal Bora (Production), Mr. Shubham Dhar (Production) and Mr. Suranjan Sarma (Quality Control) followed by the presentation on foundation of silo structures by Mr. Khimji Karena. The presentations were very nice with a lot of information about the chemistry behind cement as well as operation of a cement industry.

The presentation was followed by a short tea break, after which the students were taken to different



units of the plant. Three engineers accompanied them for instructions and demonstrations. At first, they were taken to the control room of the plant, from where the



whole cement manufacturing process is monitored. They were taken to the laboratories of the plant, where different tests on cement were being carried on. After that, they were taken to the quality control room. Students were also introduced to the vibrating machine. From the control room, they are taken to the actual plant. The Lanka plant of Dalmia Cement is a small unit, where the clinkers are not produced from raw materials. It directly comes from the other plant in Umrangshu, Assam. The students got a chance to visit the sites where the materials (Clinkers, Gypsum and Fly-ash) are being kept. From there, the materials are transferred to the storage mill and then supplied to the rotary grinder. Then it is delivered to the silo from where it goes to the packaging area, and finally via the conveyor belts to the trucks for loading. The students had a thrilling experience upon seeing the giant equipment like the mills and crushers, which run on motors and are controlled and monitored by computerized systems.

The tour of the plant came at an end by 3 pm. All the students and faculties were then taken to the guest house, where the appetizing lunch had been arranged. After the lunch, HR manager Mr. Yusuf along with other coordinators thanked everyone, and gave some gems of advice to the students about future endeavours. The students along with the faculties headed back from the plant at around 4 pm and reached campus at 8 pm. Overall, it was a pleasant experience for the students who got an opportunity to explore the industrial world.

Multi-stakeholder meeting with academia, industry, faculties, student representatives with their parents and alumni 19th May-2018

A multi-stakeholder meeting was organized by the Department of Civil Engineering at Assam Engineering College, Jalukbari on 19th May 2018 to discuss some of the key elements in the Self Evaluation Report (SAR), i.e. Vision, Mission and Program Educational Objectives (PEOs) with various stakeholders. The invited stakeholders included representatives from the industry and academia, guardians of students,



student representatives, alumni and other well-wishers of Assam Engineering College. The HoD of civil engineering department gave the inaugural speech and then the discussion started with a brief presentation by Dr. Diganta Goswami, Associate Professor, Dept. of Civil Engineering explaining about the various things included in NBA. Dr. Goswami explained the tenets of outcome-based education and its importance in the context of current educational practices. Dr. Goswami also explained the Washington Accord and what changes the Government of India plans to bring to the education system in India by becoming a permanent member. This was followed by a discussion to finalize the Vision of the department. People from the academia, industry



and guardians of students eagerly chipped in with their valuable suggestions. Prof. Arup Kr. Sarma from IIT Guwahati and Prof. Manoranjan Kalita, Principal of Don Bosco College of Engineering and Technology were also present in the meeting as representatives of the Advisory Committee for the Department of Civil Engineering and put forward their valuable suggestions. The four Missions of the department were also discussed in detail and here also, suggestions were invited from everyone present in the meeting. Finally, the Program Educational Objectives (PEOs) of the department were discussed in depth. The various stakeholders actively participated and put forward their ideas for finalizing the PEOs. The meeting concluded with the Vision, Missions and PEOs of the department finalized with consensus between the various stakeholders. This was followed by a sumptuous lunch and wishes from the stakeholders for the prosperity of Assam Engineering College. More than 70 people were present in the event.



Meeting of Academic Advisory Committee of the Department 12th September-2018

A meeting was held on 12th of September, 2018 by the Academic advisory committee to discuss about existing course curriculum, give suggestions to improve the quality of education in the programs of the department and to discuss institutional collaboration for benefit of the students' exposure and employability. The meeting was chaired by Dr. Palash Jyoti Hazarika, Professor and Head, Department of Civil Engineering. Other members of the committee were



Dr. Arup Kumar Sarma, Professor and former HoD, Department of Civil Engineering, IIT Guwahati, Dr. Rajib Kumar Bhattacharjya, Professor, Department of Civil Engineering, IIT Guwahati, Dr. Manoranjan Kalita, Professor, Department of Civil Engineering, and Director of School of Technology, Assam Don Bosco University, Dr. Binu Sharma, Professor, Department of Civil Engineering, Assam Engineering College and Dr. Jayanta Pathak, Professor, Department of Civil Engineering, Assam Engineering College.



