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

One Week online Faculty Development Programme on

"*Advancements in Mechanical Engineering"*

AME-2023

19th June 2023 to 24th June 2023 (Monday to Saturday)

Timings - Session -1 from 9.30AM to 11.00AM and Session -2 from 11.15AM to 12.45PM

The one week online Faculty program was conducted through Microsoft Teams Platform. The inaugural session for the online FDP was held on 19-6-2023 at 9.30am and with valedictory session it was closed on 24-6-2023 at 11.45am. There was a good response from the faculty and research scholars and a total 680+ registrations from the participants across the country and overseas.The total number of participants after scrutiny were limited to 250 members in Microsoft Teams after short listing process is done based on first cum first serve.

Registration link: https://forms.gle/vKBY3NYxJNFQK8z86

Registration Fee: Free

Registration Deadline: 15-06-2023

Details of Resource Persons:

DEPARTMENT OF MECHANICAL ENGINEERING

One Week online Faculty Development Programme on

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AME-2023

19th June 2023 to 24th June 2023 (Monday to Saturday)

Timings - Session -1 from 9.30AM to 11.00AM and Session -2 from 11.15AM to 12.45PM

Name of the Resource Person	Designation and Institute
Dr. P.Karthik	Research Engineer, Florida Solar Energy Centre, University of Central Florida, USA
Dr. S.K.Tyagi	Associate Professor Department of Energy Science and Engineering Indian Institute of Technology, Delhi
Dr. D.Jayakrishna	Professor Department of Mechanical Engineering National Institute of Technology, Warangal
Dr. T.Srinivas	Associate Professor Department of Mechanical Engineering National Institute of Technology, Jalandhar
Dr.M.Ravi Sankar	Associate Professor & Head Department of Mechanical Engineering Indian Institute of Technology, Tirupati
Dr.D.Chakradhar	Associate Professor Department of Mechanical Engineering Indian Institute of Technology, Palakkad
Dr.R.Parameshwaran	Associate Professor Department of Mechanical Engineering BITS-Pilani Hyderabad Campus
Dr.M.Krishna Kishore	Assistant Professor Department of Mechanical Engineering National Institute of Technology, Surat
Dr.M.Vijaya Kumar	Assistant Professor Department of supply chain NITIE, Mumbai

Inauguration Function: The inauguration function of the FDP started on 19-06-2023 at 9.30AM, with the welcome address by the Convener, Dr.S.Pichi Reddy, Professor & HoD, Department of Mechanical Engineering followed by the key note address by the distinguished guest and resource person, Dr.S.K.Tyagi, Associate Professor, Department of Energy Science and Engineering, Indian Institute of Technology, Delhi. Later the Principal of LBRCE Dr.K.Appa Rao addressed the participants and emphasized the importance of knowledge transfer to the student fraternity after attending the FDP by Faculty members. The inaugural function concluded at 9.45AM. The session on day-1 started with Dr.S.K.Tyagi Agro-wastes to carbon

neutral clean and green energy for rural India. There were total 9 sessions conducted and the details are as given below.

Table 1: Details of Resource Persons and topic delivered

Dates	Name of the Resource Person	Topic Covered
19.6.2023 9.30AM to 11.00AM	**Dr. S.K.Tyagi, Associate Professor Department of Energy Science and Engineering Indian Institute of Technology, Delhi**	Talk given on: **Agro-wastes to carbon neutral clean and green energy for rural India**
19.6.2023 11.15AM to 12.45PM	**Dr.M.Krishna Kishore, Assistant Professor Department of Mechanical Engineering National Institute of Technology, Surat**	Talk given on: **Large scale metal additive manufacturing of inconel and steels**
20.6.2023 9.30AM to 11.00AM	**Dr. T.Srinivas , Associate Professor Department of Mechanical Engineering National Institute of Technology, Jalandhar**	Talk given on: **Solar thermal and photovoltaic collector with water driven tracking mechanism**
21.6.2023 9.30AM to 11.00AM	**Dr. D.Jayakrishna, Professor Department of Mechanical Engineering National Institute of Technology, Warangal**	Talk given on: **Battery thermal management system for e-vehicles**
21.6.2023 11.15AM to 12.45PM	**Dr.M.Ravi Sankar, Associate Professor & Head Department of Mechanical Engineering Indian Institute of Technology, Tirupati**	Talk given on: **Under liquid laser micro-machining**
22.6.2023 3.30PM to 4.45PM	**Dr. P.Karthik, Research Engineer, Florida Solar Energy Centre, University of Central Florida, USA**	Talk given on: **Application of Data Mining in buildings**
23.6.2023 9.30AM to	**Dr.R.Parameshwaran, Associate Professor Department of Mechanical Engineering BITS-Pilani Hyderabad Campus**	

11.00AM	Talk given on: **Thermal energy storage using advanced materials**
23.6.2023 11.15AM to 12.45PM	**Dr.D.Chakradhar, Associate Professor** **Department of Mechanical Engineering** **Indian Institute of Technology, Palakkad** Talk given on: **Sustainable Machining**
24.6.2023 9.30AM to 11.00AM	**Dr.M.Vijaya Kumar, Assistant Professor** **Department of supply chain** **NITIE, Mumbai** Talk given on: **Technological Challenges in Indian Industries**

Outline of the topics covered in FDP

Agro-wastes to carbon neutral clean and green energy for rural India - The identification of agro waste material for cooking purpose interms of developing a new method of carbon free clean and green energy for smoke free rural india elaborated in his presentation.

Large scale metal additive manufacturing of inconel and steels - The emerging type of additive manufacturing method especially the metal additive manufacturing in large scale basis was presented with suitable examples and case studies.

Solar thermal and photovoltaic collector with water driven tracking mechanismSolar thermal and photovoltaic collector with water driven tracking mechanism - has been explained to the participants in lucid manner by the Resource person.

Battery thermal management system for e-vehicles Necessity of Battery thermal management system, Battery structure, materials, Lithium ion battery and the prospective and alternate sodium ion battery discussed.

Under liquid laser micro-machining - The instances where the necessity of under liquid machining arises and for what type of applications and components lase micro-machining can be applied was presented. The merits and demerits in comparison to other machining techniques also discussed.

