



**LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING**  
(AUTONOMOUS)

Accredited by NAAC & NBA ( CSE, IT, ECE, EEE & ME) under Tier - I

Approved by AICTE and Permanently Affiliated to JNTUK, Kakinada



Department of Mechanical Engineering  
**Guest Lecture Report on**  
**“NANO MATERIALS FOR ENERGY AND ENVIRONMENTAL APPLICATION”**

Date / Duration: 13<sup>TH</sup> APRIL, 2023, 2.00 PM to 4.00 PM

**Resource Person**

**Speaker 1: Dr. Narendra Singh, Assistant Professor Department of Chemical Engineering IIT Tirupati.**

Dr. Narendra Singh is an Assistant Professor at Department of Chemical Engineering, Indian Institute of Technology (IIT) Tirupati, Andhra Pradesh. He pursued his Ph.D. degree in Chemical Engineering from Indian Institute of Technology Kanpur in 2018. He worked as a post-doctoral researcher at National Institute of Advanced Industrial Science and technology (AIST) Nagoya, Japan. He also served as Sr. Project Engineer at Indian Institute of Technology Kanpur. Moreover, he received M.Tech. from Indian Institute of Technology Delhi and B.Tech. degree from Harcourt Butler Technological Institute Kanpur. He has authored more than 15 research articles in the reputed international journal including Langmuir, ACS Applied Materials and Interfaces, Catalysis Science and Technology, etc., and 7 book chapter.

His research interests are the fabrication of nanostructures (noble metal nanoparticles, metal oxide nanofibers, quantum dots, etc.) and surface treatment of polymer/metal surfaces for multiple applications such as for photocatalysis, wastewater treatment, sensors, energy devices, oil/water separation, omni phobic surfaces, etc. His research article entitled “Mutton bone-derived hydroxyapatite supported TiO<sub>2</sub> nanoparticles for sustainable photocatalytic applications” was highlighted in research matters news. Another article “Enhanced visible-light-driven photocatalytic activity of core-shell bimetallic nanoparticles immobilized on electro spun TiO<sub>2</sub> nanofibers for degradation of organic compounds” was published as front inside cover article

**Name of the Coordinators:**

1. Dr. P.Vijay Kumar, Professor,
2. B.SudheerKumar Sr.Asst.Professor
3. Mr. K.V.Viswanadh, Sr.Asst.Professor

**Audience:** B.Tech Mechanical Engineering 2<sup>nd</sup> Year Students

**Total Number of Participants:** 130

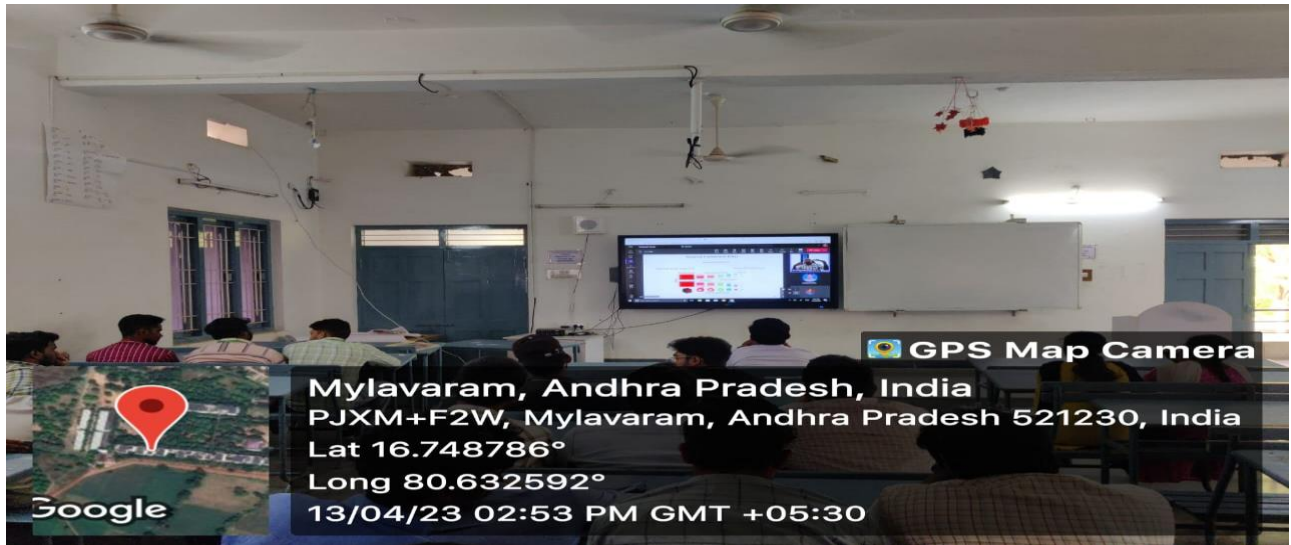
**Topics covered in the Guest Lecture:**

