

5-day Short Term Course
On
Current Research Trends in Civil Engineering
at NIT-Rourkela (Hybrid mode)
(CRTCE-NITRKL:2024)

25th October 2024 – 29th October 2024



Organized by
Department of Civil Engineering,
National Institute of Technology- Rourkela.

Coordinator-and-Faculty Instructor:
Dr. Mahendra Gattu,
Assistant Professor, Civil Engineering,
9894275445, gattum@nitrkl.ac.in

ॐ असतो मा सद्गमय।
तमसो मा ज्योतिर्गमय।
मृत्योर्मा मृतं गमय ॥
ॐ शान्ति शान्ति शान्तिः ॥

About Institute

National Institute of Technology (NIT) Rourkela is an institution of national importance funded by the Ministry of Human Resource Development. It is one of the country's premier national-level institutions for technical education.

The institute's main objective is to produce quality engineers and scientists at graduate, post-graduate, and doctoral levels in various branches of Engineering and Science.

NIT Rourkela was ranked 601-800 worldwide by the Times Higher Education World University Rankings of 2024 and 67th in Southern Asia. In India, it was ranked 19 among engineering colleges by the National Institutional Ranking Framework (NIRF) in 2025.

For details about the institute, please visit us at <https://nitrkl.ac.in/>

About the Department:

The Department of Civil Engineering is developing new technologies and nurturing engineers for diverse and sustainable growth of engineering infrastructure, leading to the wealth and welfare of humanity.

The Department offers various UG, PG, and Ph.D. programs to develop students into self-aware, resilient, and compassionate leaders in academic, industrial, and government organizations. Please visit us at <https://nitrkl.ac.in/CE>

Course Description:

The participants will learn new research ideas and innovative products developed by the civil engineering faculty at NIT-Rourkela.

Topics:

Fatigue:

- ✓ Bažant-Le-Kirane Paradox of Fatigue Fracture in Engineering Materials.
- ✓ Carbonation and chloride induced fatigue life prediction of reinforced concrete.

Composites:

- ✓ Bond shear strength enhancement in FRP lap splices using CNTs and its probabilistic modelling.
- ✓ Strengthening of RC Beams Combinedly Using Side Near Surface Mounted FRP Bars and Externally Bonded FRP Sheets.

Construction materials:

- ✓ A comprehensive review on the factors influencing engineering characteristics of lightweight geopolymer concrete.
- ✓ Variability of coal mine overburden incorporated concrete and its effect on the seismic safety of reinforced concrete building.

Computational modeling:

- ✓ Experimental and computational analysis of free in-plane vibration of curved beams.
- ✓ A 2D-CNN-Based Two-Stage Structural Damage Localization and Quantification Technique Using Time Domain Vibration Data.
- ✓ Numerical study on microscopic behaviour of non-crushable cemented granular media subjected to direct shear test.
- ✓ Numerical failure assessment of multi-bolt FRP composite joints with varying sizes and preloads of bolts.

List of Speakers (Tentative): Dr. Mahendra Gattu, Prof. Subhajit Mondal, Prof. Bibekananda Mandal, Prof. Pradip Sarker, Prof. Uttam Kumar Mishra, Prof. Sonali Bhowmick, Prof. Shyamal Guichait, Prof. Soukat Kumar Das.

Timings:

25th October 2024 – 29th October 2024: 330 pm – 500 pm

Program Fees:

✓ Online Participants:

Industry Professionals: Rs. 1000/- (includes 18% GST)

Faculty, Students and Research Scholars: Rs. 500/- (includes 18% GST)

✓ Offline Participants:

Industry Professionals: Rs. 9000/- (includes 18% GST)

Faculty, Students and Research Scholars: Rs. 8500/- (includes 18% GST)

Payment Details:

A/C Name: CONTINUING EDUCATION NIT ROURKELA

A/C No.: 10138951784

IFS Code: SBIN0002109

Bank Name: State Bank of India

Branch Name: NIT Campus, Rourkela

Registration: Google Form Link:

<https://forms.gle/GZKJZm7jV6dQNDse7>

Last Date of Registration: 22-10-2024

Terms and Conditions:

1. Fees once paid cannot not be refunded.
2. Online participants should have good internet through mobile/Desktop.
3. Offline participants: Limited Accommodation is available on first come-first serve basis.
4. Participation certificate will be provided for participants with 80% attendance and above.