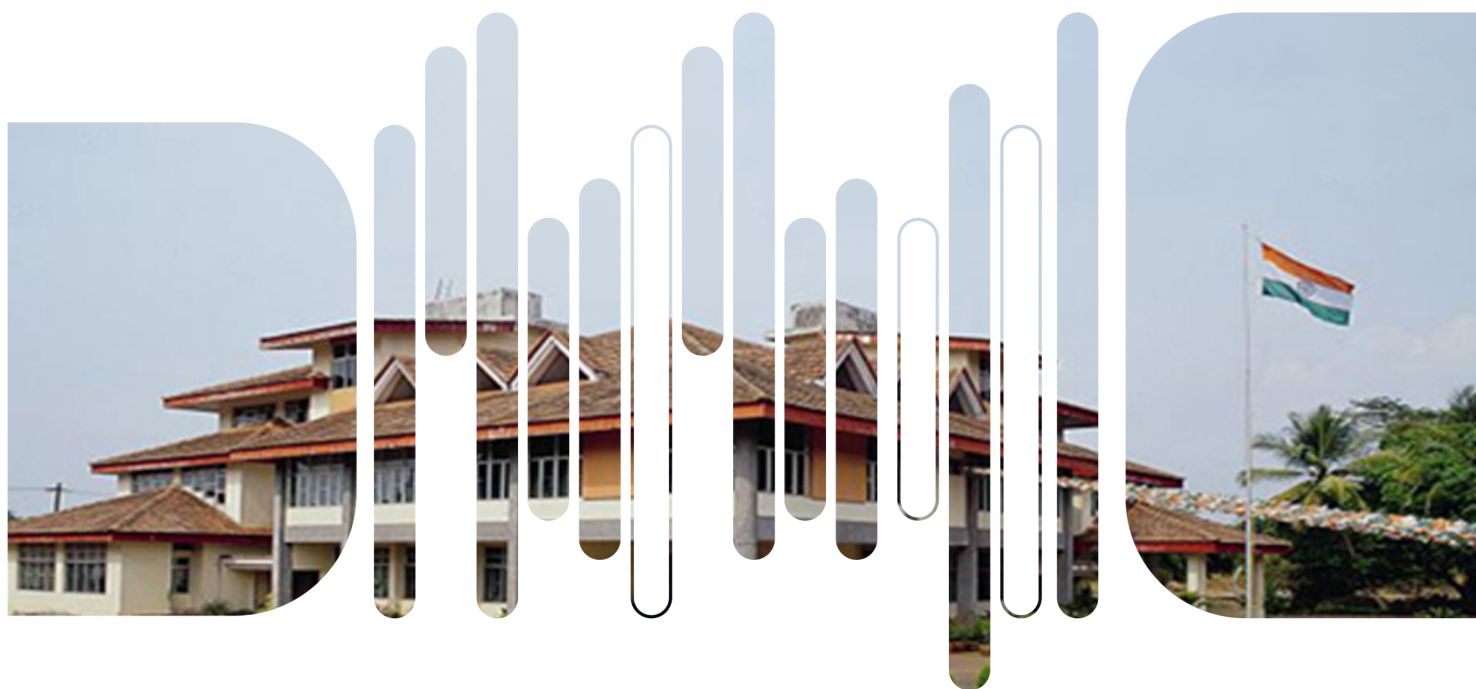




2 - DAY PRE GCDI'25 CONFERENCE INTERNATIONAL WORKSHOP

ENERGY SYSTEMS AND MODELLING (ESM'25)

4th & 5th MARCH 2025 (HYBRID MODE)



Department of Mechanical Engineering
and

Centre for Clean Energy and Circular Economy (C-CECE),

In Association With

ASME Student Section NITC,

cordially invites you to attend the 2 - day Pre-conference workshop, **Energy Systems and Modelling (ESM'25)** as part of GCDI'25

Last date of Registration and Payment: 15th Feb 2025
Confirmation and Invitation Link: 17th Feb 2025

COORDINATORS: Dr. Vinod Kumar Sharma | Dr. Vijayaraj K | Dr. Sharu B. K. | Dr. Sanjeev Kumar Manjhi

NIT CALICUT

National Institute of Technology Calicut (NITC) is an Institution of National importance, fully funded by the Government of India. With a history of 63 years of excellence, NITC proudly stands as one of the premier institutes in the country for technical education, the largest among NITs accommodating approximately 8000 students and 420 faculty members. With a vision to achieve the International Standing of the Highest Calibre, NITC offers 11 undergraduate and 30 postgraduate programs across 15 departments and several interdisciplinary and multi-disciplinary centres. Full-time and part-time doctoral research programs are offered in all the departments.

