# KLEF **Department of Mechanical Engineering** International Conference on Innovations and Challengs in Mechanical Engineering (ICICME-2022) Report

### **Brochure**

### International Conference on Innovations and Challenges in **Mechanical Engineering** ICICME-2022

### REGISTRATION FORM

Name	 	 
Designation		

Name and	Address	of the	Organization	

Phone No.: E-Mail:

Category: Research Scholar / Student / Faculty Member /industry personnel/ Non-Presenting Member

### Presenting Paper: Yes / No Registration Details:

Link for Paper Submission https://forms.gle/By3Qb4hvNpyaEy7D8 Link for Registration Fee https://forms.gle/rg9JTJ6nLHVny7NV

Amount Rs. Dated

Mode of Payment done: Payment Ref. no.:\_\_\_\_

Date

### Chief Patron Er. K. Satyanarayana, President, KLDF

K 1 Hawith Vice-President STFE Er. K. L. Halväh, Voe-President, KEP Er. K. Raja Harin, Voe-President, KEP Dr. K. S. Jagannatha Rao, Pro-Cherceller Dr. G. P. Saradhi Varma, Viee-Cherceller Prof. N. Venkatram, Pro-Viee Cherceller Prof. A. Jagadeesh, Registrar, KLEF

Conference Chairs: Dr. B. Nageswara Rao Dr K V Ramana

Dr. D. V. A. Rama Sastry, HOD-MED, KLEF

Dr. S. S. Rao, KLEF Dr. G. Murali, KLEF

### Dr. N Rajesh Dr. K. V D Rajesh

Co-Conveners

Advisory Committee Dr. K. Rama Krishna Dr. K V Narasimha Rao Dr. NBV Prasad

### Editorial Board Dr K V Ramana. Dr A Srinath Dr. P. V. Chalapath

Signature

Dr. M Nageswara Rao

For Further Correspondence Dr. Rajesh Nimmagadda Dr. K. V D Rajesh Organizing Secretaries, ICICME-2022 Email: icicme2022@kluniversity.in

ns and Challenges in Manufacturing

### Dr. Narayana Murty S. V. S, Liquid Propulsion Systems Center, ISRO. C. Navin Kumar, Sr. Lead Engineer, Tata Consultancy Services, Bangalore. Dr. T. V. Arjunan Guru Ghasidas Vishwavidyalaya, Chhatlisgarh. Dr. K. J. Sabareesaan,

Professor, Saint Louis Unversity, Missouri, US.

Organizing Committee Dr S N Padhi

Dr. M. Nageswara Rao

Dr. T. Vijaya Kumar Dr. G. Yedukondalu

Mr. S Ramesh Kumar Mr. Karimulia Syed Dr A Sri Harsha

Dr. P Raikumar

Dr. Atul Bhattad Dr PNV Balasubrahmanyam

KeyNote Speakers

Dr Sridhar Condoo

Dr. P Kasi Visweswara Rao Dr. K Lokesh

University of technology and applied sciences, Sultanate of Oman.

Dr. B. Nageswara Rao Professor, ME Department, KLEF Former ISRO Scientist

Mobile: +91-8500444957 +91-9908266894

# OKL I Att

International Conference on Innovations and Challenges in Mechanical Engineering

## ICICME-202

(Hybrid Conference) 24<sup>th</sup> and 25<sup>th</sup> June 202

Orga

Department of Mechanical Engineering Koneru Lakshmaiah Educational Foundation (Deemed to be University) Vaddeswaram, Guntur Dist., 522502, A.P., INDIA www.kluniversity.in

### Scope of Conference

A number of proven personalities from Industry, Research Organizations and Academic Institutions have given their consent to grace the conference to emphasize the benefits of Innovations and Challenges in Mechanical Engineering for a wide variety of engineering applications **Call for Papers** 

#### ICICME-2021 invites papers related to various techniques on Innovations and Challenges in Mechanical Engineering for presentation. The papers and invited talks by eminent practicing engineers are expected to benefit the participants. Conference Proceedings

All accepted papers would be published in the Conference Proceedings (as soft-copy, with ISBN and would include abstract).