ACCOLADES

PUBLICATION

Journal

1. Bhattacharjya, A. (2018). Identification and Establishing the Relationship of the Geology, Elevation and Landuse of the Cherrapunjee, Shella and Its Adjacent Areas Using SRTM Data, Meghalaya, India, *International Journal of Creative Research Thoughts*, Volume 6, Issue 2, pp. 280-297.
2. Bhattacharjya, A. and Gogoi, B. (2018). Benthic Foraminiferal Biostratigraphy and Depositional Environment of Prang Limestone of Mawlong Village, South Shillong Plateau, Meghalaya, *Earth Science India*, Volume 11, Issue I, pp. 23-43.
3. Bhattacharjya, A. and Gogoi, B. (2018). Foraminiferal Biostratigraphy of Sylhet Limestone Formation, Shillong Plateau, Meghalaya (India), *Palaontological Society of India*, in press, to be published in Volume 63 (II).
4. Chakraborty, A. and Goswami, D. (2018). Two Dimensional (2D) Slope-Stability Analysis- A Review, *International Journal for Research in Applied Science & Engineering Technology (IJRASET)*, Volume 6, Issue 2, February, 2018, pp. 2108-2112. ISSN: 2321-9653.
5. Chakraborty, A. and Goswami, D. (2018). Prediction of critical safety factor of slopes using multiple regression and neural network, *Journal of Geo-Engineering Sciences*, IOS Press, Volume Pre-press, No. Pre-press, April, 2018, pp. 1-10. DOI: 10.3233/JGS-170047.
6. Chakraborty, A. and Goswami, D. (2018). Three-dimensional (3D) slope stability analysis using stability charts, *International Journal of Geotechnical Engineering*, Taylor & Francis, May, 2018, pp. 1-8. DOI: 10.1080/19386362.2018.1465743.
7. Das, Krishna Kamal and Sarma, Bibhash (2018). Assessment of Crop Water Requirements for Kulsi River Basin, *International Journal for Research in Engineering Application & Management (IJREAM)*, Volume 4, Issue 4, June 2018, pp. 141-147. ISSN: 2454-9150.
8. Das, Krishna Kamal and Sarma, Bibhash (2018). Assessment of Water Demands and Availability of Kulsi River Basin, *International Journal for Research in Engineering Application & Management (IJREAM)*, Volume 4, Issue 5, Aug 2018, pp. 75-81. ISSN: 2454-9150.
9. Das, Krishna Kamal and Sarma, Bibhash (2018). Irrigation Planning for Kulsi River Basin for Maximizing Net Benefit, *International Journal for Research in Engineering Application & Management (IJREAM)*, Volume 4, Issue 3, June 2018, pp. 594-600. ISSN: 2454-9150.
10. Deka, Hirendra Nath and Sarma, Bibhash (2018). Evaluation of Morphometric Parameters of Gai River Basin, India using GIS, *Journal of Emerging Technologies and Innovative Research (JETIR)*, Volume 5, Issue 7, July 2018, pp. 712-719. ISSN: 2349-5162.
11. Devi, Dipsikha, Phukan, Nilutpal and Sarma, Bibhash (2018). A Study of Erosional Depositional Activity and Land Use Mapping of Majuli River Island Using Landsat Data, Springer Nature Singapore Pte Ltd. 2018. DOI: https://doi.org/10.1007/978-981-10-5801-1_14. V. P. Singh et al. (eds.), *Hydrologic Modeling*, Water Science and Technology Library 81.
12. Dutta, Bhaswati and Sarma, Bibhash (2018). Assessment of Water Quality Index of the Kolong River of Nagaon District of Assam, India, *Journal of Engineering Research and Application*, Volume 8, Issue 6 (Part-IV), June 2018, pp. 29-38. ISSN: 2248-9622.
13. Dutta, Bhaswati and Sarma, Bibhash (2018). Correlation Study and Regression Analysis of Ground Water Quality Assessment of Nagaon Town of Assam, India, *International Journal of Engineering Research & Technology (IJERT)*, Volume 7, Issue 6, June 2018, pp. 319-330. ISSN: 2278-0181.
14. Hussain, I. and Misra, U. K. (2018). Morphometric Analysis in GIS Framework: A Case Study in Champabati Watershed, *International Research Journal of Engineering and Technology*, Volume 5, Issue 5, pp. 3767-3780.
15. Hussain, I. and Misra, U. K. (2018). Soil Loss Estimation in GIS Framework: A Case Study in Champabati Watershed, *International Journal of Innovative Research in Advanced Engineering*, Volume 5, Issue 5, pp. 187-196.
16. Kalita, M. & Nath, U. K. (2018). Behaviour of Piled-Raft Foundation under Nonuniform Vertical Loading, *International Journal of Advanced in Management, Technology and Engineering Sciences*. ISSN: 2249-7455.
17. Mazumdar, N. and Talukdar, B. (2018). Application of ROM Scale for Assessing Erosional Vulnerability in Lower Assam Region of River Brahmaputra, *International Journal of Engineering Science Invention (IJESI)*, Volume 7, Issue 8, pp. 63-68. ISSN (Online): 2319 - 6734 & ISSN (Print): 2319 - 6726.
18. Mazumdar, N. and Talukdar, B. (2018). Assessment of River Bank Erosion Potential in Brahmaputra River in Lower Assam Region using Modified Rosgen's Bank Erosion Hazard Index Method, *IOSR Journal of Engineering (IOSRJEN)*, Volume 8, Issue 8, pp. 21-27.
19. Mazumdar, N. and Talukdar, B. (2018). Role of Critical Shear Stress and Erodibility of Soil in Stream Bank Erosion in Lower Assam Region of River Brahmaputra, *Journal of Engineering Research and Application*, Volume 8, Issue 8 (Part -I), Aug 2018, pp. 41-50. ISSN: 2248-9622.
20. Mazumdar, N. and Talukdar, B. (2018). Role of Physical Properties of Soil in River Bank Erosion Assessment: A Case Study in Lower Assam Region of River Brahmaputra of India, *American Journal of Engineering Research (AJER)*, Volume 7, Issue 9, pp. 197-205. ISSN (Online): 2320-0847 & ISSN (Print): 2320-0936.
21. Rahman, U. and Talukdar, B. (2018). Assessment of Hydropower Potential of the Jia Bharali River of the States of Assam and Arunachal Pradesh of India, *International Journal for Research Trends and Innovation*, Volume 3, Issue 8, pp. 42-61. ISSN: 2456-3315.