GCDI'25 |  [Click here](#)

India emits 2.9 Gt of CO₂ annually, accounting for 4.9% of global emissions, making it the third-largest emitter. The major contributing sectors —power, automotive, aviation, steel, cement, and agriculture — are responsible for approximately 70% of India's total emissions. As India's economy continues to grow, careful planning and execution are essential to balance economic development with achieving the net-zero goal by 2070. The Global Conference on Decarbonizing India (GCDI), first successfully conducted in December 2023 at PSG College of Technology, India, provides a platform for diverse stakeholders to address the challenges and explore technological solutions for decarbonization.

CENTRE FOR CLEAN ENERGY AND CIRCULAR ECONOMY

The Centre for Clean Energy and Circular Economy (C-CECE) is a multi-disciplinary centre in NITC, that aims to converge the activities related to clean energy and circular economy, aligning closely with the related sustainable development goals, national goals and missions of our country.

ESM

The first edition of the workshop on Energy Systems and Modelling (ESM 2023) was conducted online from 26th to 30th June 2023, organized by the Department of Mechanical Engineering, NIT Calicut. It featured 24 sessions over five days, covering topics like Hydrogen Technologies, CO₂ Capture, Renewable Energy, Battery Management, and CFD Fundamentals, attracting 115 participants, including students, faculty, and industry professionals. Building on the success of ESM 2023, the upcoming second edition ESM 2025 is proposed as a two-day pre-conference event for GCDI 2025. This workshop in hybrid mode aims to deepen engagement through interactive sessions, expert talks, and hands-on activities, continuing its mission to advance knowledge in energy systems and modeling. This hybrid workshop will offer insights into technology advancements, energy policy, and strategic planning, equipping participants to design innovative models for real-world energy challenges. Interactive sessions and expert-led discussions foster collaboration and innovation for a sustainable future.

OBJECTIVES

- Provide participants with advanced insights into energy systems, modelling techniques, and emerging technologies such as hydrogen technologies, CO₂ capture, and renewable energy solutions.
- Equip attendees with practical skills through interactive sessions, expert talks, and hands-on activities to design innovative models addressing real-world energy challenges.
- Facilitate meaningful engagement among students, faculty, and industry professionals to foster innovation, collaboration, and strategic planning for a sustainable future.



CHIEF GUEST

Prof. Jayanta Kapat
Univ. of Central Florida, USA

LIST OF SPEAKERS

Prof. Jayanta Kapat
Univ. of Central Florida, USA

Prof. Muthu Kumar P
IIT Tirupati

Dr. Subith Vasu
Univ. of Central Florida, USA

Prof. Anil Kumar E
IIT Tirupati

Dr. Afzaal Ahmed
IIT Palakkad

Dr. Ramees Rahman
Univ. of Central Florida, USA

Dr. S.N. Deepa
NIT Calicut

Dr. Vijayaraj K
NIT Calicut

Dr. Sanjeev Kumar Manjhi
NIT Calicut

Dr. Jithin M
NIT Calicut

Dr. Vinod Kumar Sharma
NIT Calicut

Dr. Sharu B. K.
NIT Calicut

Dr. Kaushlendra Sharma
IIIT Nagpur

Dr. Sunita Deb
NIT Andhra Pradesh

Dr. Srinivas T
NIT Jalandhar

Dr. Samarjeet Chanda
IIT Palakkad

Mr. Santosh Gurunath
Umegine

TOPICS

(NOT LIMITED TO)

- Hydrogen Production, Storage and Utilization
- CO₂ Capture and Sequestration
- Energy Harvesting
- Fuel Cells
- Clean Combustion
- Battery Thermal Management
- Energy Materials
- Renewable Energy Conversion Systems
- Phase Change Materials
- Turbomachinery

Last day visit to energy research labs

PATRON

Prof. Prasad Krishna
Director, NIT Calicut

WORKSHOP CHAIRS

Prof. M. L. Joy
HOD, MED,
NIT Calicut

Prof. Shaija A.
Chairperson, C-CECE,
NIT Calicut

HOW TO REGISTER ?

REGISTRATION FEE (INCLUDING 18% GST):	Offline (INR)	Online (INR)
Faculty	3540	1770
Industry/R&D/Organisations	5900	2950
Research Scholars/Students	1770	1180
Research Scholars/Students (NITC)	1180	944

10% DISCOUNT FOR ASME MEMBERS FOR THE WORKSHOP

Interested students can register by filling the google form with a single click on the right side button.

Click here

Special events on 6th March 2025



www.gcdi.in/industrialconclave



www.gcdi.in/ecovision2025



www.gcdi.in/sammelan

CONCLAVE & EcoVision 2025
Industry & NITC Exhibition
6th March 2025, NIT Calicut

SAMMELAN
Academia-Industry
Interaction
6th March 2025
The Raviz Kadavu
Kozhikode

CONCLAVE and EcoVision are complementary for the registrant

PAYMENT DETAILS:

Registration fee can be paid using the above QR Code.

SCAN & PAY



UPI ID: gcdi25.296@sbi



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