



# NIRMAAN

A Quarterly Newsletter  
November, 2024 - March, 2025

It is my great pleasure to share with you the second edition of the Newsletter of our Department. As we continue to grow and evolve, this publication serves as a testament to the hard work, dedication, and enthusiasm that defines our Civil Engineering community.

One of the key aspects that makes our Department special, is the unwavering commitment to excellence—whether in academics, research, or community service. We are immensely proud of the work being done by both our students and faculty members, and we continue to encourage an environment of collaboration, creativity, and learning. Our role as educators and mentors extends beyond the classroom, and I am confident that each of you can make a difference not only within the Department but also in the world of civil engineering. With best regards,

Prof. Chaitali Ray  
Head,  
Department of Civil Engineering



**IIEST, SHIBPUR**

## EVENTs

## Recently Organized Conferences/Seminars

**4th International Conference on Advanced Technologies for Industrial Pollution Control (ATIPC-2024)** held on December 17-19, 2024. ATIPC-2024 is organized by the Civil Engineering Department, IIEST, Shibpur. The conference was focused on advanced pollution control technologies, sustainable industrial practices, and environmental management solutions.



**International Conference on Novel Infrastructure Techniques:**

NITCon-2025 held on January 29-30, 2025. NITCon-2025 was jointly organized by the Civil Engineering Departments of Narula Institute of Technology, Kolkata, and IIEST, Shibpur. The conference served as a platform for researchers, academicians, and industry professionals to discuss cutting-edge infrastructure techniques and innovations.



**National Seminar on Infrastructure and Sustainable Technology Solutions** organized on February 14-15, 2025, by Nagaland University and IIEST, Shibpur under the ICSSR-funded Vision Viksit Bharat@2047 project. This seminar explored sustainable solutions for agriculture, markets, and rural livelihoods, fostering discussions on transformative infrastructural technologies.

## Recently Organized Conferences/Seminars (Continued)

The Civil Engineering Department of IIEST Shibpur successfully organized another **Conference on Sustainability Concerns in Water and Sanitation, Clean Energy, and Clean Environment** on March 26-27, 2025. The event was jointly conducted with **GAABESU - Global Alumni Association of IIEST Shibpur** and the **Adi Bhattacharyya Foundation, Vermont, USA**, in association with the **Consulting Engineers Association of India - E&NE Region** and in collaboration with the **JIS Institute of Advanced Studies and Research, Kolkata**. The conference provided a platform for experts, researchers, and professionals to discuss innovative solutions and sustainable practices in critical environmental and infrastructure sectors.



## Recently Organized Training Programs

**Periodical Sensitization Program to Impart Modern Technical Knowledge Amongst The Technical Officials Of The Housing Department, Govt. of West Bengal:** The Civil Engineering Department organized a Sensitization Program on December 13-14, 2024, sponsored by the Housing Department, Govt. of West Bengal. Covering topics like building repair, NDT methods, construction management, and green technologies, etc. the program featured expert-led sessions. The event was attended by many senior and 30 other officials from the Housing Department.



## Recently Organized Training Programs (Continued)

**Building Safer Roads: IIEST Shibpur's Training Initiative for PWD Engineers:** The Civil Engineering Department of IIEST Shibpur, in collaboration with PWD, West Bengal, has launched an Executive Development Program to train engineers in road safety and accident prevention. Led by Prof. Sudip K Roy. The initiative covers black spot identification, crash data analysis, and safe road design, integrating expert insights from engineering, law enforcement, medicine, and psychology. Participants conduct real-world safety audits and data-driven decision-making. With sessions scheduled through early 2025, the program is fostering a culture of proactive problem-solving, ultimately strengthening road infrastructure resilience across the state.



**Road Safety Training Program for Lead Agency (LA) and District Road Safety Committee (DRSC) Members, Govt. of West Bengal:** IIEST Shibpur conducted a road safety training for West Bengal's Lead Agency and DRSC members on 24-25th February 2025. Organized by the Civil Engineering Department. The hybrid program, following Supreme Court guidelines, saw 300+ participants and expert-led sessions on critical road safety measures.



## Students' Corner (Recent events organised)

### UDBHABANI 2025: A Grand Return

After a six-year hiatus, UDBHABANI made a triumphant return for its fourth edition from January 29 to February 1, 2025, under SOCCE. Chaired by Prof. Chaitali Ray and convened by Prof. Anuj Kishor Budhkar, the fest exclusively featured technical events, including 11 competitions, 2 workshops, and a grand Industry-Academia Meet. Themed **सृजन - The Manifestation**, it showcased innovations in structural design, urban planning, transportation, and sustainability. With an overwhelming response, UDBHABANI is now set to be an annual event, strengthening industry-academia collaboration and technical excellence in civil engineering.



### Launch of Departmental Yearly Magazine:

Our Department has launched its annual magazine on March 11, 2025, in the presence of students and faculty members, celebrating academic and professional achievements.