22. Rahman, U. and Talukdar, B. (2018). Derivation of Morphometric Parameters of the Jia Bharali River Basin of the States of Assam and Arunachal Pradesh (India) Based on ASTER DEM, *International Journal of Science and Research (IJSR)*, Volume 7, Issue 7, pp. 628-634. ISSN (Online): 2319-7064.
23. Rahman, U. and Talukdar, B. (2018). SRTM DEM Based Derivation of Morphometric Parameters of the Jia Bharali River Basin of the States of Assam and Arunachal Pradesh of India, *International Journal of Scientific Development and Research*, Volume 3, Issue 7, pp. 196-202.
24. Sarmah, R., Kumar, A., Chaudhary, A., Bhardwaj, S. and Thakur, P. (2018). Application of Composite Clay as Core Material in Earthfill Embankment Dams, *International Journal of Civil Engineering and Technology*, Volume 9, Issue 8, pp. 790-797.
25. Sharma, B., Siddique, A. F. and Medhi, B. J. (2018). One Dimensional Ground Response Analysis and Identification of Liquefiable Strata of Guwahati City, *GeoChina 2018, Sustainable Civil Infrastructures*, Springer, Cham, pp. 145-162. DOI: https://doi.org/10.1007/978-3-319-95768-5_13. In: Barman M., Zaman M., Chang JR. (eds) *Transportation and Geotechniques: Materials, Sustainability and Climate*.
26. Sharma, B. (2018). Coefficient of consolidation: Simplified One Point Method, *International Journal of Innovations in Engineering and Technology (IJJET)*, Volume 10, Issue 3, pp. 57-65. DOI: <http://dx.doi.org/10.21172/ijjet.103.09>.
27. Sharma, B. and Deka, A. (2018). Static Compaction Test and Determination of Equivalent Static Pressure, In: Stalin, V. K., Muttharam, M. (Eds.), *Geotechnical Characterisation and Geoenvironmental Engineering, Lecture Notes in Civil Engineering 16*, Springer Nature Singapore Pte Ltd. 2019, pp 3-10. DOI: https://doi.org/10.1007/978-981-13-0899-4_1.
28. Sharma, B. and Deka, P. (2018). A study on Compressibility, Swelling and Permeability Behaviour of Bentonite-Sand Mixtures, In: Stalin, V. K., Muttharam, M. (Eds.), *Geotechnical Characterisation and Geoenvironmental Engineering, Lecture Notes in Civil Engineering 16*, Springer Nature Singapore Pte Ltd. 2019, pp. 43-50. DOI: https://doi.org/10.1007/978-981-13-0899-4_6.
29. Sharma, B. and Sarkar, S. (2018). A Study on Efficiency of Micropile Groups, In: Thyagaraj, T (Ed.), *Ground Improvement Techniques and Geosynthetics, Lecture Notes in Civil Engineering 16*, Springer Nature Singapore Pte Ltd. 2019, pp. 11-18. DOI: https://doi.org/10.1007/978-981-13-0559-7_2.
30. Sharma, B. and Sridharan, A. (2018). Liquid and plastic limits of clays by cone method, *International Journal of Geo- Engineering*, Springer, Volume 9, Issue 22. DOI: <https://doi.org/10.1186/s40703-018-0092-0>.
31. Sharma, Dipankar and Sarma, Bibhash (2018). Morphometric Analysis of Jiya Dhol Basin in GIS Framework, *International Research Journal of Engineering and Technology (IRJET)*, Volume 5 Issue 7, July 2018, pp. 787-796. ISSN (Online): 2395-0056 & ISSN (Print): 2395-0072.
32. Sharma, Dipankar and Sarma, Bibhash (2018). Prioritization of Jiya Dhol Basin Using GIS, *International Journal of Science and Research (IJSR)*, pp. 743-749. ISSN (Online): 2319-7064, Index Copernicus Value (2016): 79.57, Impact Factor (2017): 7.296.
33. Sharma, Sanjay Kumar, Kwak, Young-Joo, Kumar, Rakesh and Sarma, Bibhash (2018). Analysis of Hydrological Sensitivity for Flood Risk Assessment, *ISPRS International Journal of Geo-Information 2018*, Volume 7, Issue 2, 51. EISSN 2220-9964. DOI: [doi:10.3390/ijgi7020051](https://doi.org/10.3390/ijgi7020051). (Special Issue Geographic Information Science and Spatial Analysis in Water Resources), Published by MDPI AG, Basel, Switzerland.

