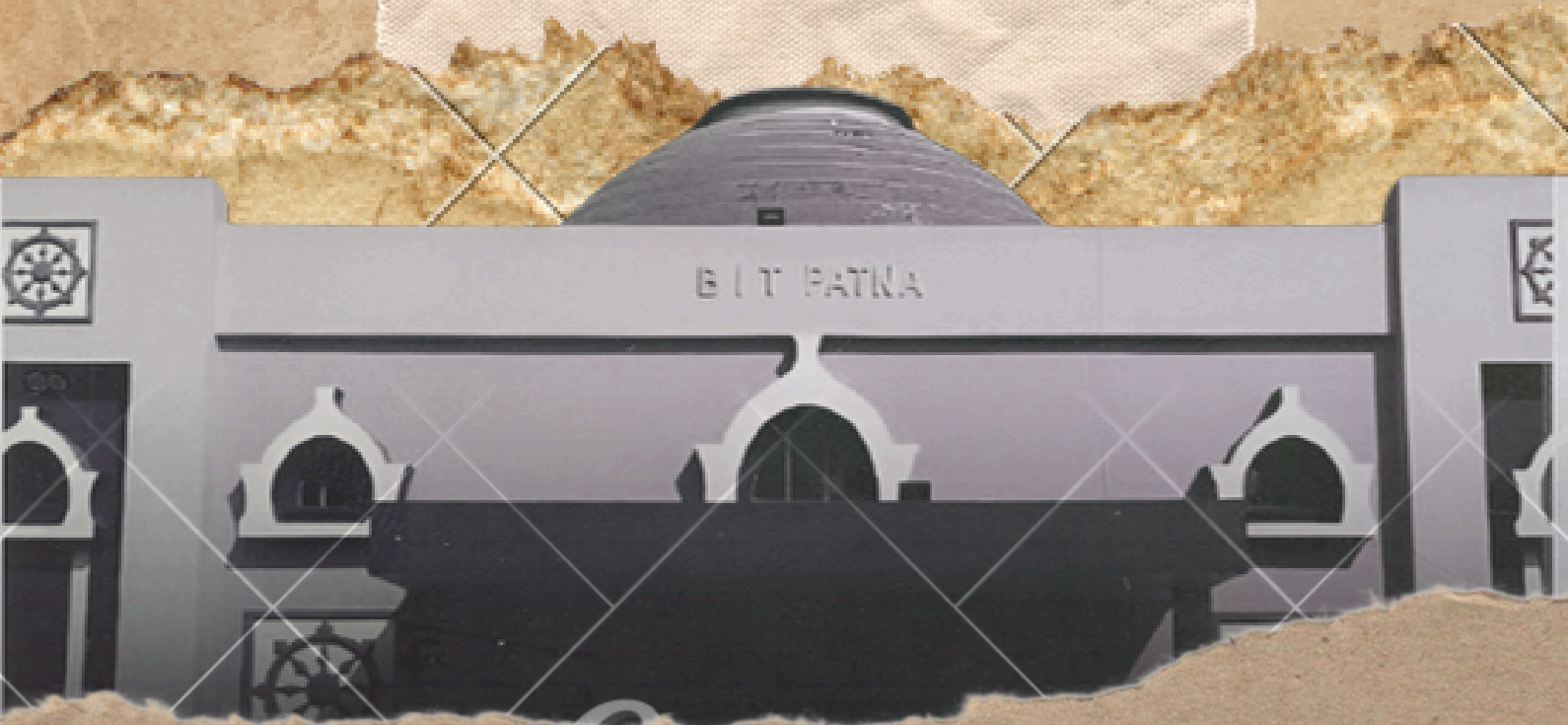




JULY 2025

SANWAD

VOLUME 2 ISSUE 1



A NEWSLETTER FROM THE DEPARTMENT OF CIVIL ENGINEERING



SANWAD

VOLUME 2 ISSUE 1





ABOUT US

Welcome to the latest edition of our Civil Engineering Department newsletter for MO24 Session. This publication is a reflection of our department's commitment to innovation, excellence, and the pursuit of engineering solutions that shape the world around us.

In this issue, we bring you the updates on groundbreaking research, student achievements, industry collaborations, and events organized. Whether you're a student, faculty member, or industry professional, we hope this newsletter keeps you informed and inspired by the remarkable work happening within our department.

Together, let's build a stronger, more sustainable future!

Happy reading!





