

## About

### NATIONAL INSTITUTE OF TECHNOLOGY CALICUT

National Institute of Technology Calicut (NITC) is one of the 31 institutions of national importance set up by an Act of Parliament namely the 'National Institute of Technology Act 2007', and is fully funded by the Government of India. The mandate of the Institute is to provide higher technical education and conduct research in the various branches of Engineering, Science, Technology and Management. Originally established in 1961 as a Regional Engineering College (REC), it was transformed into a National Institute of Technology in 2002. The Institute offers bachelors, masters and doctoral degree programs in Engineering, Science, Technology and Management. With its proactive collaborations with a multitude of research organizations, academic institutions and industries, the institute has set a new style for its functioning under the NIT regime.

Set in a picturesque landscape at the foothills of the Western Ghats, NIT Calicut is located about 22 kilometres north-east of Calicut city in the state of Kerala, India. It stretches over a length of about 1.5 kilometres along the Calicut-Mukkam road, extending over an area of approximately 120 hectares. Calicut, also known as Kozhikode, located in the Malabar region of Kerala State, found a place in world history with the discovery of a sea route to India in 1498 by the Portuguese navigator Vasco Da Gama. Basking in the idyllic setting of the Arabian Sea on the west and the proud peaks of the Wayanad hills on the east, Calicut is known for its serene beaches, lush green countryside, historic sites, calm backwaters, wildlife sanctuaries, rivers and waterfalls. Being a fully residential institution, the campus houses academic buildings, research labs, hostels, residences and other amenities among its infrastructure. The Institute is presently offering 11 UG programmes and 29 PG programmes including MBA. Doctoral level research has remarkably increased in recent times with a substantial increase in the volume of research papers and patents produced.



## About

### K.S SCHOOL OF ENGG. & MGMT.

The Kammavari Sangham, established in the year 1952, is a non-profit oriented voluntary service organization. The organization was created with the objective of providing charitable services to the community and society. The Sangham has diversified its activities since its establishment over seven decades ago. It has now expanded its horizons to include community - strengthening ventures, providing education and financial support to the society. With a firm belief that quality education only can lay a strong foundation for bringing about economic and social changes to the lives of millions, the Sangham established educational institutions, starting with K.S. Polytechnic in 1992. Enthused with this success of its foray into technical education, the Sangham started K.S. Institute of Technology (KSIT), its first Engineering College in the year 1999. In the following years, both these institutions have carved an enviable niche through academic excellence achieved in a very short span of time. Following the success of KSIT, the Sangham ventured to start yet another technical institution, oriented towards advanced studies and research and thus, started K.S. School of Engineering & Management (KSSEM) in 2010. K.S. School of Architecture was established in the year 2015 and K.S. Pre-University College was recently established in 2022.



## Department of Civil Engineering

NATIONAL INSTITUTE OF TECHNOLOGY CALICUT

&

K.S SCHOOL OF ENGG. & MGMT. BENGALURU

Jointly Organize

**AICTE Sponsored One Week Online  
Faculty Development Program**

On

**Holistic Disaster Management: Linking  
Resilient Infrastructure with Sustainability**



**20<sup>th</sup> to 25<sup>th</sup> January 2025**

**In Association with  
All India Council for Technical Education  
(AICTE-ATAL Scheme)  
Government of India, New Delhi**



## About FDP

The objective of the Faculty Development Programme on **Holistic Disaster Management: Linking Resilient Infrastructure with Sustainability** is to equip faculty members with a comprehensive understanding of disaster management that integrates resilient infrastructure with sustainable development principles. The programme aims to enhance educators' knowledge of disaster risk reduction, climate change adaptation, and mitigation strategies, emphasizing the importance of building infrastructure that can withstand natural hazards while promoting long-term environmental and social sustainability. It seeks to develop pedagogical approaches that effectively teach these concepts, fostering interdisciplinary collaboration across engineering, urban planning, environmental sciences, and policy studies. Additionally, the programme will empower faculty to engage in research and innovation related to disaster resilience and sustainability, while also encouraging them to advocate for resilient infrastructure in both academic and community settings. By strengthening the capacity of educators to teach, research, and implement sustainable disaster management practices, the programme aspires to contribute to the development of resilient communities and infrastructure capable of withstanding future challenges.

## Eligibility

The faculty members, Research scholars & PG Scholars of the AICTE approved institutions and Industry Personnel.

## Guidelines

- A test will be conducted by the coordinators at the end of the program.
- A test shall be conducted (online) by coordinator at the end of the program.
- The certificates shall be issued to those participants who are registered on ATAL portal [www.aicte-india.org/atal](http://www.aicte-india.org/atal) and attend the program with minimum 80% attendance and score minimum 70% marks in the test
- No registration fee.
- Feedback must be shared by participants through portal available on their login.