All papers presented in ICICME-2022 will be provided with an opportunity to publish as book chapter/journal article indexed in SCOPUS/ WOS (Publication charges will be additional and separate from the registration fee).

### Conference Theme

- Innovations and Challenges in Robotics and Design:
- Industry 4.0
- · Applied Mechanics Bio-mechanics
- Computer aided engineering design
- Finite element analysis
- Industrial Tribology
- Machine Design
- Robotics and Automation · Dynamics and Vibration control
- Industrial Internet of Things
- Industrial Engineering and optimization
- Autonomous vehicles

- Green Manufacturing
   Instrumentation and Control
- Material Characterizatio
- Manufacturing Techniques
- Rapid Prototyping
  Polymers and Composites
- Lean Systems.
- Digital Manufacturing. Modeling of Manufacturing Systems.
- Smart Materials
- nges in Thermal Engineering Thermal and Fluid Flow
- Refrigeration and Heat Transfer Systems Energy Engineering & Alternate Fuels
- Micro Nano Devices and System
- Intelligent Hybrid and Electric Vehicles
  - New Refrigerants
- Phase Change Materials. CO<sub>2</sub> Capture and Sequestration
- Green Energy and Green Power

The Koneru Lakshmaiah Charities was established as a trust in the year 1980 withits official address at Museum Road, Governorpet, Vijayawada, Andhra Pradesh 520 002 and started KL College of Engineering in the Academic year 1980-81.

KL Deemed to be university was established in 1980-81, as KL College of Engineering, which was upgraded to KL College of Engineering Autonomous in 2006 by UCC, and was declared as a Deemed to be University in 2009 by UGC, MHRD Govt. of India. In 2012 as a Deemed to be University the institution was accredited by NAAC with A Grade and later in 2018, was re-accredited by NAAC with A++ grade. In 2019 UGC, MHRD declared this intuition as Category I Institution. The university was also ranked 35th in NIRF 2021 rankings.

### Guide lines for paper submission

- Experimental investigation with specific conclusions Original Contribution, not published earlier
- Case studies of industrial importance Simulation studies with practical demonstration/result
- Design of Instruments / Systems / Software

### mat for Preparation & submission of pape

- Paper should not exceed 6 (six) A4 Size sheets
- Font : Times New Roman
   Margins : Left = 1.5 Inch Right, Top & Bottom = 1.0 Inch · Abstract: 11 Point Italic with single line spacing to be
- Austract. 11 Point name with angle line spacing to be placed after title and other details. Key words : 4 (Four) Text : 12 Point normal justified Para heading: 12 Point
- Bold Sentence case Spacing = 1.5 lines Figures to be inserted in jpg Format. At least one of the authors is required to register and
- attend the conference for presenting the paper
- Maximum number of authors is 4 (Four) E-mail of the corresponding author should be given.

#### Dates to Remember

- Full Paper Submission 10<sup>th</sup> lune 2022 Acceptance notification/Revision request 16th June, 2022
- Registration of accepted papers 19th June, 2022
- Submission of Camera-ready paper along with Registration form 19<sup>th</sup> June, 2022
- Intimation of Program Schedule 21<sup>st</sup> June, 2022