## Students' Corner (Recent events organised)

### **Bridging Academia and Industry**

As part of **Udbhabani 2025**, the **Civil Engineering Department, IIEST Shibpur** hosted an **Industry-Academia Meet** on **1st February 2025**, focusing on "**Bridging Academia, Industry, and Standards: Preparing for the Future Workforce.**" Eminent speakers, including **Prabir Kumar Neogi, Dilip Kumar Dhar, Arun Deb, Er. Snehasis Sinha and Prof. A. K. Sarkar**, shared insights on aligning academic training with industry needs, emphasizing standard implementation and workforce readiness. The event fostered meaningful dialogue and networking to enhance student employability and innovation.



### **ASCE Student Chapter Launched at Civil Department, IIEST Shibpur**

The **ASCE Student Chapter** at **IIEST Shibpur** was launched on **September 30, 2024**, supported by the **India Section - Eastern Region**. Operated under the guidance of the our Department, with **Er. Srirup Mitra** and **Er. Dilip Kumar Dhar** as proposed practitioner advisors, the chapter promotes student engagement in professional civil engineering activities.

In its debut initiative, the chapter collaborated with **SOCCE** to host two events—**CAD-Clash and Bridge Masters**—during **Udbhavani 4.0** on **January 29-30, 2025**. These technical competitions focused on **CAD modeling and structural bridge design**, offering students practical exposure and strengthening ties between academic concepts and real-world applications.



### Field Visits for Civil Engineering Students

- The Civil Engineering Department, in collaboration with the Bureau of Indian Standards, organized field visits for undergraduate and postgraduate students on December 2, 2024. A group of 85 students and 5 faculty members visited the Ambuja Cement factory, Sankrail, and Ramco Cement factory, Kolaghat, gaining insights into cement clinker processing.
- Additionally, students visited a G+5 building construction site on the IIEST campus to observe pile load testing and the construction of cast-in-situ concrete piles.

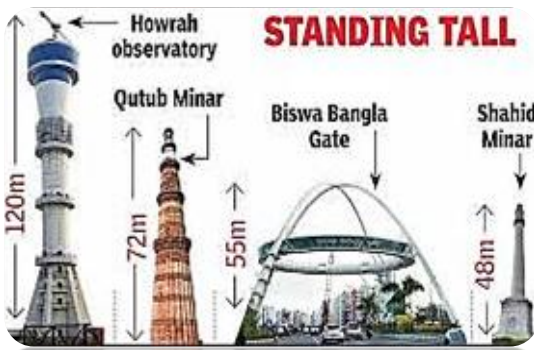


### Special Cleanliness Drive by Civil Engineering Department

As part of the **Clean Campus Green Campus** initiative, the Civil Engineering Department of IIEST Shibpur organized a Special Cleanliness Drive on February 1, 2025. With enthusiastic participation from students, staff, and faculty, the event reinforced the commitment to a cleaner campus under the Swachh Shanivar movement.



### Our Department in News Media



### IIEST Shibpur's Role in Panchdeep Minar

IIEST Shibpur contributed to the design of **Panchdeep Minar**, India's tallest observatory (120m) in Howrah. Taller than Qutub Minar, it features a 112m observatory deck, a revolving restaurant, and a banquet hall. Engineered with a deep foundation and 169 pilings, the structure uses 1,400 tonnes of steel, highlighting IIEST's excellence in structural engineering.

## Achievements of students

- The **GAABESU Research Award** Sub-Committee has announced the recipients of the 2024-25 research awards and fellowships, recognizing outstanding research contributions by students of IIEST Shibpur.

### Award Recipients

- Subham Sinha (Batch 2025)** - Sailedra Kumar Sen and Indra Sen Memorial Research Award (₹ 25,000), donated by Dr. Subir Sen (1964 CE, Maryland, USA) for the research 'Dynamic wind effect on steel slip-form structures for chimney construction' under the supervision of Dr. Soumya Bhattacharjya (Associate Professor of CE). His co-worker is **Mr. Swapnil Basu** (2023 batch)
- Harsha Agarwal (Batch 2025)** - Smriti Basu and Kamal K. Basu Memorial Research Award (₹ 25,000), donated by Ashish Basu (1983 CE, California, USA).
- Harsha Agarwal (Batch 2025)** - Smriti Basu and Kamal K. Basu Memorial Research Award (₹ 25,000), donated by Ashish Basu (1983 CE, California, USA).
- Rajesh Mondal (PhD, Batch 2028)** - Ashok Kumar Sarkar Postgraduate Fellowship I (₹ 37,000), donated by Mr. Aweek Sarkar (IIT Kanpur Alumnus, California, USA).
- Ayan Pal (Masters, Batch 2025)** - Ashok Kumar Sarkar Postgraduate Fellowship II (₹ 37,000), donated by Mr. Aweek Sarkar.
- Additionally, certificates of Honorable Mention have been awarded to **Maharnab Kundu (Batch 2025)**, **Amal Mondal (PhD, Batch 2028)**, and **Kiran Pal (Batch 2025)** for their dedication and hard work.
- MR. SWAGATAM DEY** (Batch 2024, Civil Engineering) achieved **All India Rank 16 in GATE - 2025**

• **Probodh Chandra Mitra Memorial Award 2024** is presented by the Department of Civil engineering for Best Undergraduate Project to the Batch of 2024 students on 20th Dec. 2024 at Seminar Hall.