## DISTINGUISHED SPEAKERS

**Dr. Wang Gonghui**  
Professor  
Disaster Prevention Research Institute (DPRI),  
Kyoto University, Japan



**Dr. Thomas Oomen**  
Professor & Chair  
Geology & Geological engineering,  
University of Mississippi, USA



**Dr. Madhavi Latha G**  
Professor  
Dept. of Civil Engineering  
Indian Institute of Science, Bengaluru



**Dr. K. G. Thara**  
Professor  
Institute of Land and Disaster  
Management, Kerala



**Dr. P.S. Prasad**  
Chief Scientist  
Central Road Research Institute,  
New Delhi



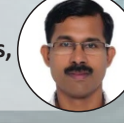
**Dr. Anil Joseph**  
Chairman  
Indian Geotechnical Society, India and  
Managing Director Geo Structural (P) Ltd.



**Dr. Arekal Vijay**  
Professor  
Department of Civil Engineering,  
K.S.School of Engineering and Management, Bengaluru



**Dr. Sajin Kumar K. S**  
University of Kerala Karyavattom Campus,  
Thiruvananthapuram, Kerala



**Dr. Sreevalsa Kolathayar**  
Associate Professor  
Dept. of Civil Engineering,  
NITK Surathkal



**Dr. Girish Gopinath**  
Scientist, Geomatics Division,  
Centre for Water Resources Development  
and Management, Kerala



**Dr.S Srikrishnan**  
Assistant Professor  
CoEDMM, IIT Roorkee



**Dr. Yunus Ali Pulpadan**  
Assistant Professor  
Earth and Environmental Sciences, Indian  
Institute of Science Education and Research Mohali



**Ms. Minimol korulla**  
Head - Strategic Initiatives & Projects -  
ISEAP at Maccaferri



## Registration Link

Participants are requested to register by scanning the below QR code.



Select the thrust area as “Disaster Management” and “Holistic Disaster Management: Linking Resilient Infrastructure with Sustainability”

## Co-ordinator



**Dr. Anil Kumar**  
Assistant Professor  
Department of Civil Engineering,  
National Institute of Technology (NIT) Calicut  
Kozhikode, Kerala

## Co-coordinator

**Dr. Naveena M.P**  
Assistant Professor  
Department of Civil Engineering,  
K.S.School of Engineering and Management,  
Bengaluru



For any clarifications, please e-mail to:

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[naveena.mp@kssem.edu.in](mailto:naveena.mp@kssem.edu.in)

## Contact Details

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8722609983

**Dr. Naveena M.P**  
7349093996



**DEPARTMENT OF CIVIL ENGINEERING**  
**NATIONAL INSTITUTE OF TECHNOLOGY CALICUT**

**&**

**K.S. SCHOOL OF ENGINEERING & MANAGEMENT BANGALORE**

**FDP REPORT ON HOLISTIC DISASTER MANAGEMENT: LINKING**  
**RESILIENT INFRASTRUCTURE WITH SUSTAINABILITY**

**About the Program**

The Department of Civil Engineering, National Institute of Technology Calicut (NITC), in collaboration with the K.S. School of Engineering & Management, Bangalore, successfully organized a Faculty Development Program (FDP) on “Holistic Disaster Management: Linking Resilient Infrastructure with Sustainability” from 20<sup>th</sup> to 25<sup>th</sup> January 2025. The program witnessed the participation of over 120 academicians and professionals from various institutions across the country.

The FDP commenced on 20th January 2025 at 6:00 PM with an inaugural address by Dr. T.M. Madhavan Pillai, Professor and Head of the Department of Civil Engineering at NIT Calicut. He highlighted the critical role of NIT Calicut in advancing research and training in disaster management and emphasized the institution’s commitment to fostering collaboration for addressing challenges in disaster mitigation and sustainability. Dr. Vijayalakshmi Akella, Professor and Head of the Department of Civil Engineering at K.S. School of Engineering & Management, Bengaluru, also addressed the gathering, emphasizing the relevance of linking resilient infrastructure with sustainability and the objectives of the FDP.

The six-day FDP featured 13 expert sessions delivered by eminent speakers from prestigious institutions, including IISc, IITs, NITs, and other reputed universities. The topics ranged from landslide risk mitigation and geospatial technology to remote sensing, machine learning, and sustainable disaster management practices.

## **About the Sessions**

**Session 1** featured a lecture by Dr. Wang Gonghui on *“New Challenges in the Risk Cognition and Reduction for Catastrophic Landslides.”* The session provided valuable insights into the complexities of landslide risks and highlighted innovative mitigation approaches. Dr. Wang's expertise offered participants a deeper understanding of this critical subject.