Conference

1. Bhardwaj, B. B. and Sapkota, G. (2018). Assessment of hill cut slopes using C-Programming, 2nd International Conference on Civil Engineering for Sustainable Development - Opportunities and Challenges (CESDOC), Assam Engineering College, Guwahati, India, 18-19 Dec, 2018.
2. Bhardwaj, B. B., Choudhary, R. and Julaganti, A. (2018). Effect of production temperature on permanent deformation characteristics of WMA mixes, 2nd International Conference on Civil Engineering for Sustainable Development - Opportunities and Challenges (CESDOC), Assam Engineering College, Guwahati, India, 18-19 Dec, 2018.
3. Bhardwaj, B. B., Devi, H. C., Boruah, B. B., Borah, R., Hazarika, B. J., Agarwalla, S. and Terang, B. (2018). Design of signalized traffic intersections on Guwahati bypass road, 2nd International Conference on Civil Engineering for Sustainable Development - Opportunities and Challenges (CESDOC), Assam Engineering College, Guwahati, India, 18-19 Dec, 2018.
4. Bora, Abhinav and Baruah, Debayan (2018). Proposal for a Waste-Water Treatment Plant in Bharalumukh (Guwahati), 2nd International Conference on Civil Engineering for Sustainable Development - Opportunities and Challenges (CESDOC), Assam Engineering College, Guwahati, India, 18-19 Dec, 2018.
5. Hussain, Z., Sharma, B. and Rahman, T. (2018). A Model Study of Micropile Groups subjected to Lateral Loading under different Relative Density, 8th Conference on Deep Foundations Technologies for Infrastructure Development in India (DFI- India 2018), Deep foundation Institute, pp. 240-249.
6. Kakoty, A., Nath, U. K. and Deka, G. (2018). An experimental study on the effects of river sand and rock quarry dust on quality of concrete, 2nd International Conference on Civil Engineering for Sustainable Development - Opportunities and Challenges (CESDOC), Assam Engineering College, Guwahati, India, 18-19 Dec, 2018.



