

**Civil Engineering Department
School of Engineering & Technology
Academic Year 2025-26**

Faculty Development Program

1. Event Title: “Sustainable Development in Civil Engineering: Contemporary Challenges, Industry Practices, and Academic Solutions” at the Department of Civil Engineering, SoET, Sandip University, Nashik.

2. Event Date: 15/12/2025 – 19/12/2025

3. Event Conduction Duration: 11:00 PM TO 12:30 PM & 3.00 PM TO 4.30 PM

4. Event Venue: Online Mode. <https://meet.google.com/ude-fjzp-dis>

5. Event Resource Person Details (Speaker Image, Speaker name, Designation, Company name)

Dr. V. Senthilkumar, Associate Professor, Dept. of Civil Engineering, IIT Pallakad.

Dr. G R Doda Goudar, Professor, Department of Civil Engineering, IIT Madras.

Dr. Manjari T , Assistant Professor, Department of Civil Engineering, NIT Suratkal

Dr. Wisena Perceka, Assistant Professor of Civil Engineering, Member of Structural Engineering Division, Department of Civil Engineering, Faculty of Engineering, Parahyangan Catholic University, Indonesia

Mr. Kaustubh Phadke, India Head - Global Cement & Concrete Association (GCCA)

Dr. K.V. Anand, Assistant Professor, Department of Civil Engineering, NIT Calicut

Dr. Shiv Shankar Kumar, Assistant Professor, Department of Civil Engineering, NIT Patna

Dr. Yogeshwar Navandar, Assistant Professor, Department of Civil Engineering, NIT Calicut

Dr. Rajasekar, Associate Professor, Department of Civil Engineering, NIT Suratkal

Mr. Vetriselvan Arumugham, Head Design and Engineering Kaustubh Phadke, India Head – Bauer Engineering India Pvt Ltd, Chennai

6. Name of Event Coordinator with contact details:

Dr. Swati Patil - Mo.8698747179

Dr. S. Sudhakar – Mo. 9444617244

7. Number of Participants: 256

8. Event Outline, Objective & Outcome of the event:

Outline: The Faculty Development Programme (FDP) on “**SUSTAINABLE DEVELOPMENT IN CIVIL ENGINEERING: CONTEMPORARY CHALLENGES, INDUSTRY PRACTICES, AND ACADEMIC SOLUTIONS**” is organized by Department of Civil Engineering, School of Engineering and Technology, Sandip University, Nashik, Maharashtra India during December 15-19, 2025 through using the Google meet conference (online mode). A total of 256 participants from various states of the country participated in the FDP. The participants are the Faculty, Research scholars and PG students of various Government and Private Engineering colleges along with industry professionals across the country. The FDP has received an overwhelming response from the participants. A total of 10 sessions is conducted. The technical sessions highlight deeper insights into modern tools, ground improvement using waste materials, sustainable transport strategies, and coastal protection measures.

Objective:

- To highlight sustainable practices in Civil Engineering through expert sessions on low-carbon materials, geotechnical advancements, resilient infrastructure, and modern construction technologies.
- To equip participants with Industry-Oriented Insights on waste-based solutions, coastal protection, sustainable transport systems, and innovative methods to enhance teaching and research.

Outcome of Event:

TECHNICAL SESSIONS

December 15, 2026 (Day – 1, Session – 1)

The participants are trained on the following concepts of Project Delivery.

- Need for strategic planning and innovative technologies
- Building Information Modelling BIM
- Applications of BIM - IIT – Palakkad – Case study
- BIM based Construction Progress Monitoring
- Various Technology Implementation Approaches

December 15, 2026 (Day – 1, Session – 2)

The participants were introduced with the following concepts.

- Sustainable Development and Practice
- Materials and The Environment
- Materials – Production, Manufacture, Transportation and Use
- Deep Foundations - Piled-Raft Foundations
- Design Principles – PRF or CPRF
- Construction and Monitoring of CPRFs
- Analysis, Design and Practice: Case Histories- Environmental Considerations

December 16, 2025 (Day – 2, Session – 1)

The participants have gained the technical knowledge on the following concepts.

- Properties applications of Lightweight concrete & Aerated Cellular Concrete
- Properties and Applications of No Fines Concrete & Foamed Concrete
- Mix Design Philosophy

December 16, 2025 (Day – 2, Session – 2)

The participants have gained the technical knowledge on the following concepts.

- Challenge of Concrete
- Fiber Reinforced Concrete (FRC)
- Evolution of Fiber Reinforced Concrete
- The Use of New Generation of Fiber Reinforced Concrete in Earthquake-Resistant Structures

December 17, 2025 (Day – 3, Session – 1)

The participants have gained the knowledge on the following concepts.

- Identification of High-Impact "Hotspots" for Decarbonization
- Increased Adoption of Material Substitution
- Design Optimization to Reduce Material Waste
- Regulatory Compliance

December 17, 2025 (Day – 3, Session – 2)

In this session, the participants have gained the knowledge on the following:

- Coastal vulnerability assessment along the coast of Kerala
- Vulnerability Index calculation
- Coastal Protection- Hard Measures
- Modeling of temporal non stationarity in wave parameters
- Sustainable Coastal Protection Measures

December 18, 2025 (Day – 4, Session – 1)

In this session, the participants have gained the knowledge on the following:

- Methods for Soil Improvement
- Applications for geotextiles and geogrids
- Functions of geotextiles and geogrids
- An application of Shredded tyre & Geogrid in improving soft clay bed

December 18, 2025 (Day – 4, Session – 2)

In this session, the participants have gained the knowledge on the following:

- key obstacles hindering IWT development,
- Identification of Strategic Solutions for Sustainability
- Interpretive Structural Modeling (ISM) to analyze the complex cause-effect relationships among the barriers

December 19, 2026 (Day – 5, Session – 1)

In this session, the participants were explained the following concepts.

- Sustainable Materials such as Flyash, GGBS
- Agricultural Waste Based Construction Materials
- Alkali Activated Materials
- Sustainable Aggregates and Replacement Philosophy
- Bonding Mechanisms in Eco-friendly Materials

December 19, 2026 (Day – 5, Session – 2)

In this session, the participants have gained the knowledge on the following:

- Geotechnical Solutions for Sustainable Development
- Foundation Solutions
- Compaction
- Reinforcement - Stone columns
- Chemical modification - Deep Soil Mixing
- Case studies

Overall, the conduction of Faculty Development Programme

- Strengthened collaboration between Sandip University and experts from IITs, NITs, and industry for future joint projects, workshops, and training programs.
- The participants gained valuable insights from academia and industry experts, encouraging them to adopt modern tools and technologies in civil engineering.
- The event marked a significant step towards achieving the department's vision of bridging academics with industry needs and promoting real-time applications, advanced technologies, and practical challenges in delivering sustainable infrastructure among the participants.
- The programme promoted curriculum enrichment, research collaborations, and enhanced teaching methodologies in line with global sustainability goals.



Dr.

Prakash G. Burade, Associate Dean, Engineering SOET, Sandip University is addressing the participants



Dr.

Swati A. Patil, HoD, Civil Engineering, SOET, Sandip University, is addressing the participants



Dr. K.V. Anand is explaining the applications of Coastal Protection Structures





Mr. Vetrivelvan Arumugham, is explaining Geotechnical Solutions for Sustainable Development