# Alumni Corner

## From IIEST to ESE: A Journey of Learning and Growth

Looking back, my journey in civil engineering has been one of perseverance, learning, and gratitude. I had the privilege of studying at IIEST Shibpur (2015-19 batch), where I built a strong foundation in my core field. After securing a job at L&T through campus placement, I soon realized that my aspirations lay elsewhere. With a leap of faith, I decided to prepare for the Engineering Services Examination (ESE). It was during this phase that I understood the true value of our college curriculum—every concept asked in the exam had already been taught to us. My IIEST notes and standard textbooks became my guiding light, helping me clear the exam and step into public service.

During college, we often found the rigorous coursework and endless practical sessions exhausting. At times, it felt overwhelming. But looking back, I now realize that this very practice built the conceptual clarity that later made all the

- difference. The problem-solving approach we developed, though challenging at that time, became an invaluable asset in both exams and real-world engineering challenges.

Beyond academics, college gave me something equally valuable—Sports. Whether it was badminton, table tennis, cricket, or swimming, every game had a lesson to teach. A missed shot, a lost match, or a failed attempt in the pool wasn't just about losing; it was about learning, adapting, and coming back stronger. Sports unknowingly prepared me for the setbacks in life, teaching me how to take failures in stride and move forward with resilience.

To all aspiring engineers—believe in yourself, trust the process, and make the most of every opportunity. The knowledge and experiences you gain in college will always be your greatest assets. Stay dedicated, embrace failures, and success will follow.



By **Er. Satyam**

Assistant Director, IDSE, MES)

ESE 2023 - AIR 51

GATE 2023- AIR 261

CRPF Assistant Commandant

(Engineering) - AIR 3

# Ongoing Consultancy Projects

• Feasibility study, DPR, Design and Tender Documents for Ro-Ro Terminals Infrastructure Shalimar & Garden Reach for West Bengal Inland Water Transport Logistics and Special Development Projects (WBIWTLSDP) from West Bengal Transport Infrastructure Development Corporation Limited; (31-12-24); **Prof. Ambarish Ghosh, Prof. Debabrata Mazumder, Dr. Ashis Kumar Bera, Dr. Sujata Biswas, Dr. Sujit Kumar Dalui, Dr. Pritam Saha, Dr. Deep Roy** and others

• Vetting of design and drawing of water pumping main for the project entitled 'Collection of water from Mayurakhi river and transmission to Dumka Station for Comprehensive Water Supply scheme at Dumka and adjoining stations' from Consulting Engineers and Constructor, Lakshminarayan Colony, Kolkata - 100126; **Dr. Asok Adak & Prof. Ambarish Ghosh**

• Reviewing, Checking and Vetting of design & drawing, soil investigation report, load test reporter for "Design and Construction of 28MGD Water treatment plant with space saving technology along with intake arrangement, including commissioning & trial run along with 5 years' operation & maintainance of Turnkey basis from M/S traders & Engineers Private Ltd., 16A, lake View Road, Kolkata- 700029; **Prof. Ambarish Ghosh, Dr. Sujit Dalui & Dr. Asok Adak**

• Vetting of design and efficacy of the drainage proposal for the work "Proposed stormwater underground drain along RHS of Shodepur -Madhyamgram road between Ghola Bazar; **Dr. Asok Adak & Prof. Ambarish Ghosh**

• Design and planning of construction of Railway Wagon Facility for Ramsarup Industries Ltd, Kharagpur; **Dr. Apurba Das & Dr. Saptarshi Kundu**

• Vetting of the Structural Design for the Proposed Solid Waste Management Processing Plant to be set up at Promodnagar (for 5 Municipalities) from State urban Development Agency, Ilgus Bhavan, HC Block, Sector III, Bidhannagar, Kolkata; **Dr. Sujit Kumar Dalui & Prof. Ambarish Ghosh**

• Inspection and assessment of the Civil & Electrical works of the newly constructed (B+G+10) Administrative cum Academic building of WBUHS; **Dr. Tapash Kumar Roy, Dr. Soumya Bhattacharya, Dr. Abhinandan De & Dr. Amal Barman**