7. Kalita, M. and Nath, U. K. (2018). Effect of Pile Spacing and Raft Thickness on Behaviour of Piled-Raft Foundation – A Parametric Study using FEM, International Conference on Advances in Construction Materials and Structures (ACMS-2018), IIT Roorkee, Roorkee, Uttarakhand, India, 7-8 March, 2018.
8. Kalita, M. and Nath, U. K. (2018). Parametric Study of Hill-slopes Vulnerable to Landslides in Guwahati City of Assam, 2nd International Conference on Civil Engineering for Sustainable Development - Opportunities and Challenges (CESDOC), Assam Engineering College, Guwahati, India, 18-19 Dec, 2018.
9. Kotoky, Priyanka and Sarma, Bibhash (2018). Mapping of Ground Water Quality of the Guwahati City of Assam, India Using Geographic Information System, Souvenir cum Technical Volume, 14th Foundation Day, Senior Engineers' Forum, Guwahati (N.E. Region), 20 Feb, 2018, pp. 92-100. Theme- Potential Effects of Contaminated Water on Health Mitigation Options.
10. Pathak, J., Lang, D. H., Meslem, A. and Bora, A. (2018). Risk Management Framework for Sustainable Development of Built Environment, 2nd International Conference on Civil Engineering for Sustainable Development - Opportunities and Challenges (CESDOC), Assam Engineering College, Guwahati, India, 18-19 Dec, 2018.
11. Pathak, J. and Viswanathan, R. (2018). Sustainable Infrastructure Development In Northeast - Case Study Of NERUDP Project, International Conference on Infrastructure Development (ICID), Jorhat Engineering College, Assam, India, 21-22 Dec, 2018.
12. Pathak, J., Meslem, A., Lang, D. H. and Lindholm, C. D. (2019). Earthquake Damage and Loss Model for the City of Guwahati, Assam, India, accepted for publication in The Society for Earthquake and Civil Engineering Dynamics Conference (SECED 2019), 9-10th September 2019, Greenwich, London.
13. Patowary, B. N. and Nath U. K. (2018). Study of Piled Raft Foundation on Layered Soil, 2nd International Conference on Civil Engineering for Sustainable Development - Opportunities and Challenges (CESDOC), Assam Engineering College, Guwahati, India, 18-19 Dec, 2018.
14. Sarmah, R., Kumar, A., Chaudhary, A., Bhardwaj, S. and Thakur, P. (2018). Influence of Core Composition on Stability of Earthen Embankment Under Rapid Drawdown Condition, International Conference on Infrastructure Development (ICID), Jorhat Engineering College, Assam, India, 21-22 Dec, 2018, pp. 228-231.
15. Sharma, B., Gogoi, B. and Sridharan, A. (2018). Static Compaction Characteristics of Coarse and Fine Grained Soils, GeoChina 2018, Sustainable Civil Infrastructures, Springer, Cham, pp. 45-67. DOI: https://doi.org/10.1007/978-3-319-95792-0_4. In: Hossain Z., Zhang J., Chen C. (eds) Solving Pavement and Construction Materials Problems with Innovative and Cutting-edge Technologies.
16. Sharma, B. and Tribeni, S. (2018). Effect of ethanol on compressibility, Swelling and permeability characteristics of bentonite - sand mixture, Indian Geotechnical Conference (IGC 2018), Indian Institute of Science Bengaluru, 13-15 Dec, 2018.
17. Siddique, A. and Sharma, B. (2018). Comparison of 1D equivalent Linear and Nonlinear Ground response Analysis for different soil profiles, International Conference on Infrastructure Development (ICID), Jorhat Engineering College, Assam, India, 21-22 Dec, 2018.
18. Siddique, A., Sharma, B. and Mazumdar, J. (2018). Identification of Liquefiable Strata by 1D Ground Response Analysis of South-Western Zone of Guwahati City, 16th Symposium on Earthquake Engineering, IIT Roorkee, India, 20-22 Dec, 2018.

ACTIVITIES

Dr. Binu Sharma

- Attended the 5th GeoChina International Conference 2018 held in Hangzhou, China from July 23rd to 25th, 2018 and presented two research papers. The conference was attended by receiving the International Travel Grant from the Department of Science and Technology, New Delhi.
- Delivered a speech at the National Seminar on “Earthquake Hazards: Perception, Mitigation and Management” sponsored by Ministry of Earth Sciences, Government of India, organised by the Department of Environmental Studies, North-Eastern Hill University, Umshing Mawkynroh, Shillong-793022, Meghalaya and Environmental Watch and Management Institute on 9-10 November, 2018.
- Short Term Training Program on “Recent Advances in Civil Engineering” at Civil Engineering Department, Jorhat Engineering College, held from 27/8/2018 to 31/8/2018, Jorhat