DIRECTOR'S DESK



It is with great pleasure to introduce Sanwad (Vol.2, Issue 1), an official newsletter of Department of Civil Engineering, Birla Institute of Technology, Patna. The success of the department is based on the commitment, diligence, and accomplishments of our faculty, staff, and students, all of whom are highlighted in this newsletter. Sanwad is a celebration of the teamwork, tenacity, and creativity that characterize our Civil Engineering Department rather than merely a list of occasions and achievements. By using this platform, we honor the community's unwavering efforts and highlight the active extracurricular and academic programs that help shape the future of aspiring engineers. I express my gratitude to everyone involved in bringing "Sanwad" to fruition that may not only inform but also inspire, fostering a sense of pride in collective accomplishments. I am sure the readers will get a good view of CED, BIT Patna's all-round activity.

My Best Wishes

Prof. (Dr.) Anand Kumar Sinha

Director

Birla Institute of Technology Mesra- Patna Campus



DEPARTMENTAL PROFILE

The Department of Civil Engineering at BIT Off-Campus (Patna) was formally established in 2007 with a vision to create an impact on society through technology-based training, innovation, and service. Civil Engineering is a professional engineering discipline that deals with the design, construction, and maintenance of the physical and naturally built environment, including works like roads, bridges, canals, dams, and buildings.

Presently, the department offers 4-years B.Tech. programme with an average intake of 60 per year. B.Tech. programme in Civil Engineering envisages providing students with a good understanding of civil engineering solutions in global, societal, and environmental development. Student contexts are consistent with the principles of sustainability and given very good exposure to modern tools such as Engineering Graphics, AutoCAD, StaadPro, MATLAB, GIS, etc. It embraces Architectural Planning, Structural and Pavement Design, Construction and Infrastructure Management, Geotechnical, Environmental, Water Resources, and Hydraulic Engineering. The course also gives importance to research-based projects and prepares students for further research, in addition to making them ready to satisfy the current needs of the industry.



VISION OF THE DEPARTMENT

To develop quality intellectuals through education, research, and motivation, so that they can bring a positive contribution to society, in the areas of Civil and Environmental Engineering.

MISSION OF THE DEPARTMENT

- To develop professional skills through quality education and research.
- To outreach various sectors of society through interdisciplinary programmes and practice-oriented approach.
- To create dynamic, logical, and effective leaders with inspiring mindsets.



EDITORIAL TEAM



EDITOR

Dr. Kumari Sweta

Assistant Professor (Visiting),
Civil Engineering Department



TRANSLATOR-
(HINDI)

Ms. Bandana Mahto

Assistant Professor,
Civil Engineering Department



TRANSLATOR-
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Dr. Angshuman Mandal

Assistant Professor,
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Amit Saurav

UG Student
Civil Engineering Department



FACULTY PROFILE



Prof. (Dr.) Anand Kumar Sinha

Director and Professor Ph.D.
(IIT Kharagpur)



Prof. (Dr.) Sudeshna Chakravarty

Professor
Ph.D. (BESU, Shibpur)



Dr. Anish

Assistant Professor and
In-charge, Ph.D. (NIT PATNA)



Mrs. Bandana Mahto

Assistant Professor, M.Tech.
(IIT Guwahati)



Dr. Angshuman Mandal

Assistant Professor, Ph.D.
(IIT Kharagpur)



Dr. Kumari Sweta

Assistant Professor (Visiting),
Ph.D. (IIT Patna)



FACULTY ACHIEVEMENTS

Publication details of Faculty

1. Mohit Kumar, Ayush Kumar Choudhary, Angshuman Mandal, "Size optimization of truss structures for sequential loading scenario using evolutionary algorithms", Structural Engineering and Mechanics: An International Journal, Technopress Publication, Vol. 92, No. 6, 2024, Pages: 587-601 (SCIE Indexed, Impact Factor: 2.2). <https://www.technopress.org/content/page=article&journal=sem&volume=92&num=6&ordernum=5>
2. Mohit Kumar, Ayush Kumar Choudhary, Angshuman Mandal, "Weight Minimization of Truss Using Strain Energy Density and Genetic Algorithm for Single and Multiple Load Cases", International Journal of Civil Engineering, Springer Publication, 2024, (SCIE Indexed, Impact Factor: 1.8 based on 2023) <https://doi.org/10.1007/s40999-024-01044-2>
3. Vivek Kumar Singh, Sandip Kumar, Kumar Aniket, Gulshan Prakash, Saurav Kumar, Kumari Sweta, Experimental Assessment of the Effect of Waste Milk Packets for the Improvement of Soil Subgrade in Flexible Pavement, Proceedings of Indian Geotechnical Conference (IGC 2024), MIT Aurangabad, 19-21 December, 2024.