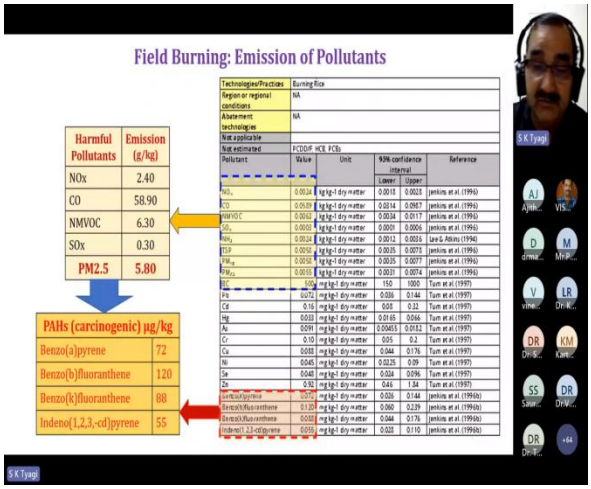
Application of Data Mining in buildings - The step by step procedures for selecting and implementing the data mining technique with examples and specific applications to building simulation analysis assisted by some software tools like Python and R programming also chatGPT discussed.

Thermal energy storage using advanced materials Thermal energy storage methods, sensible heat type, latent heat type, PCM based thermal energy storage, its salient features, different types, application of PCM based thermal energy storage in solar collectors, energy storage capacity with adavanced materials was presented.

Sustainable Machining- The problems associated in machining methods and the causes for inefficient and ineffective machining with respect to materials and methods presented. The probable methods leads to sustainable machining discussed.

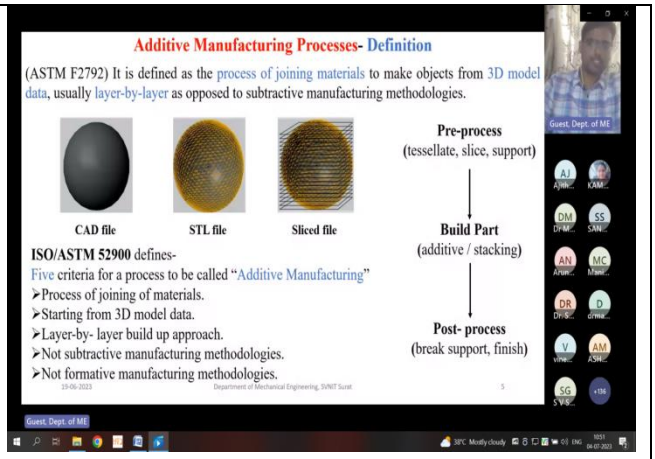
Technological Challenges in Indian Industries - The present day industries facing challenges elaborately presented with appropriate analysis using statistical data and the remedies were proposed.

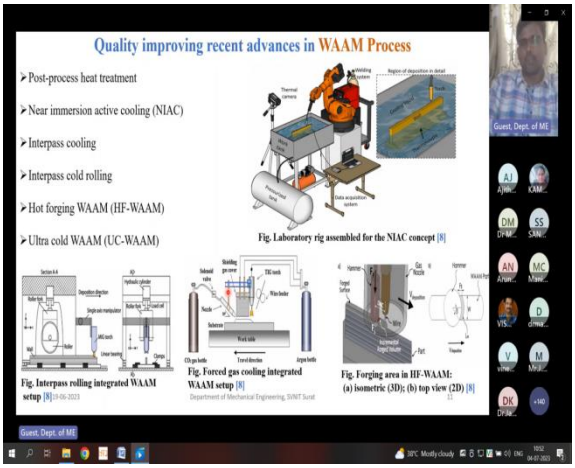
Day-1: Monday 19-06-2023, Session-1, Dr.S.K.Tyagi, IIT, Delhi

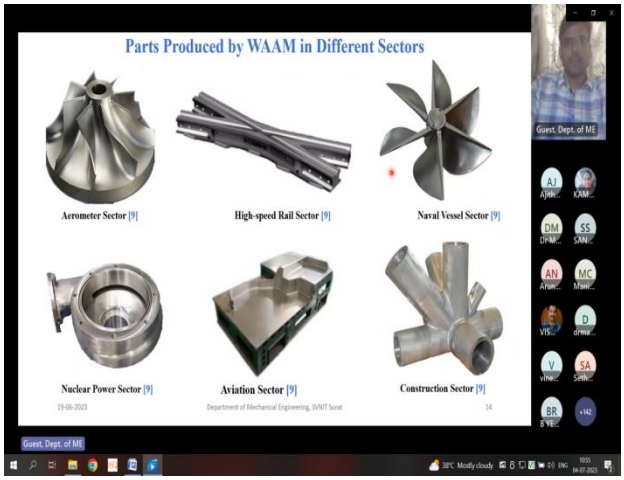


Day-1: Monday,19-06-2023, Session-2, Dr.M,Krishna Kishore, Asst. Professor, NIT, Surat

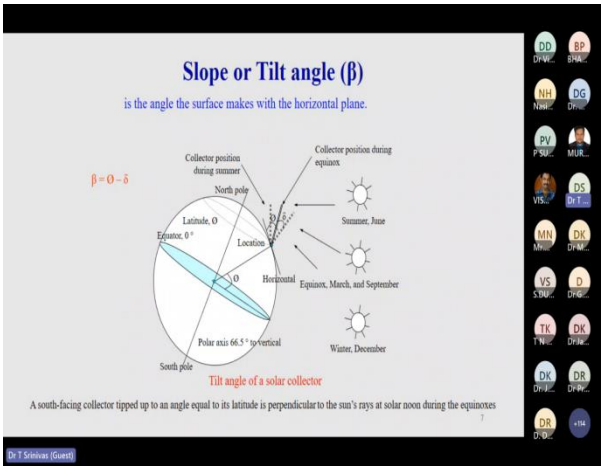
Lakireddy Bali Reddy College of Engineering-MED Online FDP: 19-06-2023 to 24-06-2023