#### **Registration Fee**

Minimum one author per paper should register for presenting

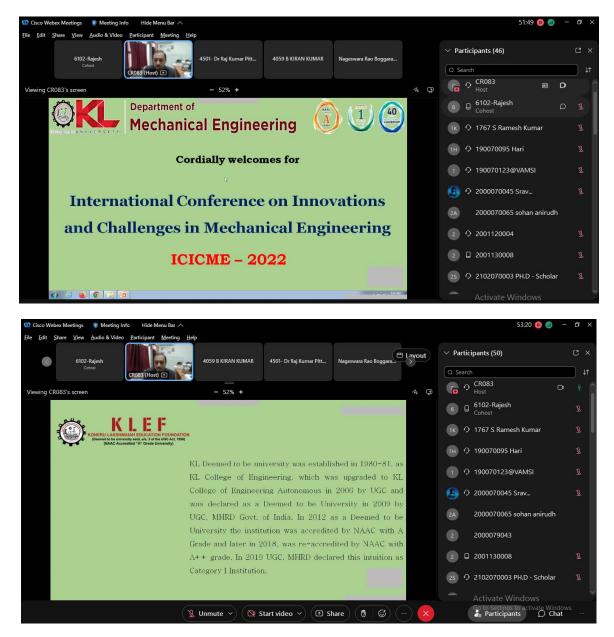
- the work
- UG or PG Student : Rs. 600 / \$ 40
- Research Scholar and Faculty Member : Rs. 1000 / \$ 60 Industry Persons : Rs. 1500 / \$75

#### Activate Window

# Day-1 (24-06-2022)

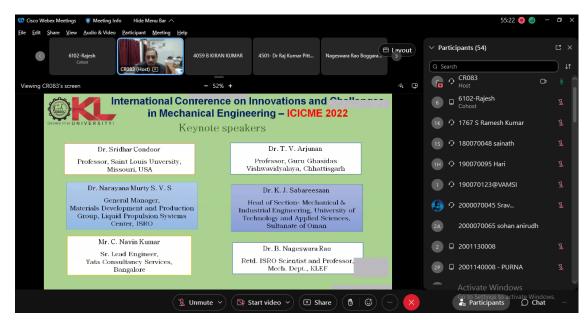
### **Inagural Session Report**

International Conference inaugural function started at 9:30 A.M. Organising secretary Dr. N. Rajesh invited Chief guest, Conference chair, Convenor, Co-convenors, Faculty, Students and participants for conference and then Convenor Dr. D.V.A Rama Sastry presented achievements of K L University and then addressed about unique selling points of Mechanical Engineering Department at K L University. Convenor presented details about keynote speakers of ICICME-2022. Total 6 Keynote lecture sessions planned on this 2 days conference.



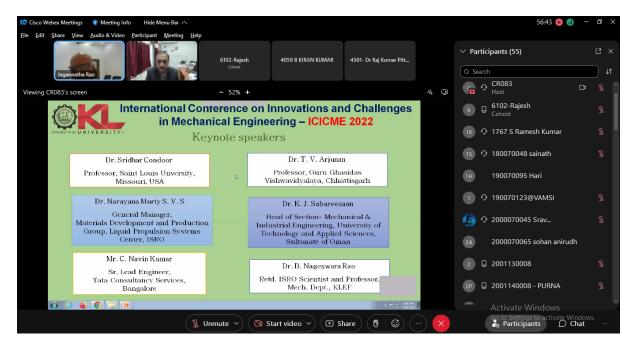






### **Pro chancellor address**

Professor Jagannadha Rao garu addressed conference gathering and presented his valuable word on conference. He addressed Gap between engineers, scientists and medical field and announced that Soon KLU is going to start medical field and can apply our mechanical applications in medical field. KLU is always open up to collaborate with many other universities to encourage younger researchers. He congratulated team ME for organising this and also thanked all keynote speakers for being a part in this conference.



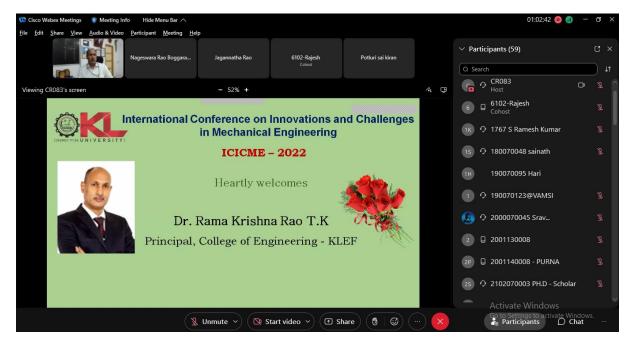
# **Conference chair address**

Dr. B. Nageswara Rao presented opening remarks about conference theme and explained importance of innovations and challenges in Mechanical Engineering.