Dr. Jayanta Pathak

- Invited by the Gauhati University as speaker and panellist to the two-day National Conclave on Brahmaputra River Basin organised by Gauhati University in collaboration with the NEC and sponsored by the Ministry of DoNER, (12-13 February, 2018) for making presentation on technological intervention for Flood Resilient Housing for Flood affected / displaced people.
- Appointed in 2018, May, reviewer of International Journal of Seismology to review the paper on Earthquake Hazard Potential of Indo-Gangetic Foredeep: its Seismotectonism, Hazard and Damage Modeling for the cities of Patna, Lucknow and Varanasi submitted by scholars from IIT Kharagpur.
- Appointed In 2018, June, as member of the Steering Committee by Gauhati University for establishment of Centre for Brahmaputra Studies (CBS) (in collaboration with the North Eastern Council and sponsored by the Ministry of DoNER) for overall supervision of all activities related to the establishment of the Centre.
- Invited as speaker and panellist by the Indian Institute of Architects, Assam Centre for a Seminar on "The Essence of Vernacular Architecture - The Urban Context" along with 'Building Solutions 2018' at Guwahati on 27th October 2018. Invited as speaker and panellist to Biennial Architectural Festival by SIX 18, aimed Panel Discussion "Wither the Role of the Architect." on 11 November, 2018, at Guwahati.



Dr. Diganta Goswami

- Supervised scholar Sashanka Bora for his Ph.D works with a topic of 'Site Response Analysis and Soil Structure Interaction in High Seismic Region', co-supervised by Dr. Jayanta Pathak (2018)
- Supervised scholar Ruby Das Borah with a topic of 'Integrated Remote Sensing and GIS Based Study on Storm Water Flooding in Guwahati', co-supervised by Dr. Biswajit Sarma.
- Acted as resource person in "Ground Subsidence Due to Shallow Tunneling in Soft Ground" - Advances in Civil and Infrastructure Engineering-2018" (ACIE'18),

Organised by Department of Civil Engineering, Tezpur University, 18-19th February, 2018.

Dr. Bipul Talukdar

- Resource person for "Operation of a Multipurpose Reservoir" theme-based lecture given in a training course on "Development of Climate Risk Management (CRM) tools for Agriculture & Water Resources management" during March 13 to 20, 2018 organised by NESAC in collaboration with IMD and IIT Bhubneshwar.
- Resource person for "River Interventions - Success and Failure Stories and Lessons Learnt", lecture presented during National Conclave on Brahmaputra Basin organised by Gauhati University during 12-13 February, 2018.
- Coordinator, MIKE powered by DHI training course on "Integrated 1D and 2D River Flood Modelling", 1st to 3rd November, 2018 at Civil Engineering Department, Assam Engineering College.

Dr. Bibhash Sarma

- Attended "Faculty Induction Workshop" at IIT Kharagpur, sponsored by MHRD (TEQIP-III) from July 3rd to 7th, 2018.
- Delivered an invited lecture on "Hydro-power potential, opportunities and challenges in NE India" for the top officials of Numaligarh Refinery Limited at Numaligarh on 15th September, 2018.
- Delivered lecture on "Recent flood mitigation and erosion resistance techniques" as Guest of Honour on Engineer's Day (15th Sept., 2018), organised by Institutions of Engineers, India; Numaligarh Chapter.
- Chaired Technical Session III in the training cum workshop on "Flood Forecast, - data requirement and reliability & applicability in flood modelling, with specific reference to Brahmaputra" organised by Assam Water Research & Management Institute, Basistha, Guwahati-29 under World Bank sponsored National Hydrology Project, on 22nd June, 2018.
- Delivered invited lecture and took part as panellist in the seminar on "Synergy among organizations working in water resources sector in North Eastern Region" organised by Brahmaputra Board, Ministry of Water Resources, on 27th September, 2018 at Assam Administrative Staff College.
- Chaired the whole day seminar on "Flood-erosion-river dam: Future of Assam" organised by 'All Assam Water Resources Contractors' Association' at Tezpur on 29th October, 2018.



- Acted as resource person in the national seminar on “Emerging Trends on Mitigation of Natural disasters in North East Region”, organised by Girijananda Chowdhury Institute of Management and Technology, Tezpur on 2nd November, 2018.