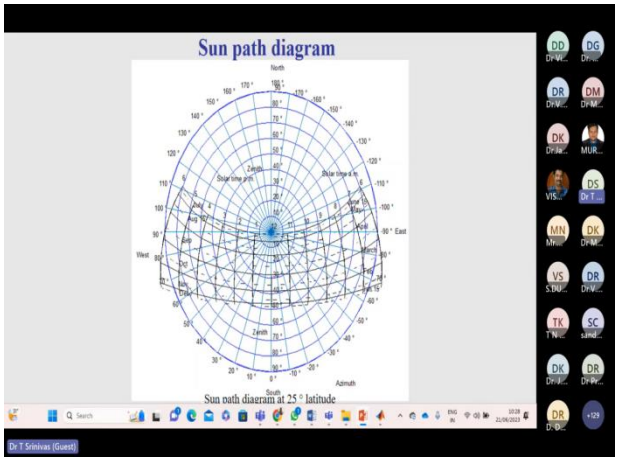


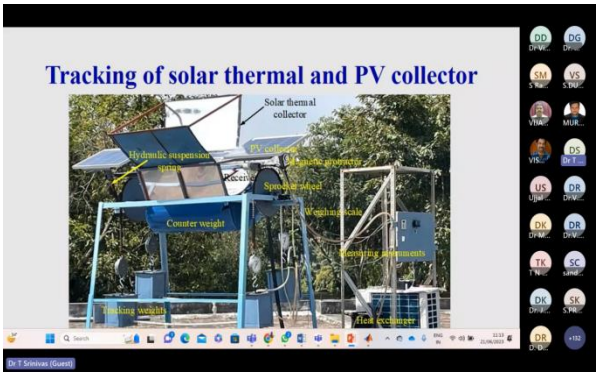


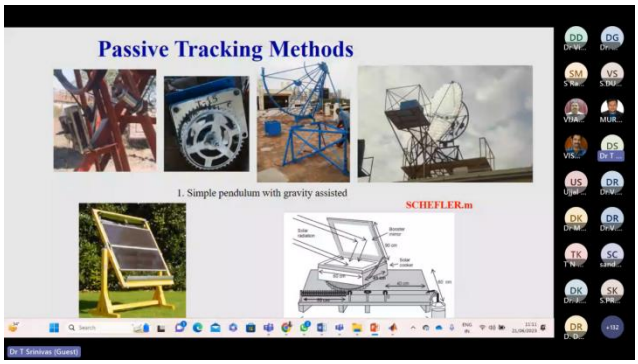


Day-2: Tuesday 20-06-2023, Session-1: Dr.T.Srinivas, NIT, Jalandhar

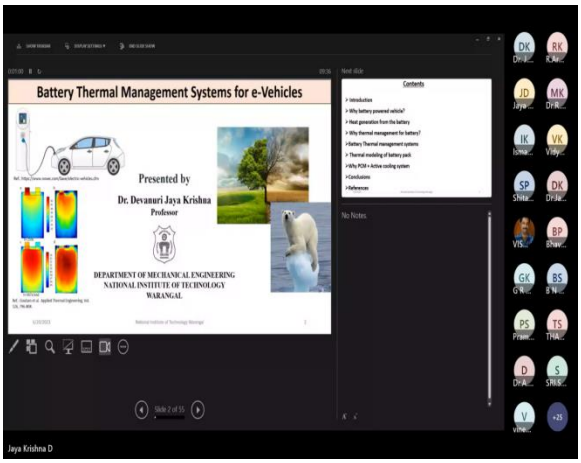


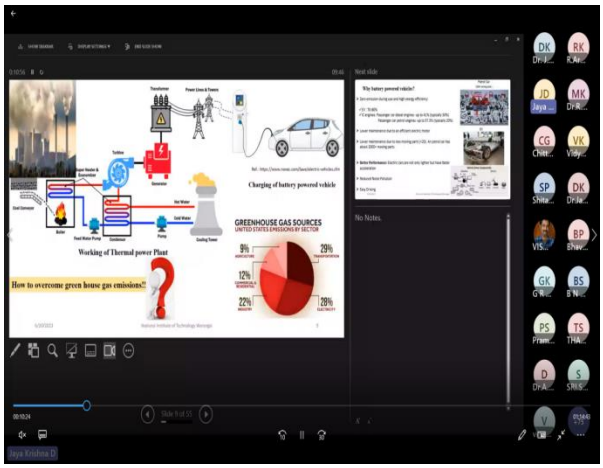


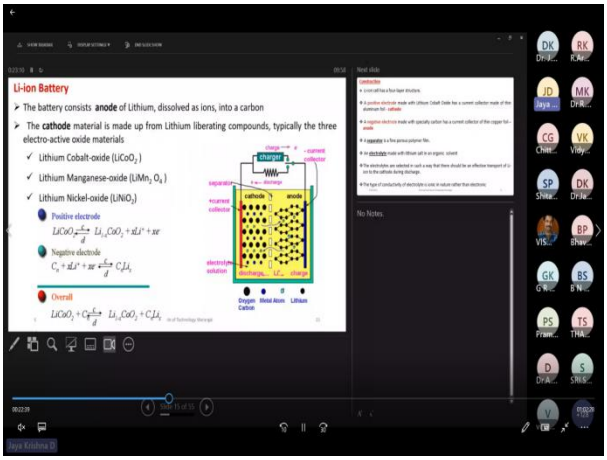


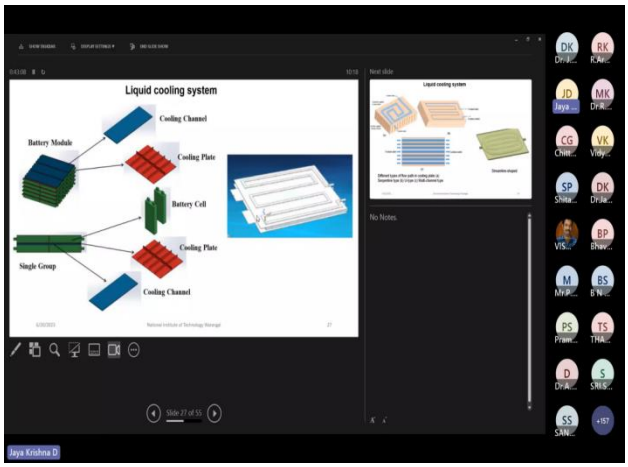


Day-3: Wednesday 21-06-2023, Dr.D.Jayakrishna, NIT, Warangal









Day-4: Thursday 22-06-2023, Evening Session(Special), Dr.P.Karthik, Research Engineer, University of Central Florida, USA