• Vetting of the Structural Design for the Proposed Solid Waste Management Processing Plant to be set up at Ashoknagar-Kalyangarh Municipality for Clauster-III project; **Dr. Sujit Kumar Dalui & Prof. Ambarish Ghosh**

• Geotechnical Study Report On Highwall Mining At Nimcha Colliery, Satgram Area, Eastern Coalfield Ltd.; **Prof. N.C. Dey & Dr. Saptarshi Kundu**

• Structural Stability analysis for replacement of old lift at VECC campus for Variable Energy Cyclotron Center, Dept. of Atomic Energy Govt. of India, Sector 1, Bidhannagar, Kolkata; **Dr. Soumya Bhattacharjya**

• Proof checking of design and drawing for Replacement of Superstructure of Belghoria ROB at KM-11/5-7(11.2), Kolkata from OSD Engineers, 7/1 RK das Lane Kolkata 700009; **Prof. Soumya Bhattacharjya**

• Vetting for the process design, GADs of a pressures and filter (PSF) and P&ID for intake to CWPH of sub-surface water based pipe water-supply scheme in Kumarganj block, Dakshin Dinajpur for Eco protection Engineers Pvt. Ltd., Malda - 732142; **Dr. Asok Adak**

## Continued...

- Design & Engineering work for vetting of hydraulic design and drawing of clear water rising main, WTD hydraulics & probes with ESR & CWR boosting facility area, Purulia South for WPIL Limited, Topsia road, Kolkata 700046; **Prof. Anirban Gupta**
- Design & Engineering work for vetting of hydraulic design and drawing of clear water rising main, WTD hydraulics & probes with ESR & CWR boosting facility area, Purulia North for WPIL Limited, Topsia road, Kolkata 700046; **Prof. Anirban Gupta**
- Adequacy assessment of effluent treatment plant for Greenfizz Beverages Private Limited, Singur, Hoohly-712223; **Prof. Anirban Gupta**
- Design & Engineering work for vetting of hydraulic design and drawing (Shyampur Package - 3) for WPIL Limited, Topsia road, Kolkata 700046; **Prof. Anirban Gupta**
- Independent assessment of vibration & monitoring of vibration during dynamic pile load test for the project Keventer one at 25, Nataji Subhas Rd. Kolkata-700001 for Bengal Bonded Warehouse Limited, Clive Ghat Street, Kolkata - 700001; **Prof. Ambarish Ghosh**
- Vetting of structural design of staging and shuttering arrangement and drawings for Rishikesh-karnaprayag New B.G. Railway line project - 3 nos. deck slab and 1 no. typical pier cap for Ekaiva Consulting LLP, Kolkata - 700061; **Dr. Soumya Bhattacharjya**
- Proof consultancy services "Improvement of two lane with paved shoulder from Ramnagar to Roseda from (Km 3+500 to Km 45+000) of NH-527E in the State of Bihar for M/S Ram Kripal Singh Pvt. Ltd. Ranchi - 843001; **Prof. Sudip Kr Roy, Dr. Sandip Chakraborty, Dr. Sujit Kumar Dalui & Dr. Saptarshi Kundu**
- Hiring of consultancy services of IIEST, Shibpur for Health Assessment of present structural condition of the existing three storied Abhikshan Bhawan Building of WBSETCL by conducting various structural NDTs and Furnishing recommendation for repair, renovation and/or retrofitting for structural safety & stability of the said building for WBSETCL, Vidyut Bhawan, Bidhannagar - 91; **Er. Arun Kumar Chakraborty & Dr. Ashis Kumar Bera**
- Vetting of design and efficiency of the drainage proposal for the work "Proposed stormwater underground drain along RHS of Shodepur-Madhyamgram road between Ghola Bazar" for Office of the Executive Engineer, PWD, Barracpur Division, Barracpur, North 24 Pgs - 700120; **Dr. Asok Adak & Prof. Ambarish Ghosh**
- PHE Directorate, Office of the Executive Engineer, Malda Arsenic Area (W/S) Division, PO-Maliha, Malda - 732102; **Prof. Ambarish Ghosh**
- Structural Consultancy for -1. Vertical extension of the shopping complex above the 1<sup>st</sup> floor at Rosaline hostel of IIT(ISM), Dhanbad, and 2. Vertical extension over F&A section at admin block for establishment of Dean Faculty at IIT(ISM), Dhanbad for CPWD, Dhanbad - 826004; **Dr. Soumya Bhattacharjya**