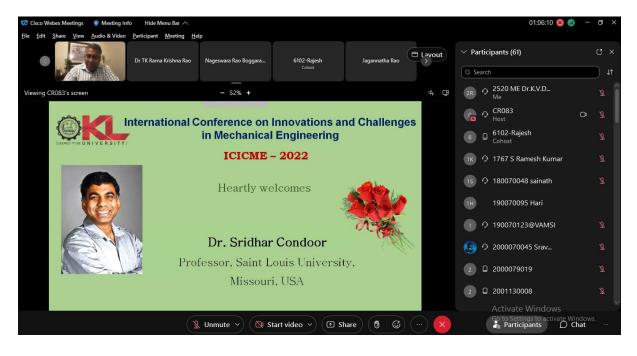
# **Principal address**

Dr. T.K. Rama Krishna Rao, Principal College of Engineering addressed conference gathering and congratulated Team ME for organising this conference and welcomed all participants and keynote speakers for being a part in this conference.



# **Chief guest address**

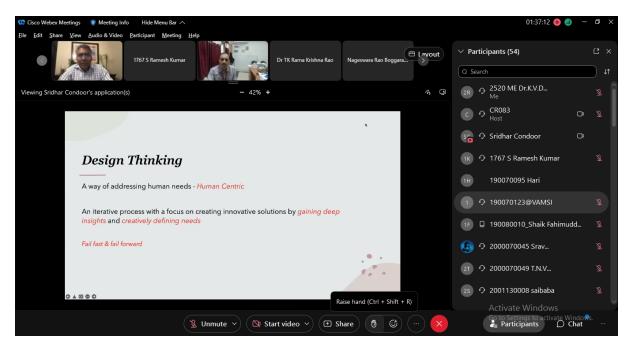
Dr. Sridhar Condoor, Professor Saint Louis University, Missouri, USA

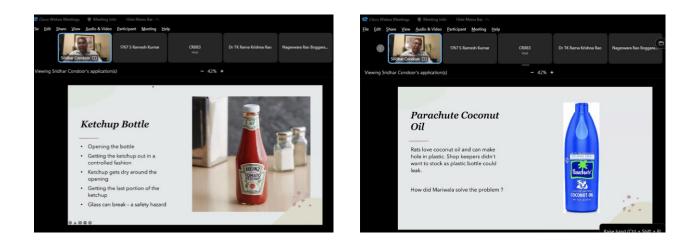


# **Keynote Session-1**

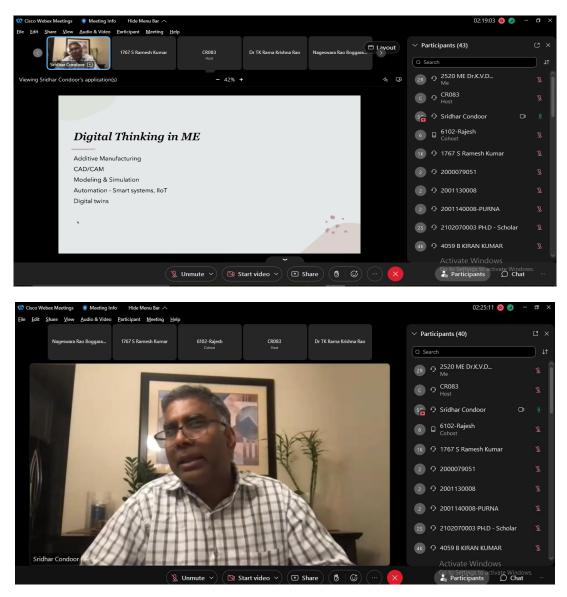


Dr. Sridhar Condoor presented keynote address on "Opportunities and Challenges in Shaping Mechanical Engineering Education". As demand in present era is shifting more towards computer science and engineering, he addressed opportunities and challenges of mechanical engineering with presentation outline of Design thinking and Digital thinking. He explained product development time by comparing vaccine development throughout history. Design thinking challenges with examples are discussed.