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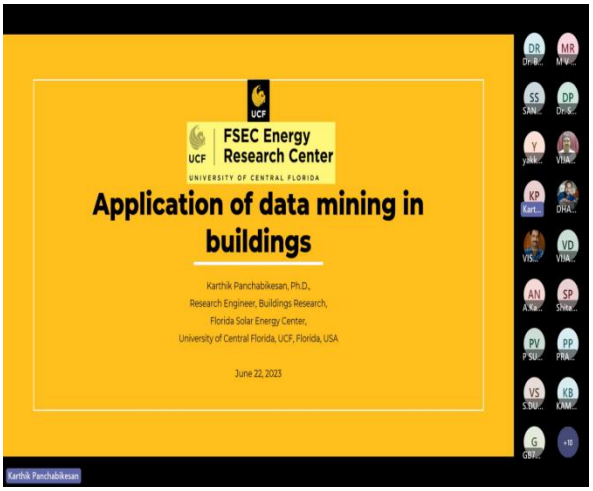
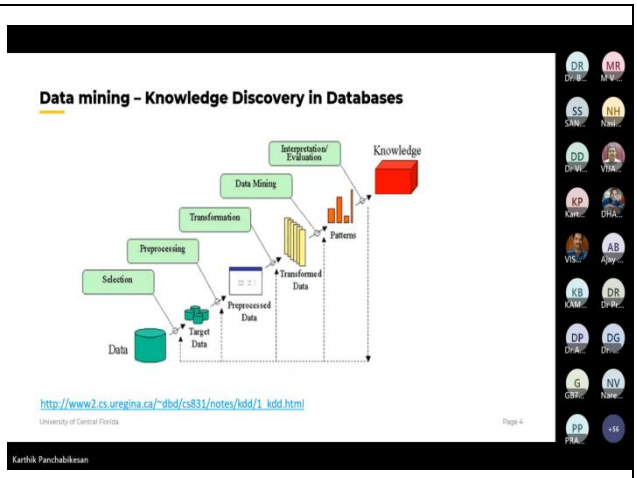
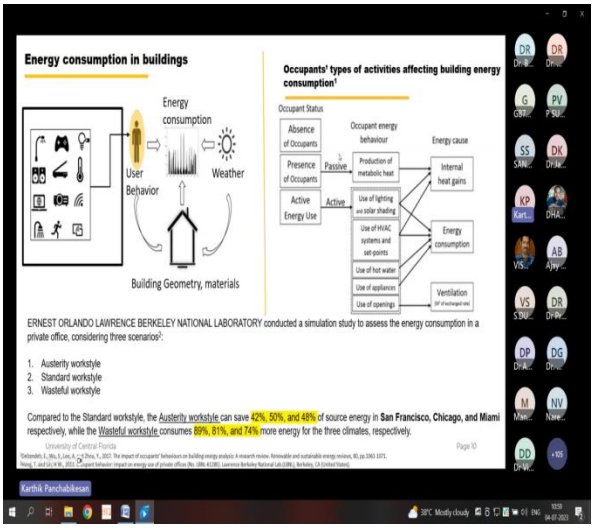
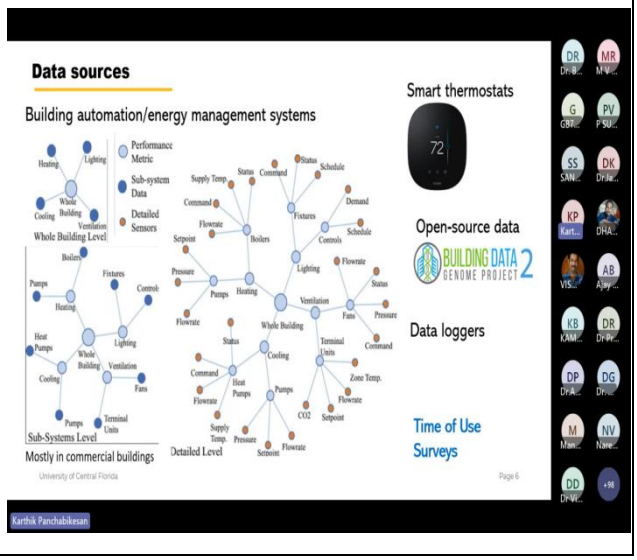
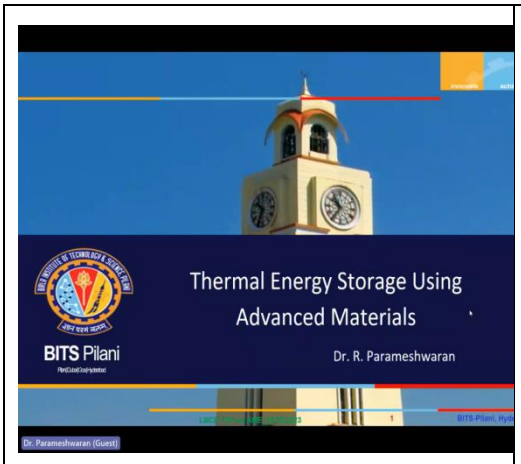