# Research & Academics

## Journal Publications

- Akram, F., Mandal, S., & Dalui, S. K. (2024). Static wind pressure and force effect on Y-Plan building in presence of adjacent buildings. *Wind and Structures*, 39(6), 469.
- Alam, M. M., Das, A., & Adak, A. (2024). Hydroxyl and sulfate radicals-based electrochemical advanced oxidation process for treating dye-bearing wastewater-A review. *Water Practice & Technology*, 19(12), 4816-4838.
- Basak, S. S., Adak, A., & Alam, M. (2025). UV-H<sub>2</sub>O<sub>2</sub>-based process for inactivation of *Escherichia coli* and *Staphylococcus aureus* on inanimate surfaces: Kinetics analysis and relationship between UV dose and log reduction. *Journal of Hazardous, Toxic, and Radioactive Waste*, 29(1), 04024041.
- Bhunia, S., & Saha, U. (2025). Long-range forecasting of daily rainfall using machine learning techniques. *International Journal of Hydrology Science and Technology*, 19(2), 117-151.
- Biswas, P., & Saha, U. (2025). Disaggregation of rainfall from daily to 1-hour scale through integrated MMRC-copula modelling. *Journal of Hydrology*, 647, 132338.
- Chowdhury, D. P., Roy, D., & Saha, U. (2025). Incorporation of weather parameters in MMRC-K model for rainfall disaggregation. *Stochastic Environmental Research and Risk Assessment*, 39(1), 289-308.
- Chowdhury, D. P., Roy, D., & Saha, U. (2025). Study of rainfall occurrence process by Markov Chain models and decision tree-based ensemble and boosting techniques. *Water Resources Management*, 1-21.
- Das, A., & Dalui, S. K. (2025). ANN-based prediction of aerodynamic force coefficients and shape optimization using MOEO of a high-rise building with varying cross-section along height. *Journal of Building Engineering*, 100, 111780.
- Dey, M., & Chakraborty, S. (2024). Seismic performance of reinforced concrete building frames on sloping ground retrofitted with steel and reinforced concrete jacketing. *Innovative Infrastructure Solutions*, 9(11), 441.
- Hossain, S., Budhkar, A. K., Palash, P. S., & Bharti, R. K. (2025). Determinants of walking as a mode of transportation: A case study of Howrah. *International Journal of Civil Engineering*, 12(3). <https://doi.org/10.14445/23488352/IJCE-V12I3P117>
- Konar, T., Das, A., & Ghosh, A. D. (2024). Near-fault earthquake-induced vibration control of a supertall benchmark building using an inerter-assisted compliant liquid damper. *ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering*, 10(4), 04024070.
- Konar, T., Ghosh, A. D., & Basu, B. (2024). Real-world installations of tuned liquid column dampers for wind-induced vibration control of tall buildings. *Structure and Infrastructure Engineering*, 1-15.
- Mahata, K., & Bera, A. K. (2025). Load settlement and load sharing characteristics of a combined pile-raft foundation in granular soil deposits: A numerical simulation approach. *Transportation Infrastructure Geotechnology*, 12(2), 1-24.

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Majumder, R., Mishra, S. K., & Chakraborty, S. (2024). A reliability-based design against post-buckling load drop in spherical shell cap with stochastic imperfections. *International Journal of Non-Linear Mechanics*, 165, 104794.

Pandit, A., & Budhkar, A. K. (2025). Impact of fog levels on free-flow speeds in mixed traffic conditions. *Communications - Scientific Letters of the University of Žilina*, 27(2), F1-F12. <https://doi.org/10.26552/com.C.2025.019>

Paul, S., Ghosh, A., & Basu, B. (2024). A computationally efficient approach to estimate design wave force on seawalls under large amplitude irrotational waves. *Ocean Engineering*, 311, 118745.

Paul, S., Ghosh, A., & Basu, B. (2024). Numerical estimation of wave breaking forces on seawalls. *Ships and Offshore Structures*, 1-10.

Ray, C., Kar, R., Biswas, D., Dalui, S. K., & Kundu, S. (2024). Response analysis of hollow core FRP bridge deck panel with steel girder under moving load. *Iranian Journal of Science and Technology, Transactions of Civil Engineering*, 1-16.

Ray, C., Sarkar, S., Kar, R., Biswas, D., Dalui, S. K., & Kundu, S. (2025). Temperature-induced characteristics of fiber-reinforced-plastic bridge decks: A study on the combined effects of thermal and vehicle loads. *Journal of Bridge Engineering*, 30(4), 04025012.

Ray, P., Ghosh, A., & Bhattacharjee, D. (2025). Behaviour of strip footing resting on encapsulated soil mass: A numerical study. *Modeling Earth Systems and Environment*, 11(1), 37.

Ray, P., Ghosh, A., & Bhattacharjee, D. (2025). Theoretical and numerical studies on strip footing resting on encapsulated soil mass. *Transportation Infrastructure Geotechnology*, 12(1), 21.

Roy, A., Chakraborty, S., & Adhikari, S. (2024). Seismic reliability analysis of nonlinear structures by active learning-based adaptive sparse Bayesian regressions. *International Journal of Non-Linear Mechanics*, 165, 104817.