Workshop/Seminar/FDP Attended by Faculty

S.No	Name of Faculty	Workshop/Seminar/FDP	Organized By	Date Attended
1	Prof. Sudeshna Chakaravarty	Application of GIS in the Modern Era of Civil Engineering (AGMECE-2024)	BIT Patna	03.12.2024
2	Dr. Anish	Application of GIS in the Modern Era of Civil Engineering (AGMECE-2024)	BIT Patna	03.12.2024
3	Dr. Kumari Sweta	Application of GIS in the Modern Era of Civil Engineering (AGMECE-2024)	BIT Patna	03.12.2024



FACULTY ACHIEVEMENTS

Workshop/Seminar/FDP Organized by Faculty

S.No	Details of Workshop	Date	No. of participants	Convenor/Co-Convener
1	One-Day Workshop “Application of GIS in the Modern Era of Civil Engineering (AGMECE- 2024	03.12.2024	35	Dr. Angshuman Mandal and Ms. Bandana Mahto

Consultancy carried out/Amount Recieved

S.No	Title of Project	Faculty Involved	Funding Agency	Amount Recieved
1	Testing of Cement	Dr. Anish Ms. B. Mahto Dr. A. Mandal Dr. K. Sweta	Dalmia Cement (Bharat) Limited, Patna, Bihar.	15,104.00



LIST OF EQUIMENTS



Tar Viscometer
Apparatus



Dynamic Cone
Penetrator



Flash and Fire
Point



Temperature
Curing Tank



Blain Air
Apparatus



Frame
Deflections and
Reactions



Ring and Ball
Apparatus



Jaw Crusher



Hot Plate



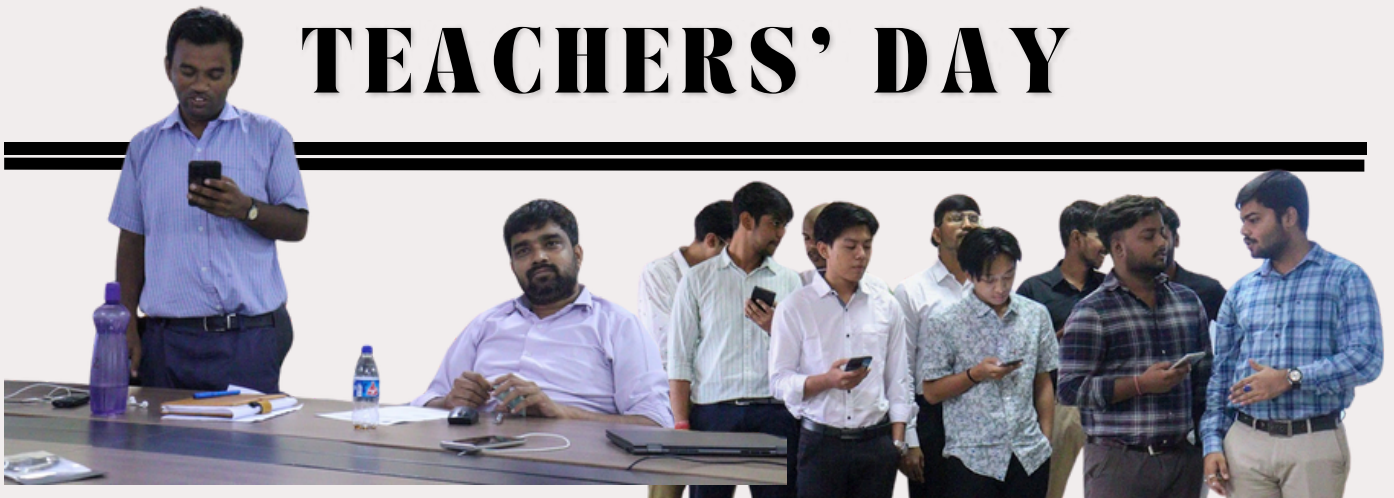
Bitumen
Extractor



Density Basket



TEACHERS' DAY



The Civil Engineering Department of BIT Mesra, Patna, celebrated Teachers' Day with great enthusiasm and appreciation for the faculty. Students from the 2nd and 4th years organized the event, which featured a series of engaging performances, including songs, poetry, and heartfelt speeches expressing gratitude toward their mentors.

The event began with a warm welcome speech, setting the stage for a joyful celebration. Students performed melodious songs and recited poetry dedicated to their teachers, creating a heartfelt atmosphere. A special highlight was the cake-cutting ceremony, where Dr. Anish and Dr. Angshuman Mandal, along with other faculty members, participated, adding to the celebratory spirit.

Dr. Angshuman Mandal audience with a soulful song, and appreciation. The showcased the deep bond between their teachers, memorable filled gratitude,

further delighted the earning warm applause event beautifully bond students and making it a occasion with respect, and happiness.