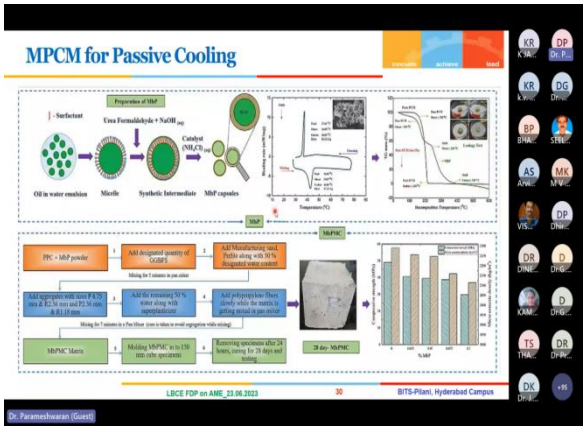






Day-4: 23-06-2023, Friday Session-1, Dr.R.Parameshwaran, BITS Hyderabad Campus





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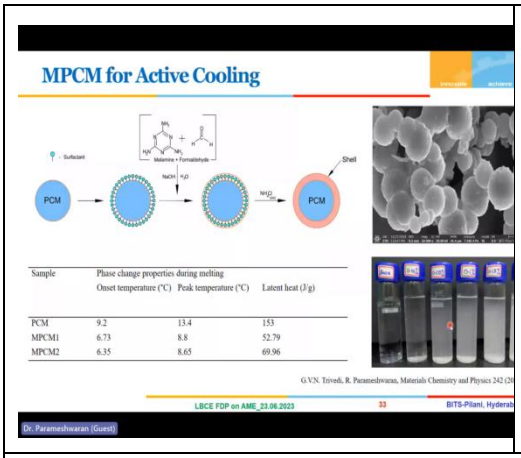
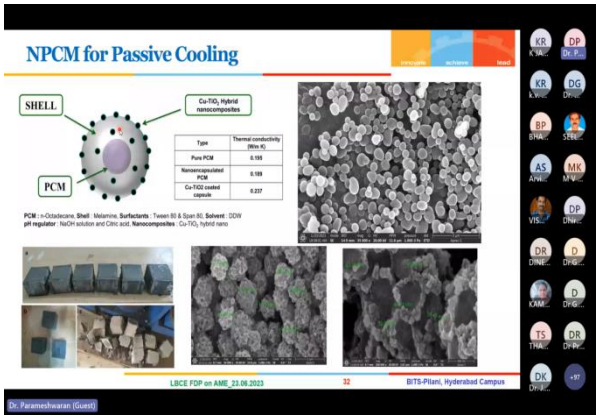
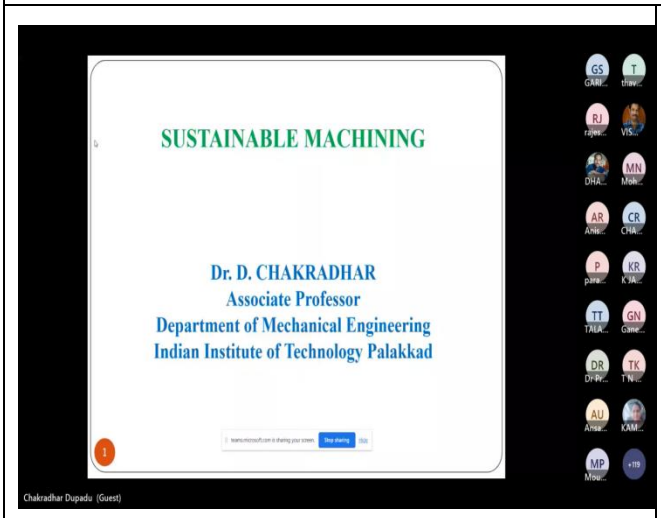
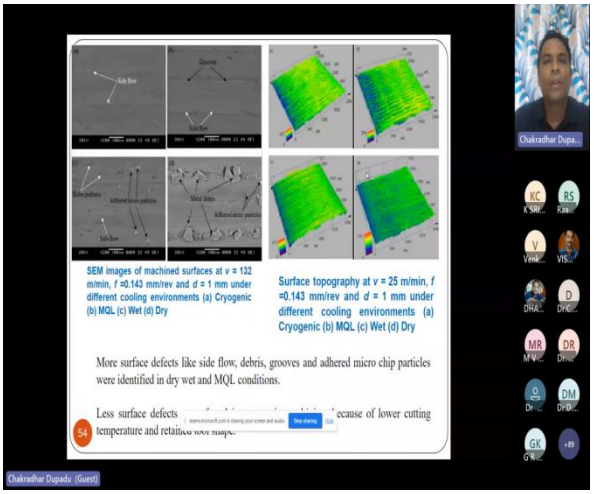
Lakireddy Bali Reddy College of Engineering-MED Online FDP: 19-06-2023 to 24-06-2023

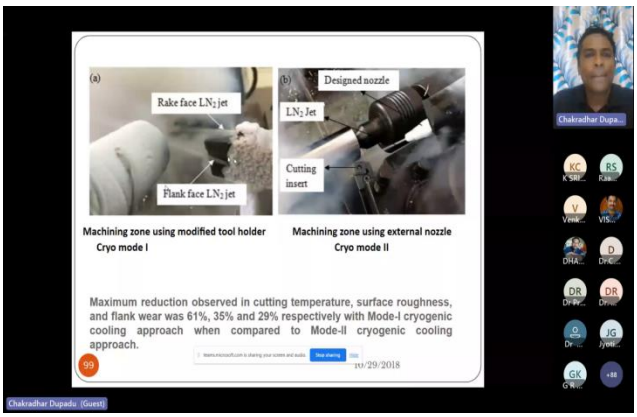


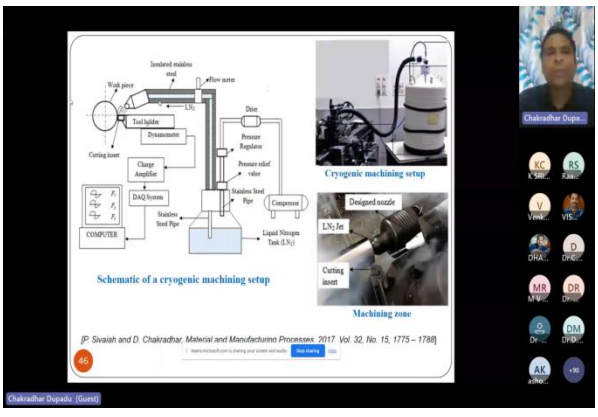


Day-5: 23-06-2023, Friday, Session - 2 Dr.D.Chakradhar, IIT, Palakkad









Day-6: 24-06-2023 Saturday Dr.M.Vijaya Kumar, NITIE, Mumbai

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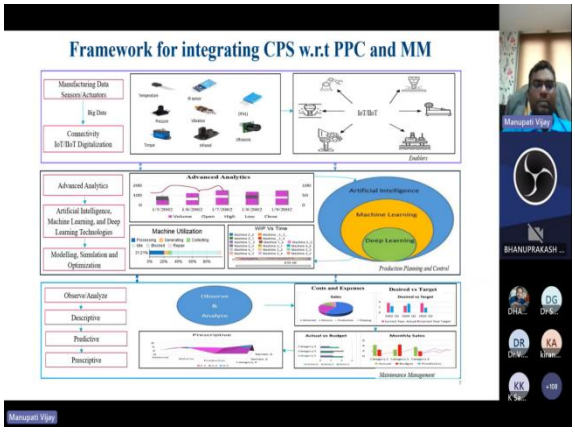

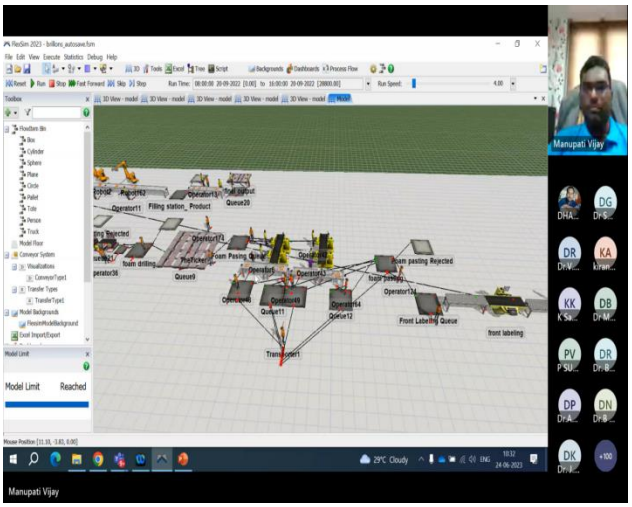

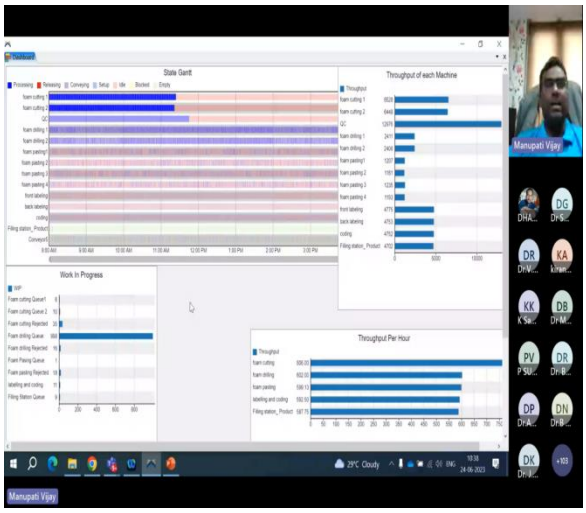

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DEPARTMENT OF MECHANICAL ENGINEERING

One Week online Faculty Development Programme on

"***Advancements in Mechanical Engineering- AME 2023"***

19th June 2023 to 24th June 2023 (Monday to Saturday)

Timings - Session -1 from 9.30AM to 11.00AM and Session -2 from 11.15AM to 12.45PM

Program Objective: To impart the knowledge of advancements and current research in the domain of Mechanical Engineering happening around the globe.