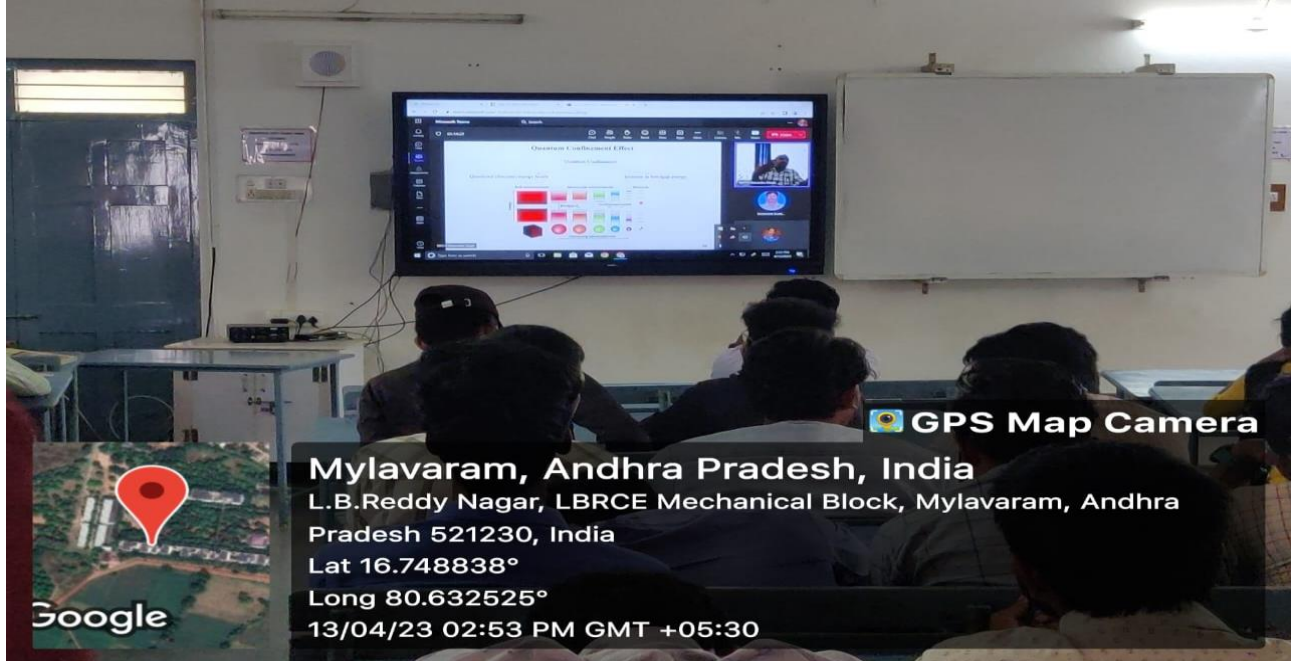
Biomaterials and Bio-Inspired Materials.

- Carbon-Based Materials.
- Ceramics and Glass.
- Colloidal Materials and Interfaces.
- Computational Materials Science.
- Energy Materials.
- Environmental Degradation of Materials.
- Mechanics of Material

**Objective of the Event:** To make the students aware of nano materials for energy and environmental applications.

Screen Shots of Guest lecture delivered by **Dr. Narendra Singh**, Assistant Professor at Department of Chemical Engineering, Indian Institute of Technology (IIT) Tirupati, Andhra Pradesh 13-04-23