Sarkar, N., & Ghosh, A. D. (2024). Application of conical spring to maintain tuning of mass damper for wave-induced vibration control of offshore jacket platform subjected to changes in natural frequency. *Ocean Engineering*, 312, 119352.

Sarkar, N., Konar, T., & Ghosh, A. D. (2025). Passive vibration control techniques for offshore structures under different environmental loading: A review. *Ocean Engineering*, 320, 120296.

Sen, S., Nandi, S., & Biswas, S. (2024). Application of GRACE-based satellite estimates in the assessment of flood potential: A case study of Gangetic-Brahmaputra basin, India. *Environmental Monitoring and Assessment*, 196(10), 997.

Sengupta, P., & Chakraborty, S. (2024). A state-of-the-art review on model reduction and substructuring techniques in finite element model updating for structural health monitoring applications. *Archives of Computational Methods in Engineering* (In press).

Sengupta, P., & Chakraborty, S. (2025). Bayesian model updating in an active Kriging-based metamodeling framework. *Applied Mathematical Modelling*, 115981.

# Conference Publications

Adak, A., Das, S., 2024. Adsorptive Removal of Methylene Blue and Congo Red using Raw Rice Husk as a Low-cost Adsorbent, in: Proceedings of International Conference of Advanced Technologies for Industrial Pollution Control.

Biswas, B., Majumder, C., 2024. Earthen Pot Membrane Electrodialysis (EPME) for the Removal of Reactive Red 141 (RR141) Dye from Aqueous Solution, in: Proceedings of Sustainable Advanced Technologies for Environmental Management, pp. 411-423. [https://link.springer.com/chapter/10.1007/978-3-031-64006-3\\_30](https://link.springer.com/chapter/10.1007/978-3-031-64006-3_30)

Biswas, R., Ghosh, A.D., 2025. Mitigation of seismic response of tall latticed transmission towers by fluid viscous dampers, in: International Conference on Smart Resilient and Sustainable Infrastructure (SRISTI), IIT (ISM) Dhanbad, 24-25 January 2025.

Biswas, S., Biswas, S., 2025. Calibration and Validation of SWAT Model for a Himalayan Snowfed River Basin Combining IMD and MERRA-2 Sourced Climatic Input, in: ICWROEE 2024. Water and Environment, Lecture Notes in Civil Engineering, vol 413. Springer, Singapore. [https://doi.org/10.1007/978-981-97-7699-3\\_10](https://doi.org/10.1007/978-981-97-7699-3_10)

Budhkar, A.K., et al., 2025. Impact of Highway Expansion on Driving Behavior: A Comparative Analysis of Two-Lane and Four-Lane Dynamics on NH 37, in: National Seminar on Infrastructure and Sustainable Technology Solutions: Transforming Agriculture, Markets, and Rural Livelihoods, 14-15 February 2025, School of Agricultural Science, Nagaland University.

Budhkar, A.K., et al., 2025. Understanding Commuter Perception of Their Mode Choices in Dense Urban Areas, in: ASCE International Conference on Challenges and Innovations for Sustainable Smart Cities (CISSC-2025), 7-9 February 2025, Hotel Novotel, Chandigarh, India.

Dey, S., Majumder, C., 2024. Arsenic Removal from Drinking Water by Iron-Copper Mixed Hydroxide Precipitate, in: Proceedings of Sustainable Advanced Technologies for Environmental Management, pp. 151-164. [https://link.springer.com/chapter/10.1007/978-3-031-64006-3\\_11](https://link.springer.com/chapter/10.1007/978-3-031-64006-3_11)

Dutta, S., Paul, S., Ray, C., 2025. Experimental and Numerical Study on Free Vibration Analysis of Composite Laminated Shell, in: ISAMPE National Conference on Composites (INCCOM-19), 30-31 January 2025, Pune, India.

Gayen, S., Das, A., Alam, M.M., Ali, A., Mishra, P., Adak, A., 2024. Performance Evaluation and Enhancement of Wastewater Treatment Plant: A Case Study on Abrasion Paper Manufacturing Industry, in: Proceedings of International Conference of Advanced Technologies for Industrial Pollution Control.

Ghosh, S., Sardar, R., Chakraborty, S., 2024. Wave Vibration Control of Offshore Structures using Improved Tuned Liquid Column Damper, in: 69th Congress of the Indian Society of Theoretical and Applied Mechanics (ISTAM), 19-21 December 2024.

Halder, P., Bhattacharjya, S., Chakraborty, S., 2024. Energy-Based Seismic Performance Assessment of Asymmetric Building Frame, in: 69th Congress of the Indian Society of Theoretical and Applied Mechanics (ISTAM), 19-21 December 2024.

Hossain, S., et al., 2024. Determinants of Walking as a Mode of Transportation: A Case Study of Howrah, in: International Conference on Computer-Aided Modeling for the Sustainable Development of Smart Cities, 27-30 November 2024, NERIST, Itanagar, Arunachal Pradesh, India.