Program Outcomes: The participants able to

1. Know the aspects of developing thermo-economic mechanical systems
2. Comprehend thermal and renewable energy storage systems using the advanced materials
3. Recognize the significance of modelling, simulation, analysis and optimization of machining
4. Know the importance of developing the carbon free clean and green energy systems for smoke free rural india
5. Know the technological challenges of indian industries and propose the remedies
6. Develop the methods for thermal management of e-vehicles

COORDINATORS

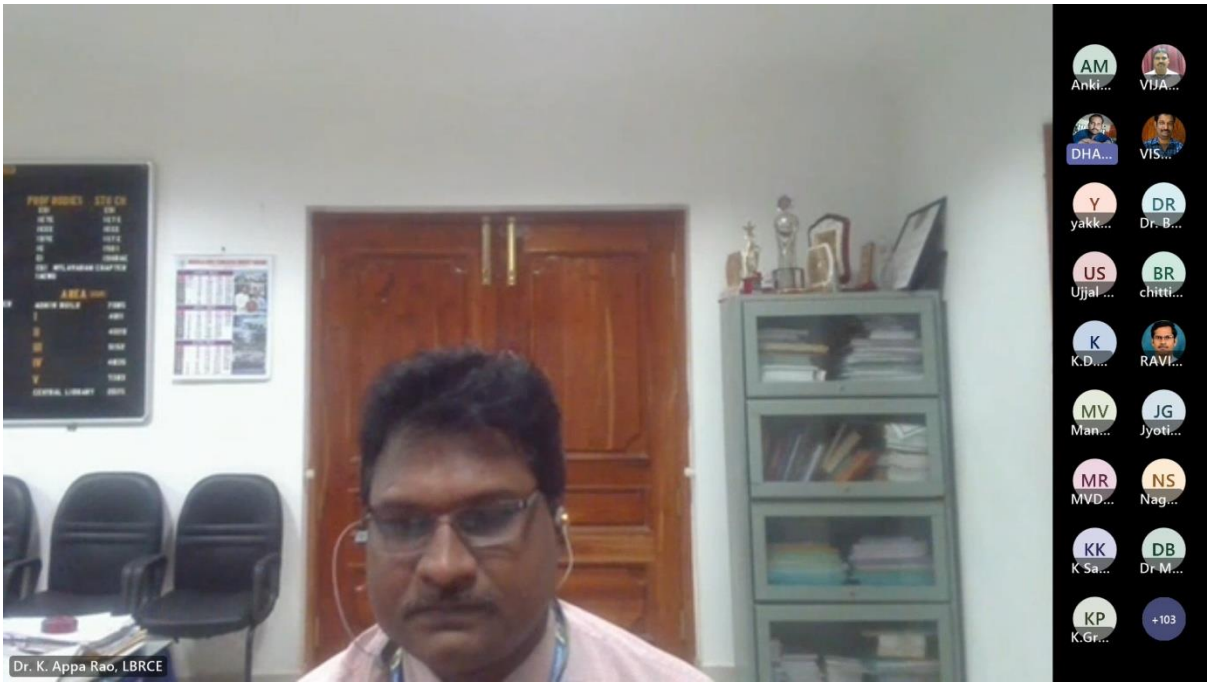
1.Dr.P.Vijay Kumar
Professor

2.Dr.V.Dhanaraju
Assoc.Professor

CONVENER

Dr.S.Pichi Redd
Professor and Head

Valedictory Function Images, Conversation of Dr.K.AppaRao, Principal and Dr.M.Vijaya Kumar, Asst. Professor, NITIE Mumbai.



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DEPARTMENT OF MECHANICAL ENGINEERING

One week online Faculty Development Programme on

Advancements in Mechanical Engineering (AME-2023)

June 19th – June 24th, 2023

Programme Schedule

S. No	Day	Date & Time	Resource Person Details	Topic
			DAY-1	
1	MONDAY	19/06/2023 9.30AM	Dr. S.K.Tyagi, Associate Professor of Mechanical Engineering, Indian Institute of Technology, Delhi	Agro-wastes to carbon neutral clean and green energy for rural India
2		19/06/2023 11.15AM	Dr. M.Krishna Kishore, Assistant Professor, Department of Mechanical Engineering, SVNIT Surat	Large scale metal additive manufacturing of inconel and steels
			DAY-2	
3	TUESDAY	20/06/2023 9.30AM	Dr.D.Chakradhar, Associate Professor, Department of Mechanical Engineering, Indian Institute of Technology Palakkad	Sustainable Machining
4		20/06/2023 11.15AM	Dr.D.Jayakrishna, Professor, Department of Mechanical Engineering, National Institute of Technology Warangal	Battery thermal management system for e-vehicles
			DAY-3	
5	WEDNESDAY	21/06/2023 9.30AM	Dr.T.Srinivas, Associate Professor, Department of Mechanical Engineering, NIT Jalandhar	Solar thermal and photovoltaic collector with water driven tracking mechanism
6		21/06/2023 11.15AM	Dr. M.Ravi Sankar, Associate Professor & Head, Department of Mechanical Engineering, Indian Institute of Technology, Tirupati	Under liquid laser micro-machining
			DAY-4	
7	THURSDAY	**22/06/2023 3.00PM (Special**	**Dr.P.Karthik, Research Engineer, Florida Solar Energy Centre, Central University of Florida, USA.**	Application of data mining in buildings

		Session)		
DAY-5				
8	FRIDAY	23/06/2023 9.30AM	Dr. R.Parameshwaran, Associate Professor, Department of Mechanical Engineering, BITS- Pilani, Hyderabad Campus	Thermal energy storage using advanced materials
DAY-6				
9	SATURDAY	24/06/2023 9.30AM	Dr.Vijaya Kumar Manupati, Assistant Professor, Operations and Supply chain Division, NITIE, Mumbai	Technological Challenges in Indian Industries

Resource Persons

Dr.P.Karthik, Central University of Florida, USA
Dr.S.K.Tyagi, IIT Delhi
Dr. M.Ravi Sankar, IIT Tirpati
Dr.D.Chakradhar, IIT, Palakkad
Dr. D.Jaya krishna, NIT, Warangal
Dr.T.Srinivas, NIT, Jalandhar
Dr.R.Parameshwaran, BITS-Pilani, Hyderabad Campus
Dr.M.Krishna Kishore, SVNIT, Surat
Dr.V.K.Manupati, NITIE, Mumbai

Registration Fee:
- **No Registration Fee.**

Target Audience:
Faculty and research scholars from the state, spread across India and Abroad

Important Date:
Last Date for Registration: 10/06/2023

Registration Link:
Fill the Registration form with the following link:
https://forms.gle/GTa8xZHmGDnwYV3w5
Join the WhatsApp group to get the updates:
https://chat.whatsapp.com/EaUbw7uUglMFVNZUhGPWZN
Online FDP will be organized in Microsoft Teams Platform

Certificate Criteria:
- All eligible candidates will be given e-certificates.
- Attendance is mandatory.