**Session 2** featured an insightful lecture by Dr. S. Srikrishnan on *“Geotechnical Engineering Applications to Territorial Landslide Early Warning System (Te-LEWS) in India.”* The session highlighted the integration of geotechnical engineering with early warning systems and advancements in landslide disaster management in India. Dr. Srikrishnan's expertise offered valuable insights into enhancing resilience against landslide hazards.

**Session 3** featured an insightful lecture by Dr. P.S. Prasad on *“Safety Issues Related to Landslides & Slope Stability.”* The session highlighted key safety challenges and practical solutions for managing landslides and ensuring slope stability. Dr. Prasad's expertise emphasized the importance of these aspects in enhancing infrastructure resilience and disaster risk reduction.

**Session 4** featured an insightful lecture by Dr. Madhavi Latha G on *“Comprehensive Stability Analysis of Jointed Rock Slopes - Chenab Bridge Case Study.”* Her in-depth analysis of this iconic engineering project offered valuable insights into stability considerations in complex geotechnical conditions. The session provided participants with a deeper understanding of advanced slope stability analysis techniques.

**Session 5** featured an engaging lecture by Dr. Sajin Kumar K. S on *“Landslide Early Warning System through a Mobile App.”* His insights on leveraging mobile technology for disaster preparedness emphasized the importance of accessible, community-focused solutions. The session highlighted innovative approaches to mitigating landslide risks effectively.

**Session 6** featured an enlightening lecture by Dr. Thomas Oommen on *“Integrating Remote Sensing and Machine Learning for Holistic Disaster Management: Bridging Resilient Infrastructure and Sustainability.”* His discussion on combining advanced technologies offered a forward-looking perspective on sustainable disaster management. The session emphasized innovative approaches for building resilient infrastructure.

**Session 7** featured an inspiring lecture by Dr. Anil Joseph on *“Engineering A Resilient Future: Building Stronger, Smarter, Safer.”* His insights into innovative geotechnical practices highlighted the importance of resilient engineering solutions. The session emphasized building smarter and safer infrastructure to address future challenges effectively.

**Session 8** featured an inspiring lecture by **Dr. Sreevalsa Kolathayar**, highlighting the integration of sustainability into geotechnical engineering for disaster risk reduction. His insights provide a guiding framework for developing eco-friendly, disaster-resilient infrastructure. Dr. Kolathayar's work continues to inspire the engineering community to adopt innovative and sustainable solutions that promote environmental stewardship.

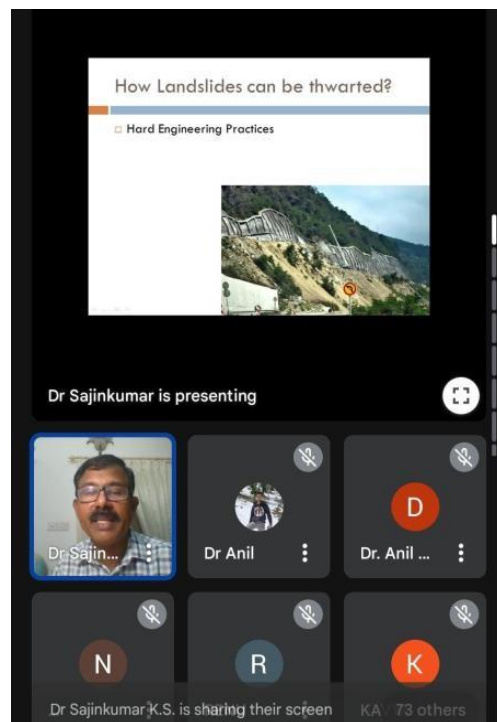
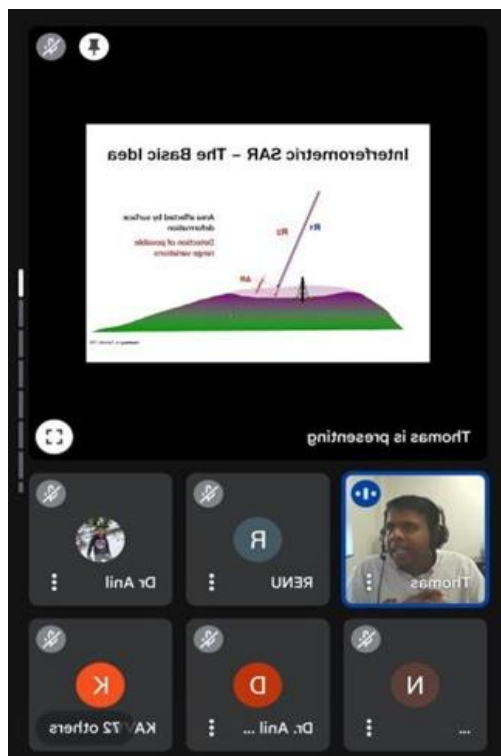
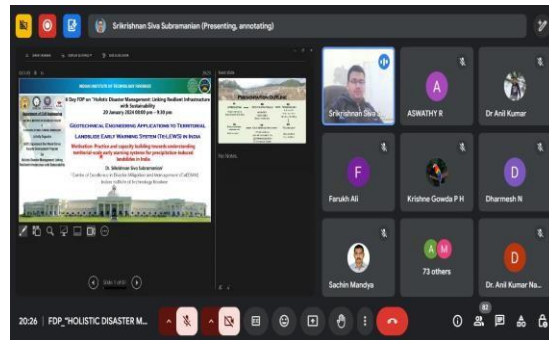
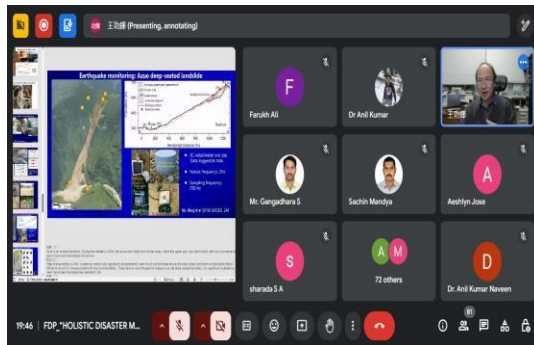
**Session 9** featured an insightful lecture by Dr. Yunus Ali Pulpadan on *"Cascading Geohazards: Understanding Their Mechanisms and Evolutions from a Remote Sensing Perspective."* His expertise in using remote sensing to analyze the mechanisms and evolution of cascading geohazards offered valuable insights. The session provided participants with a deeper understanding of these complex phenomena and their effective management.