Dr. Bharati Medhi Das

- Completed her PhD in April, 2018 in “Study of non-linear unsteady flow in surge tank and high-pressure pipe”

Bibhuti B. Bhardwaj

- Resource person at Assam Road Research & Training Institute, Guwahati, funded by Road Rehabilitation Project (RRP) | The World Bank and delivered lecture on “Construction and Maintenance of Flexible and Rigid Pavements- New materials and technology for rigid pavements in rural roads”, 26th August, 2018.

ACHIEVEMENTS

Rituraj Borgohain, B.Tech 4th semester

- Secured 2nd position from the North East India at the 17th Delhi International Open Grandmasters Chess Tournament- 2019. He scored 7 points out of possible 10 in Category-B of the tournament, organised by Delhi Chess Association in New Delhi, 9th-12th January, 2019
- Secured 1st position in Dibrugarh District Chess Championship-2018 organized by Duliajan Club, 3rd-6th July, 2018
- Secured 20th position with 6.5/10 points in All Assam Rapid Prize Money Tournament organized by Bharatiya Janata Yuva Morcha, Dibrugarh District, 3rd-5th August, 2018
- Participated in “Category B” of 1st Goa International Open Grandmaster Chess Tournament, 13th-16th October, 2018

Rimpi Sharma, B.Tech 4th semester

- Received certificate of appreciation in the event BuildXtra, Pyrokinesis-2018/ Udbhavanam 6.0
- Secured 1st position in poem writing Competition, College week, AEC- 2018
- Secured 1st position in story writing Competition, College week, AEC- 2018
- Participated in a 2-day workshop on Bridge Design in Techniche-2018 by IIT Guwahati

Dixita Bora, B.E. 6th semester

- Participated in 2nd Annual Debate competition on the topic “Abolition of University Grants Commission will help in the reformation of higher education system.” Held at Pandu College, Pandu on 15th August, 2018.
- Participated in the R.M.D.C debate competition on 16th May, 2018 on the topic “the new citizenship amendment bill will threaten the lives and jeopardize the existence of indigenous people.”
- Participated in Dr. Sangeeta Das Memorial Debate on 23rd, September, 2018 on the topic “correct NRC will ensure the future of indigenous people of Assam.”

Ankita Roy Karmakar, B.E. 6th sem

- Participated in 2nd Annual Debate competition on the topic “Abolition of University Grants Commission will help in the reformation of higher education system.” Held at Pandu College, Pandu on 15th August, 2018.
- Participated in the R.M.D.C debate competition on 16th May, 2018 on the topic “the new citizenship amendment bill will threaten the lives and jeopardize the existence of indigenous people.”

Arindam Bortamuly, B.E. 6th sem

- Attended Harvard US India initiative Conference on 6th and 7th January, 2018 which was held in ITC Maurya, New Delhi. The conference aim was to engage students and young professionals in a dialogue about India’s political, social and economic challenges.
- Attended Asia Investment and Banking Conference (AIBC) from 7th to 12th September, 2018 which was held in Hong Kong Convention and Exhibition Centre, Hong Kong. This conference was related to sales and trading, global markets, mergers and acquisition. Secured 6th position in the S&T competition.

Nafisa Nazneen Choudhury, B.E. 6th semester

- Selected for Oxford 2 Week Academic Course - Single Room with Private Bathroom Engineering, 8th July, 2018 – 21st July, 2018
- Worked as a content team leader in Make Me Builder (OPC) Pvt. Ltd. and guided interns from different states

of India to write civil engineering research articles from 1st April, 2018 to 31st August, 2018

- Worked as a state team leader in Make Me Builder (OPC) Pvt. Ltd. and guided interns from North East India to write civil engineering research articles from 2nd January, 2018 to 31st March, 2018
- Recommended for job opportunities in Technical Operations (ITES (Hardware and Networking)/ BPO) by AMCAT on the basis of score secured
- Completed internship on Content Development (Civil Engineering) at Sanfoundry Technology through Internshala.
- Completed internship on Engineering Project Solutions Business Development at Make Me Builder (OPC) Pvt. Ltd. through Internshala.

Soumya Roy Choudhury and Prachurjya Bhuyan, B.E. 8th semester

- Co-founders of The North-Eastern Chronicle, which in association with St. Francis De Sales school, Narangi, Gauhati, on 11th and 12th January, 2019 organised the Corporate Industrial Conclave Model United Nations.
- It was the first ever economic and commercial issues-based Model United Nations' (MUN) of this region, with the committees discussing about economic consequences on the forefront.
- It also introduced the continuous crisis committee or the TATA committee, which made the conference even more economic as ever. The host school being a convent, another myth of convent school not supporting the MUN culture was broken.
- With a total of 6 committees and 160 plus delegates, this conference also became the country's first ever corporate MUN conference, with the backing up of a total of 18 plus brands.