For more details contact:
Dr.P.Vijaya Kumar: +91-9490817851
Dr. V.Dhana Raju:+91-9848363670

Committee Members

Chief Patrons
Sri. L.Jaya Prakash Reddy, Honorary Chairman
Sri. L.R.N.K.Prasad Reddy, Chairman
Sri. L.Vijaya Kumar Reddy, Vice Chairman

Patrons
Sri G. Srinivasa Reddy, President
Dr. K. Appa Rao, Principal
Dr. K. Harinadha Reddy, Vice-Principal
Dr. M. Srinivasa Rao, Dean Academics
Dr.E.V.Krishna Rao, Professor, Dean R&D

Convener
Dr.S.Pichi Reddy, Professor & HOD, ME

Coordinators
Dr.P.Vijaya Kumar, Professor
Dr.M.B.S.Sreekara Reddy, Assoc. Professor
Dr.K.Murahari, Assoc. Professor
Dr.V.Dhana Raju, Assoc.Professor

Co-Coordinators
Mr. K.V.Viswanadh, Sr.Assistant Professor
Mrs.B.Kamala Priya, Assistant Professor

Advisory committee
Dr.P.V.Chandrasekhara.Rao, CoE & Professor
Dr.P.Ravindra Kumar, Professor
Dr.K.Dilip Kumar, Professor

Organizing committee
Mr.S.Srinivasa Reddy, Associate Professor
Dr. Ch.Siva Sankara Babu, Sr. Asst Professor
Mr.B.Sudheer Kumar, Sr.Assistant Professor
Mr.S.Srinivasa Reddy, Sr.Assistant Professor
Mr.S.Ramireddy, Sr.Asst Professor
Mr.A.Nageswara Rao, Sr.Assistant Professor
Mr.K.Lakshmi Prasad, Sr.Asst Professor
Mr.V.Sankar Rao, Sr.Asst Professor

Online one week
Faculty Development Program
on

ADVANCEMENTS IN MECHANICAL ENGINEERING
(19th June - 24th June 2023)

Organized by
Department of Mechanical Engineering
(Accredited by NBA under Tier – I)

LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING
(Autonomous)

Accredited by NAAC & NBA (CSE, IT, ECE, EEE, MECH)
ISO 9001:2015 Certified Institution
Approved by AICTE, New Delhi and Affiliated to JNTUK, Kakinada
L.B. REDDY NAGAR, MYLAVARAM, KRISHNA DIST., A.P.- 521 230

About the Institute:

LBRCE was founded through Lakireddy Bali Reddy charitable trust in 1998 which stands for quality technical education that is exemplified by the continuous strides taken towards excellence in the last two decades. LBRCE started with an intake of 180 and has reached the current intake of 1164. UGC has accorded Autonomous Status in the year 2010, subsequently renewed in 2016, valid up to 2022. LBRCE has been accredited by NAAC with Grade 'A' and NBA (ECE, IT, CSE, EEE & MECH) under Tier-I. The College has also been awarded 2(f) and 12(B) status, apart from the recognition as a 'College with Potential for Excellence (CPE)' status from the UGC. Our institute has pride to have large pool of well-qualified and experienced faculty.

About the Department:

The Department of Mechanical Engineering was started in the year 1998. It has well qualified faculty and well-equipped laboratories.

The Department is accredited by NBA under Tier-I. About 25% of faculty members having doctoral degree. JNTUK Kakinada has accorded Research Centre to the Department and several research scholars are pursuing their Ph.D. The Department received sponsored research projects worth Rs.1.5 Crore from various GOI funding agencies.

About the FDP:

The one-week online FDP is aimed at enriching the knowledge and research capabilities of faculty and research scholars of academia and R&D centers working in different areas of Mechanical Engineering domain. This FDP also covers simulation, modeling, and optimization techniques.

This program is useful for participants who are actively involved in research work in various fields of Mechanical Engineering .

Eminent professors from India and Abroad are drawn from the highly reputed institutes (IIT, NIT, R&D centers) have been invited for FDP.to deliver latest topics of research.

Objectives of the FDP:

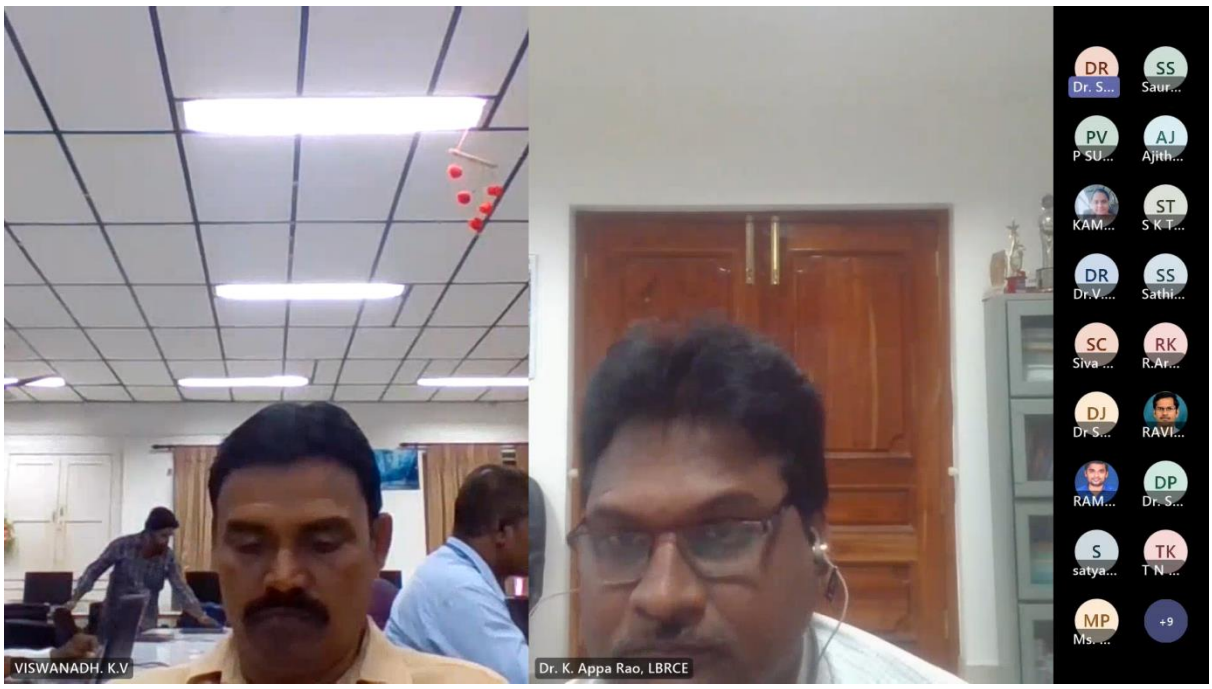
- To know the latest research work in Mechanical Engineering domain.
- To get exposed to the latest simulation. modeling and optimization techniques.
- To get acquainted with the advancements in research of Mechanical systems.