EXPERT LECTURE

The BIT Patna Civil Engineering Society organized a very successful expert lecture on E-Tendering and Contracts on 1st October 2024, at 10:30 AM in the CAAD Lab, Civil Engineering Department. The session was delivered by expert speakers Er. K.K. Chatterjee, retired Head of Department, Central Mine Planning & Design Institute, Coal India Limited, and Dr. Anish, Head of the Department of Civil Engineering.

The lecture was a comprehensive explanation of modern-day e-tendering procedures, contract management, and best practices in the industry, providing practical knowledge necessary for the professional development of the students. Er. Chatterjee's professional experience, along with Dr. Anish's experience as a teacher, made the discussion informative, and thus a knowledge-intensive and interactive session. The session concluded with an interactive Q&A session, where the students participated enthusiastically and gained valuable knowledge of real-life issues in civil engineering contracts.





TECHNIKA



BIT Patna had organized the most awaited Techno-Cultural fest "Technika'24" from 26th October to 28th October 2024. With the theme "Elysium-Innovating today and Sustaining Tomorrow", this fest promises to be a captivating blend of technical prowess and cultural vibrancy.

The participants from within and outside the Institute were cordially welcomed to participate and give their best in the competitive events.

The primary objective of "Technika'24" was to celebrate the technical and cultural aspects of society among inter and intra-institution participants. Several events were organized such as Speed Cubing, Fusion Fiesta, Solo Saga, Matargashti etc.

The Department of Civil Engineering made a significant contribution by organizing specialized events such as Bridge The Gap and Tall Tower, offering students the chance to demonstrate their technical skills and collaborate in competitive settings.



Position of Civil Engineering Students in Technika 2024

Name & Roll No.	Name of Event	Position
Saurav Kumar Sinha (BTECH/15137/23) Vaibhav Kumar Sinha (BTECH/15136/23) Krishn Ranjan (BTECH/15137/23) Satyam Bhaskar (BTECH/15137/23)	Bridge The Gap	Gold (1st)
Saurabh Kumar Sinha (BTECH/15137/23) Ashish Kumar (BTECH/15118/23) Shashikant Kumar (BTECH/15185/23) Tushar Gupta (BTECH/15211/23)	Tall Tower	Gold (1st)
Gour Kumar (BTECH/15086/23) Parbhakar Kumar (BTECH/15086/23) Ashish Kumar (BTECH/15118/23) Shashikant Kumar (BTECH/15185/23)	Bridge The Gap	Silver (2nd)



GROUP DISCUSSION



The recent Group Discussion (GD) round in the Civil Engineering lab involved 4th-year seniors and 2nd-year juniors, who were divided into mixed groups and assigned random topics. This format encouraged a rich exchange of ideas, combining the experience of seniors with the fresh perspectives of juniors.

Each participant shared their views on their assigned topic, engaging in discussions that ranged across various civil engineering aspects. The seniors contributed their deeper insights, while juniors offered new ideas, fostering a balanced and dynamic conversation. Faculty members moderated the discussions to ensure equal participation and focus.

The GD round helped improve communication, teamwork, and critical thinking skills, while promoting collaboration between different year groups and enhancing technical knowledge.



GOVT. POLYTECHNIC COLLEGE VISIT

On 13th November 2024, students and faculty members from Govt. Polytechnic College, Patna visited the Civil Engineering Department of Birla Institute of Technology, Patna Campus. The purpose of the visit was to provide students with practical exposure to core civil engineering concepts and lab-based applications.

The visiting group was warmly received by the department, and the sessions were conducted by experienced faculty members: Dr. Anish, Dr. Angshuman Mandal, Ms Bandana Mahto and Dr. Kumari Sweta. They introduced the students to various laboratory facilities and explained their practical significance.

The labs covered during the visit included:

- Surveying Lab
- Geotechnical Engineering Lab
- Concrete and Material Testing Lab
- Environmental Engineering Lab

This hands-on experience helped students connect classroom knowledge with real-world civil engineering practices. The faculty of Girls Polytechnic College expressed sincere thanks for the enriching and well-organized session conducted by BIT Patna.





ONE DAY WORKSHOP ON GIS



On December 3, 2024, the BIT Patna Civil Engineering Society successfully held a workshop at the Civil Engineering Department's CAAD Lab on Geographic Information Systems (GIS) and Its Applications in Civil Engineering. In this practical session, students learned about the foundations of GIS technology, its importance in civil engineering, and its uses in environmental management, infrastructure development, and urban planning. In order to analyze spatial information and improve decision-making, participants worked with real-world datasets in hands-on exercises. Students gained important technical skills in GIS from the workshop, which helped them close the gap between theory and practice. All attendees found the session to be a very enriching experience because of the active participation and interactive format.





THE DEPARTMENT OF CIVIL ENGINEERING





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