**Session 10** featured an insightful lecture by Dr. Girish Gopinath on *"Geospatial Technology for Mapping, Monitoring, and Modelling of Landslides."* His discussion on the application of geospatial tools to landslide studies emphasized the critical role of technology in effective disaster mapping, monitoring, and prediction.

**Session 11** featured an insightful lecture by Dr. K.G. Thara on *"Structural and Non-Structural Measures for Sustainable Disaster Mitigation."* Her expertise and thoughtful explanations provided a deeper understanding of effective disaster risk reduction strategies. The session offered valuable insights into sustainable approaches to disaster mitigation.

**Session 12** featured an insightful lecture by Ms. Minimol Korulla on *"Novel Landslide Mitigation Approaches for Sustainability."* Her expertise and innovative approaches in this critical area were truly inspiring. The session highlighted sustainable strategies for effective landslide mitigation.

**Session 13** featured an insightful lecture by Dr. Arekal Vijay on *"Recent Trends in Disaster Resilient Infrastructures."* His expertise and innovative approaches provided valuable insights into designing and maintaining disaster-resistant infrastructure. The session broadened our understanding of emerging trends in resilient infrastructure development.





Yunus Ali (Presenting, annotating)

### Deformation Mapping

**COSI-Corr**

The time series deformation shows that the location points A-C within the R1 area have occurred remarkable displacement before the failure.

6:52 PM | kna-qgnc-ozd

People

All muted Add people

Search for people

IN MEETING

Contributors 73

- Naveena M P (You) Meeting host
- 6005 B Bharathi
- ABHILASH N R
- Abirami
- Adarsha
- Aeshlyn Jose

65 others

Naveena M P

minimol korulla (Presenting, annotating)

### ANCHORING /REINFORCING , DRAINING & GREENING

**ROHTANG TUNNEL SOUTH PORTAL SINKING ZONE - MITIGATION MEASURES, HIMACHAL PRADESH, INDIA**

MITIGATION - SOLUTION GLIMPSES

minimol korulla

14:16 | FDP\_"HOLISTIC DISASTER MANAGEMENT: LINKI...

People

All muted Add people

Search for people

IN MEETING

Contributors 58

- Dr. Anil Kumar Nav... (You) Meeting host
- 6005 B Bharathi
- Aeshlyn Jose
- Aishwarya Shaji
- Ajmal M Sajeev
- Amardeep Meena

48 others

Dr. Anil Kumar ...

The program concluded with a valedictory function on 25<sup>th</sup> January 2025 at 6:30 PM. During the session, Dr. Anil Kumar, Assistant Professor, Department of Civil Engineering, NIT Calicut, and the Program Coordinator, presented a comprehensive summary of the six-day FDP, outlining the key insights, discussions, and learnings from the expert sessions. The event ended with a heartfelt vote of thanks delivered by Dr. Naveena M.P., Co-Coordinator from the Department of Civil Engineering, K.S. School of Engineering & Management, Bengaluru, who expressed gratitude to all the speakers, participants, and organizing teams for their efforts in making the program a success.

This FDP provided a platform for participants to gain advanced knowledge, exchange innovative ideas, and explore multidisciplinary approaches to linking disaster resilience with sustainability, contributing significantly to the field of disaster management.