



Student Activity Centre



Organized by



CEST CLUB OF NIT Rourkela

&



ICE - UK, NIT Rourkela Chapter

ICE UK: NIT Rourkela Chapter



WHERE TRADITION MEETS INNOVATION
THE ANNUAL CIVIL ENGINEERING FEST OF NIT ROURKELA

CHRONICLE

About the event:

Chronicle is an event where participants have to present their innovative ideas and solutions on a given topic. This Event aims for participants to express their thoughts and theories, bringing positive change to society.

Problem Statement:

Prepare a Presentation on any of the given topic:

1. Integration of Artificial Intelligence in Civil Engineering Structures for Health assessment.
2. Enhancing disaster management through infrastructure resilience.

1. INTEGRATION OF AI IN CIVIL ENGINEERING STRUCTURES FOR HEALTH ASSESSMENT

Introduction:

Since 1956, artificial intelligence research has been built on the basis of interaction of different disciplines, such as informatic science, cybernetics, informational philosophy, psychology, linguistics, Neurophysiology, and so on. artificial intelligence research has become a reality.

In the field of adaptive civil engineering, Adam and Smith presented advancement. In the context of the management framework on an active tensegrity, self-diagnostic, multi-objective form control and enhancement-learning processes are applied.

The artificial immune system (AIS) activates a living creature's adaptive immune system to solve the challenges of real-world engineering optimization issues. To find feasible structures and the necessary constants for such structures, a variation of the genetic algorithm and the least-squares approach was used in this methodology.

Swarm intelligence metaheuristics, which model a population of simple individuals evolving solutions by communicating with one another and the environment, have produced promising results on a variety of difficult problems and have become a hot topic of study in recent years.

What is expected from the participants:

- a. How the AI improves the buildings durability and health condition of workers.
- b. How can unemployment be decreased?
- c. Effective ways of implementation of AI on a large scale and considering the cost barriers.



Student Activity Centre



Organized by



CEST CLUB OF NIT Rourkela

&



ICE : UK , NIT Rourkela Chapter

ICE UK: NIT Rourkela Chapter



WHERE TRADITION MEETS INNOVATION
THE ANNUAL CIVIL ENGINEERING FEST OF NIT ROURKELA

2.ENHANCING DISASTER MANAGEMENT THROUGH INFRA STRUCTURE RESILIENCE

Introduction:

No person or place is immune from disasters or disaster-related losses. Infectious disease outbreaks, acts of terrorism, social unrest, or financial disasters in addition to natural hazards can all lead to large-scale consequences for the nation and its communities. Communities and the nation thus face difficult fiscal, social, cultural, and environmental choices about the best ways to ensure basic security and quality of life against hazards, deliberate attacks, and disasters. One way to reduce the impacts of disasters on the nation and its communities is to invest in enhancing resilience.

Disaster Management can be defined as the organization and management of resources and responsibilities for dealing with all humanitarian aspects of emergencies, in particular preparedness, response and recovery in order to lessen the impact of disasters. Infrastructure resilience is the ability to reduce the magnitude and/or duration of disruptive events. The effectiveness of a resilient infrastructure or enterprise depends upon its ability to anticipate, absorb, adapt to, and/or rapidly recover from a potentially disruptive event.

What is expected from the participants:

- Effective ways of disaster management and controlling the after effects of it.
- Any new ways or better ways of infrastructure resilience.

General Guidelines:

- The event is open to all.
- The event is divided into two stages:
STAGE I - Abstract submission
STAGE II - Final presentation
- It is a team event. The maximum number of permissible members in a group is 4.
- Shortlisted teams from the abstract submission round have to present their ideas in the form of PowerPoint presentations. This round will be conducted virtually.
- Use of any unfair means is strictly prohibited.

Abstract Guidelines:

- The abstract should be submitted with a minimum font size of 12 and single line spacing and must not exceed two pages.
- It should be supported with valid references.
- Members may add one extra page to include stats, images and hyperlink them wherever required.
- Team leaders should submit the abstract in the below-mentioned link by **11/05/21**
- Members' details should be present on the first page below the title chosen in the following order. (**Name – Regd ID – Contact Details – Mail ID – College**)



Student Activity Centre



Organized by



CEST CLUB OF NIT Rourkela

&



ICE UK: NIT Rourkela Chapter



WHERE TRADITION MEETS INNOVATION
THE ANNUAL CIVIL ENGINEERING FEST OF NIT ROURKELA

Presentation Guidelines:

- Team leaders of shortlisted abstracts will be sent a mail regarding their selection. It is advised to check your mail regularly.
- The maximum time for presentation would be 15 minutes, followed by a 5 min query session.
- The team leaders, along with members, should join the Whatsapp group provided in the mail(Mail will be sent after the abstract submission round).
- If a team misses its designated presentation time, it will forfeit its competition slot.
- All team members are advised to be present and speak during their team's presentation.

Judging Criteria:

Presentation: 50%

Abstract: 20%

Interaction: 20%

Innovation: 10%

Registration Cum Abstract Submission Link:

<https://forms.gle/52jcjzEW3i94skEKA>

Prizes:

- Prizes worth ₹8,000/- will be given to the winners.
- Certificate of Participation will be issued to all the participants.

NOTE:

The decision of the Organizing Committee will be final and binding to all. Please keep checking the Website and Rulebook regularly for any further updates.

Coordinators:

Hemanth: 8919273775

Thomas: 7356426413