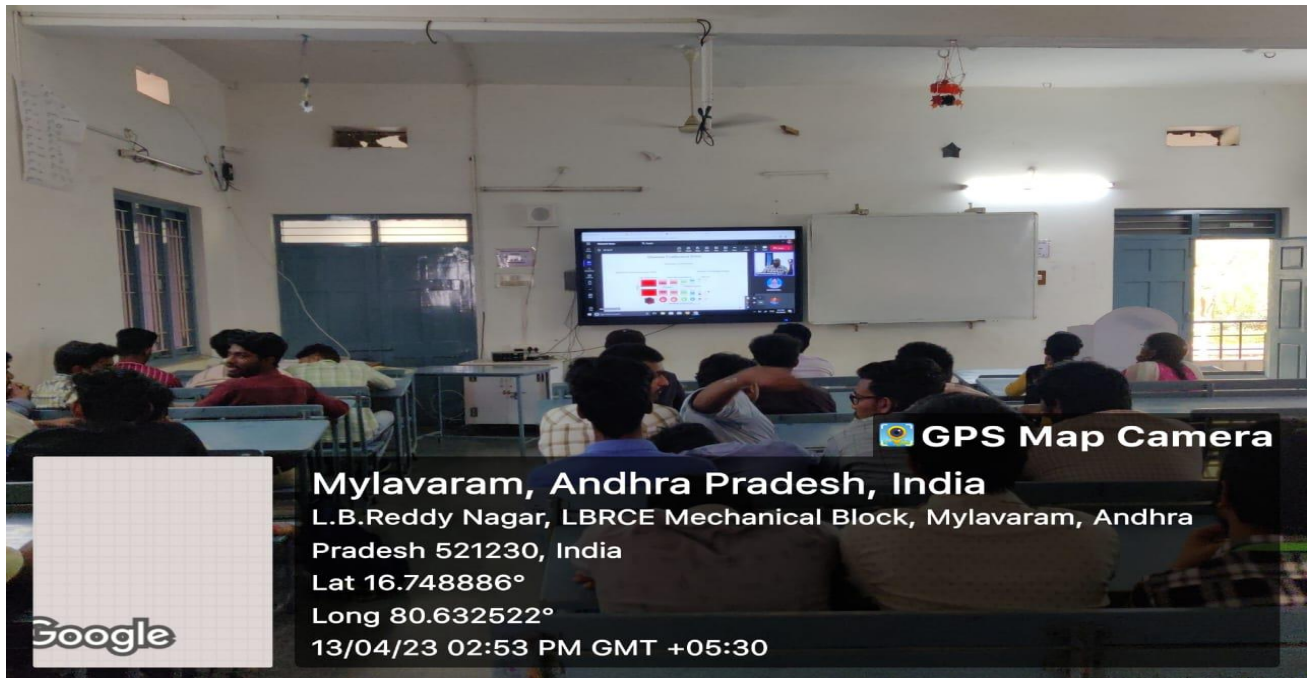
**Mylavaram, Andhra Pradesh, India**

L.B.Reddy Nagar, LBRCE Mechanical Block, Mylavaram, Andhra Pradesh 521230, India

Lat 16.748838°

Long 80.632525°

13/04/23 02:53 PM GMT +05:30



**Mylavaram, Andhra Pradesh, India**

L.B.Reddy Nagar, LBRCE Mechanical Block, Mylavaram, Andhra Pradesh 521230, India

Lat 16.748886°

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13/04/23 02:53 PM GMT +05:30

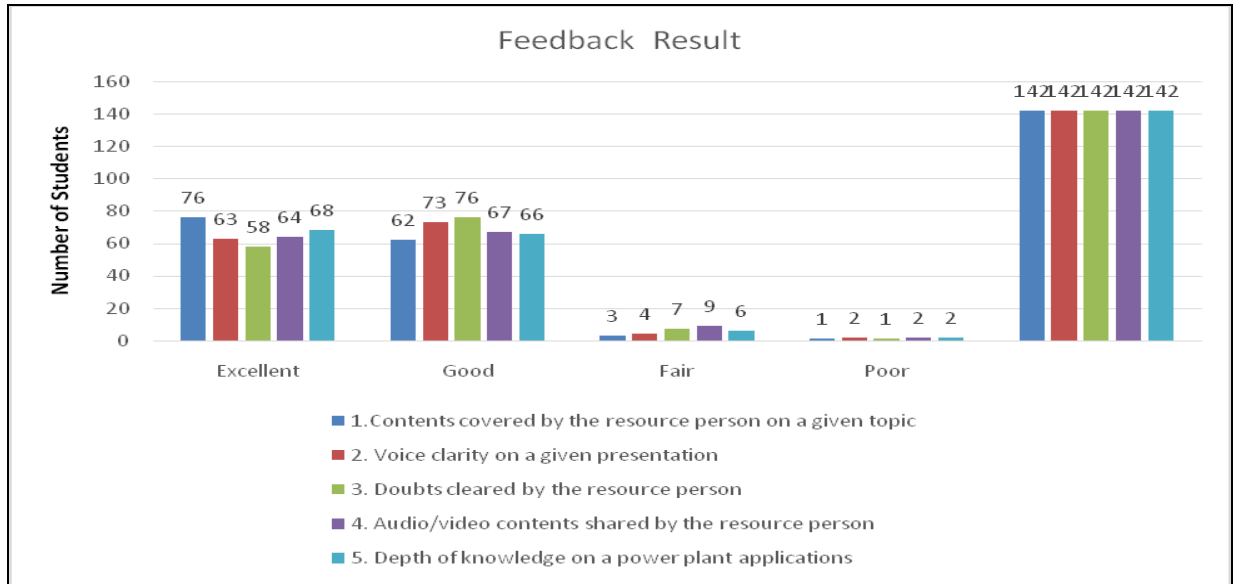


**Outcome of the Event:** The 30 participants who attended the webinar gave their feedback on the guest lecture and gained knowledge on the scope nano materials for energy and environmental applications.

**Feedback / Suggestions:**

- 1. Play the related videos of the topic delivered wherever necessary for better understanding
- 2. Explain some case studies from industries and R&D centres

**Feedback Report:** The student participants gave their feedback on the guest lecture and the responses were shown in the form of graph given below.



*[Signature]*  
HEAD  
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