Sanjib Gohain, M.Tech 2nd semester

- Awarded "Distinguished Researcher of the Year-2018" of Rula International award by IJRULA
- Published a paper titled "A study on tolerance & sensitivity of road side trees to air pollution along a stretch of NH-15 at Tezpur, Assam, India" on CESDOC-2018
- Participated in a short-term course on "Flood Risk & River Basin Management" organized by IIT Guwahati in November, 2018

SNAPSHOTS FROM NBA VISIT





Faculty List

- Dr. Palash Jyoti Hazarika (HoD)
- Dr. Binu Sharma
- Dr. Jayanta Pathak
- Dr. Mrinal Kumar Borah
- Mr. Sunit Kumar Bhagabati
- Dr. Diganta Goswami
- Dr. Bipul Talukdar
- Dr. Bibhash Sarma
- Dr. Utpal Kumar Misra
- Mr. Bhaskarjyoti Das
- Dr. Triptimoni Borah
- Dr. Utpal Kumar Nath
- Dr. Malaya Chetia
- Dr. Pankaj Goswami
- Dr. Bharati Medhi Das
- Mrs. Puspanjali Sonowal
- Mrs. Rupjyoti Bordoloi
- Mr. Abinash Mahanta
- Dr. Sasanka Borah

Assistant Professor (TEQIP-III)

- Mr. Bibhuti B. Bhardwaj
- Ms. Jayshree Hazarika
- Ms. Rupali Sarmah

Guest Faculty:

- Dr. Indira Baruah Gogoi
- Mr. Prasenjit Saha
- Ms. Mitali Mandal
- Mrs. Rhitwika Barman
- Mrs. Anindita Bhattacharya

Contact Us

Department of Civil Engineering
Assam Engineering College,
Jalukbari,
Guwahati-781013, Assam,
India.

Email: hod_civil.aec@rediffmail.com

Department Profile

Surrounded by lush green forests with majestic hills and the Deepor Beel (Ramsar Site), Assam Engineering College (AEC) is situated amidst the fine beauties of nature. AEC, the first engineering college of north-east India was established in the year 1955 with Civil Engineering as its first department. The Department currently offers undergraduate, postgraduate and doctoral programmes. Its flagship undergraduate programme attracts the cream of students of the state and outside. The first post graduate course with specialization in Watershed Management and Flood Control was started in 1976. In 1988, the second post graduate course on Soil Mechanics and Foundation Engineering was started. The Department has been offering Doctoral degree in various fields of civil engineering since 1993. The department has seven state-of-the-art laboratories and highly qualified faculty members to support the various educational programmes. The department undertakes sponsored research and industrial consultancy on behalf of government, PSU and private sector organisations of repute.

Timeline of important milestones of the Civil Engineering Department, Year-2018

5 th January	4 new faculties joined the department under TEQIP-III project as Asst. Professor
22 nd -23 rd February	Two-day workshop on Computational Methods in Engineering was held
27 th February	One-day seminar on Civil Engineering Challenges in North East India was held
28 th February	Alumni-Student interaction meet with Mr. Anand Dharampuri was held
9 th -10 th April	Industrial Visit to Dalmia Cement Plant, Lanka for B.E. 6 th semester students was carried out
19 th May	Multi-stakeholder meeting with academia, industry, faculties, student representatives with their parents and alumni was held
30 th May	Self-Assessment Report (SAR) was submitted online to National Board of Accreditation (NBA) for the undergraduate civil engineering programme
31 st July	Retirement of Mr. Tarun Patgiri, non-teaching staff from Geology Laboratory
11 th September	Departmental website was launched with link: www.civil.aec.ac.in
12 th September	Meeting of Academic Advisory committee of the department was held
28 th -29 th September	Visit by team of experts from National Board of Accreditation (NBA) to the department took place
1 st -3 rd November	Three-day hands on course on "MIKE FLOOD-Integrated 1D and 2D river flow modelling" was held
12 th November	The undergraduate program of civil engineering got accreditation from NBA for academic years 2018-19 to 2020-21
18 th -19 th December	2 nd International Conference on Civil Engineering for Sustainable Development - Opportunities and Challenges (CESDOC) was organized by the department