

# LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING

(AUTONOMOUS)

# Accredited by NAAC & NBA (CSE, IT, ECE, EEE & ME)

Approved by AICTE, New Delhi and Affiliated to JNTUK, Kakinada

L.B.Reddy Nagar, Mylavaram-521230, Krishna Dist, Andhra Pradesh, India

# DEPARTMENT OF CIVIL ENGINEERING

# REPORT OF Online Three Day FDP On

# **Modelling Approaches in Structural Engineering**

Event Type	Online Faculty Development Program
Date / Duration	30-06-2022 to 02-07-2022
Resource Team	<ol> <li>Dr. T.D. Gunneswara Rao, Professor, Department of Civil Engineering, NITWarangal.</li> <li>Dr. M.V.N. SivaKumar, Assistant Professor, Department of Civil Engineering, NITWarangal.</li> <li>Dr. G. Kalyan Kumar, Assistant Professor, Department of Civil Engineering, NITWarangal.</li> </ol>
Name of Coordinator	Dr. K.V.Ramana, Associate Professor.
Target Audience	Faculty members of Civil, Research scholars and M.Tech students
Total no of Participants	52 (Internal - 10, External – 42)
Objective of the event	<ul> <li>Application of various modelling approaches/techniques in structural Engineering.</li> <li>Fuzzy logic techniques for seismic hazard analysis</li> <li>Genetic Algorithms in Structural Engineering</li> <li>Finite Element approaches in modelling of various structural elements.</li> </ul>
Outcome of event	<ul> <li>Faculty can take up research in local regions &amp; guide/ supervise students for dissertation or project work.</li> <li>It enables the participants to appreciate the role of various numerical and mathematical approaches available in structural engineering.</li> </ul>
Feedback / Suggestions	Faculty and research scholars gave positive feedback on the FDP and requested to conduct more webinars and FDPs in similar domain.

# **Photographs:**





Press Clippings: Nil

### **REPORT**

The Department of Civil Engineering, Lakireddy Bali Reddy College of Engineering (A), Mylavaram, organized a three day online Faculty Development Program during 30-06-2022 to 02-07-2022 on "**Modelling Approaches in Structural Engineering**" through Microsoft Teams. The FDP was inaugurated on 30-06-2022 by the Principal Dr Appa Rao garu. Three topics were delivered on this occasion.

#### **Resource persons:**

- 1. Dr. T.D. Gunneswara Rao, Professor, Department of Civil Engineering, NITWarangal.
- 2. Dr. M.V.N. SivaKumar, Assistant Professor, Department of Civil Engineering, NITWarangal.
- 3. Dr. G. Kalyan Kumar, Assistant Professor, Department of Civil Engineering, NITWarangal.

#### Topic-1: Fuzzy Probabilistic Seismic Hazard Analysis by Dr. G. Kalyan Kumar

#### **Content:**

- Earthquake Engineering
- Probabilistic
- Fuzzy
- Liquefaction

Outcome: Will be exposed to the basic concepts on Liquefaction analysis, PSHA, FSHA

## Topic-2: Genetic Algorithms by Dr.T.D. Gunneswara Rao

#### **Content:**

- Introduction
- Concept
- Applications

**Outcome:** Faculty can take up research in local regions and are able to solve the both constrained and unconstrained problems.

# Topic-3: Finite Element Approach by Dr. M.V.N. Siva Kumar

**Content:** Numerical Modelling of Fracture Behavior In Metal and Concrete Members

Outcome: Learn the fundamental Applications of Numerical modelling for different structural materials.

Finite element modelling of fracture behaviour of Metal and Concrete members