Topics to be covered:

- **Thermal battery management system for e-vehicles**
- **Under liquid laser micro-machining**
- **Technological challenges in Indian industries**
- **Solar thermal and photovoltaic collector with water driven tracking mechanism**
- **Argo-wastes to carbon neutral clean & green energy for rural India**
- **Application of Data mining in buildings**
- **Sustainable machining**
- **Application of machine learning technique for large scale manufacturing of inconel and steels**
- **Thermal energy storage using advanced materials**

Learning Outcomes:

- Acquire the latest technological advancements in Mechanical Engineering.
- Optimize the performance parameters of thermal and mechanical systems.
- To predict the solutions for problems in Mechanical Engineering.



Addressing the participants by Principal Dr.K.Appa Rao during the inaugural function of FDP on 19-06-2023

Chief Guest and Inaugural session Speaker Dr.S.K.Tyagi, IIT Delhi and

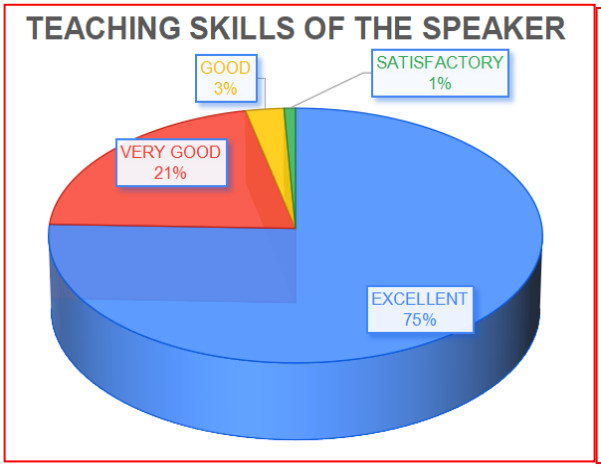
Principal Dr.K.Appa Rao conversation during the FDP inaugural function on Monday.19-6-2023

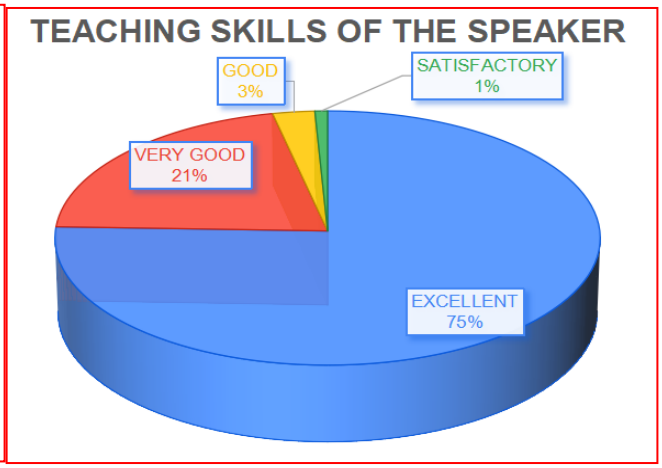
"*Advancements in Mechanical Engineering*"

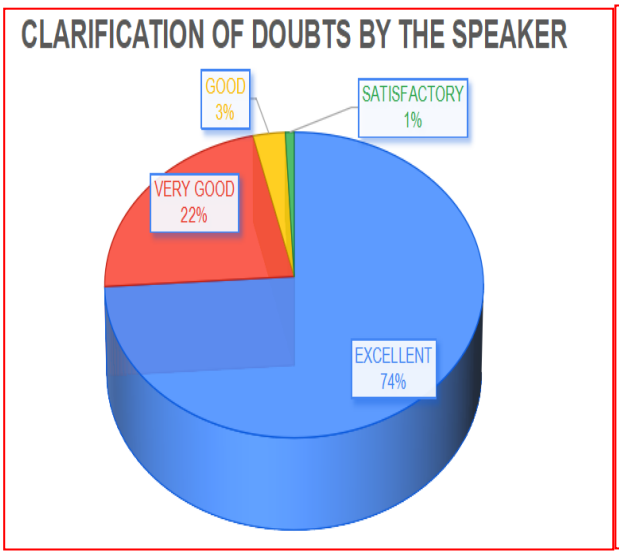
AME-2023

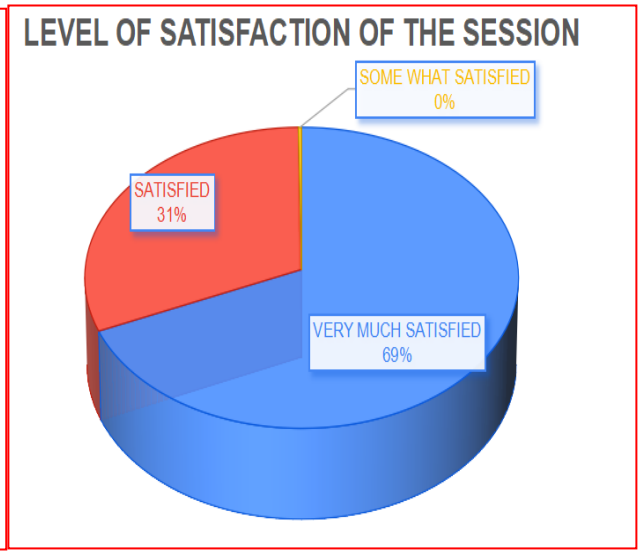
PARTICIPANTS FEEDBACK

(Total 380 Participants)









HEAD
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HoD