Hossain, S., et al., 2024. Determinants of Walking as a Mode of Transportation: A Case Study of Howrah, in: International Conference on Computer-Aided Modeling for the Sustainable Development of Smart Cities, 27-30 November 2024, NERIST, Itanagar, Arunachal Pradesh, India.

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- Kashyap, A., Paul, S., Ray, C., 2024. Buckling Analysis of Hybrid Bio-composite Plates Based on Finite Element Analysis, in: 69th ISTAM Conference, CHRIST University, Bangalore, India, 19-21 December 2024.
- Kar, R., Paul, S., Ray, C., 2024. Free Vibration Analysis of Hybrid Bio-composite Laminates: Numerical Simulation with Experimental Verification, in: 14th Structural Engineering Convention, 12-14 December 2024, NIT Tiruchirappalli, India.
- Majumder, C., Ray, S.K., 2024. Arsenic Organic Interaction: Removal by Synthesized Iron Functional Carbon Nanocomposite Through Batch Study, in: Proceedings of Sustainable Advanced Technologies for Environmental Management, pp. 187-206. [https://link.springer.com/chapter/10.1007/978-3-031-64006-3\\_13](https://link.springer.com/chapter/10.1007/978-3-031-64006-3_13)
- Mondal, A., Saha, S., Kundu, S., Bhattacharjee, D., 2024. Studies on the Performance of Geogrid Reinforced Marginal Soil Slopes Subjected to Surcharge Loading, in: Indian Geotechnical Conference, 19-21 December 2024.
- Mondal, R., Ghosh, S., Bhattacharjee, D., 2024. Seepage Analysis of Conventional Levee and Fly Ash Levee Subjected to Flooding using Different Filter Media, in: Indian Geotechnical Conference, 19-21 December 2024, MIT Aurangabad, Maharashtra.
- Nandy, K., Pandit, D., Chakraborty, S., 2024. The Moment-Curvature Response of a Deep Curved Beam with Elastic-Perfectly Plastic Material, in: 14th Structural Engineering Convention, 12-14 December 2024, NIT Tiruchirappalli.
- Pal, A., Bhattacharjee, D., 2024. Numerical Studies on Vetiver Root Reinforced Soil Slope Subjected to Rainfall in the North-Eastern Terrain of India, in: Indian Geotechnical Conference, 19-21 December 2024, MIT Aurangabad, Maharashtra.
- Pandit, A., Budhkar, A.K., 2024. Lateral Analysis of Car Following in Foggy Weather, in: Traffic and Granular Flow, 2-5 December 2024, Lyon, France.
- Paul, S., Ghosh, A., Basu, B., 2024. Wave Forces on Seawalls from Tsunami Waves, in: 14th Structural Engineering Convention, December 2024, NIT Tiruchirappalli.
- Prateek, S., Majumder, D., Chakraborty, S., 2025. Seismic Fragility Analysis of Shallow Tunnels, in: 10th Indian Young Geotechnical Engineers Conference (10th IYGEC), March 2025, IIT Indore.
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- Sardar, R., Chakraborty, S., 2024. An Innovative Semi-active Cell Tuned Liquid Mass Damper for Wave Vibration Control of Offshore Jacket Structure, in: 69th Congress of the Indian Society of Theoretical and Applied Mechanics (ISTAM), 19-21 December 2024.
- Soubhik, B., Paul, S., Chakraborty, S., 2024. Prediction of the Velocity Response of Moment-Resisting Frames Based on the Energy Balance Method, in: 14th Structural Engineering Convention, 12-14 December 2024, NIT Tiruchirappalli.

# Lectures & Seminars

## Delivered by Our Departmental Faculties

**Prof. Subrata Chakraborty**, has delivered a lecture on *Adaptive Support Vector Regression Model for Reliability Analysis of Structures* at International Conference on Smart, Resilient and Sustainable Infrastructure (SRISTI), IIT(ISM), Dhanbad, ASCE ISER, Jan. 24-25, 2025.



**Prof. Subrata Chakraborty**, has delivered a lecture on *Reliability analysis of structures by adaptive support vector regression model* at the 69th Congress of the Indian Society of Theoretical and Applied Mechanics (ISTAM) on 19-21 Dec. 2024 at CHRIST (Deemed University), Bangalore-560029, India

**Prof. Subrata Chakraborty**, has delivered a lecture on *A two stages Adaptive Metamodeling Approach for Reliability Analysis of Underground Tunnel* at International Conference on Novel Infrastructure Techniques (NITCon-2025) on 29-30th Jan, 2025 at Narula Institute of Technology, Agarpara, Kolkata, India.

**Prof. Sudip Kumar Roy**, has delivered a lecture at a Workshop on Sustainable Engineering for Future Infrastructure (SEFI) on 13<sup>th</sup> February, 2025 on *Sustainability Challenges in Transportation - A Brief Discussion* at Dream Institute of Technology, Kolkata

**Dr. Tapash Kumar Roy**, has delivered a lecture at a Workshop on Sustainable Engineering for Future Infrastructure (SEFI) on 13th February, 2025 on *Design of Bituminous Mix: Indian Scenario* at Dream Institute of Technology, Kolkata

**Dr. Anuj Kishor Budhkar** delivered an invited talk on *Revolutionizing Traffic Data Collection: Methods and Challenges for Mixed Traffic Systems* as a keynote speaker in the International Conference on Computer-Aided Modeling for the Sustainable Development of Smart Cities (29 November 2024, NERIST, Itanagar, Arunachal Pradesh)

**Dr. Dipaloke Majumder** delivered an invited talk on *Tunnel Engineering: What Challenges Lie Below the Surface?* in the FDP on 'Sustainable and Resilient Infrastructure Development using Advanced Materials and Technologies (SRIDAMT)' at Sanaka Educational Trust's Group of Institutions. Malandighi, Durgapur-713212 on 16-20 December, 2024

**Dr. Anuj Kishor Budhkar**, has delivered a lecture at a Workshop on Sustainable Engineering for Future Infrastructure (SEFI) on 11th February, 2025 on *Smart and Holistic Planning for Smart Cities* at Dream Institute of Technology, Kolkata

## Lectures & Seminars

### Delivered by Our Departmental Faculties (Continued)

**Prof. Anirban Gupta** was an invited speaker at the panel discussion on "Innovation and Technology for Sustainable Resource Management" at the U.S. pavilion at the International Kolkata Book Fair on February 01, 2025

**Prof. Ambarish Ghosh** was an invited speaker at the panel discussion on "Developing Inland Waterway Ecosystem: Shaping the Future" at the 8<sup>th</sup> Bengal Global Business Summit organized by Govt, of West Bengal and Indian Chamber of Commerce on 6<sup>th</sup> February 2025 at Biswa Bangla Convention Centre, New Town, Kolkata

### Organized by Our Department

The **5th Prof. P. K. Roy Memorial Lecture**, jointly organized by GAABESU and the Civil Engineering Department, IIEST Shibpur, was held on March 11, 2025. Eminent engineer **Dr. Nirmalya Bandyopadhyay** (Civil, 1973) delivered an insightful lecture on "*Lifecycle Analysis of Infrastructures*."



- The Civil Engineering Department of IIEST Shibpur organized a lecture and interactive session with Dr. Pranamesh Chakraborty, Assistant Professor at IIT Kanpur. The session focused on opportunities for Civil Engineering students in higher studies, providing valuable insights and guidance.
- A Talk and Interactive Session on Subsurface Imaging Using IITM Wave held on 3rd March, 2025 at Civil Engineering Department, IIEST Shibpur. The speaker of this session was Dr. Tarun Naskar, Assistant Professor in the Department of Civil Engineering at the Indian Institute of Technology, Madras.
- Prof. Anirban Gupta had chaired a technical session on Environment and Sustainability at the 39th Indian Engineering Congress held at Kolkata on 21st December 2024.

## Academic Arena

### PhD Awarded

- **Dr. Nilarghya Sarkar** - A study on passive Control of water-induced Vibration of Offshore fixed jacket Platforms and Floating Production Storage and Offloading Systems
- **Dr. Shib Sankar Basak** - Ultraviolet and hydrogen peroxide-based process for inactivation of Escherichia coli and Staphylococcus aureus on material surfaces
- **Dr. Ranjan Mahapatra** - Investigation on the Infill rate over a navigational bar in the Hooghly Estuary based on Sediment dynamics along a flow vertical
- **Dr. Indrani Khan** - Natural wastewater treatment and reuse as a low carbon option in the east Kolkata wetlands

- A **NEW COURSE STRUCTURE** has been finalized for the undergraduate and post-graduate students of Civil Engineering Department, IIEST, Shibpur as per **National Educational Policy-2020** of India.
- A new **MENTORSHIP PROGRAM** has been started in March 2025 for undergraduate students to support them in academic, non-academic, and career related matters

## Administrative Arena

- **Prof. Aparna Dey Ghosh** has been appointed as the **Dean (Planning and Development)** of IIEST, Shibpur.
- **Prof. Anirban Gupta** has been appointed as the **Dean (International Relations and Alumni Affairs)** of IIEST, Shibpur.
- **Prof. Ambarish Ghosh** is working as the **Dean (Academic Affairs)** of IIEST, Shibpur.

### Editorial Team

**Prof. Chaitali Ray**, Professor (HAG) and Head, Department of Civil Engineering

**Dr. Dipaloke Majumder**, Assistant Professor

**Dr. Anuj Kishor Budhkar**, Assistant Professor

**Dr. Saptarshi Kundu**, Assistant Professor