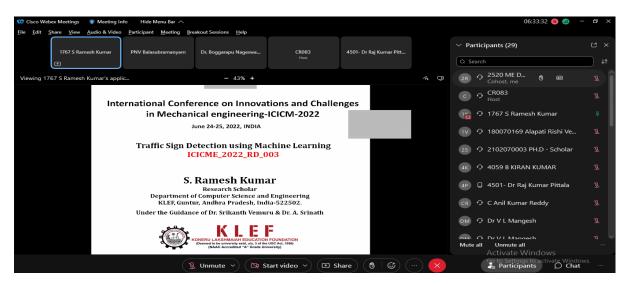


He suggested to incorporate digital thinking in mechanical courses like CAD/CAM, Additive Manufacturing, Modelling and Simulation, automation-Smart systems, IIoT etc.,. So that students will show more interest rather than learning coding courses being mechanical students. At last, he clarified doubts raised by participants.



# Paper presentations on Day-1 (AN)

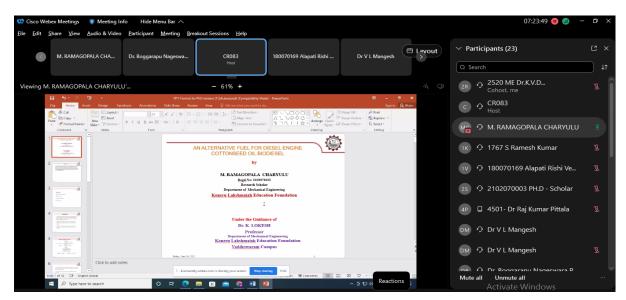
### **RD003**



### **RD\_004**

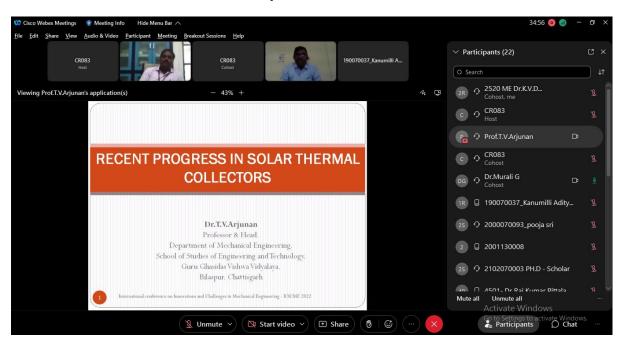


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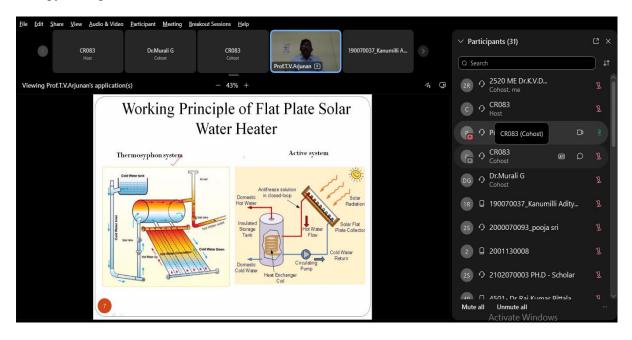


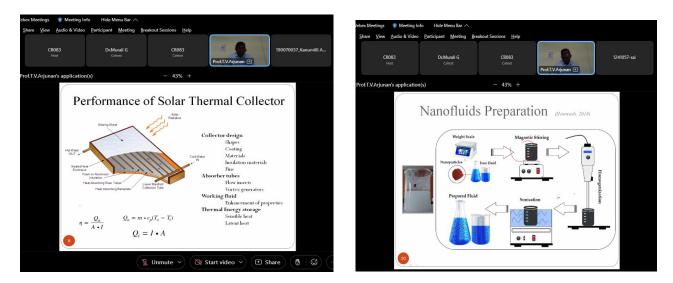
# Day-2 (25-06-2022)

**Keynote Session-4** 

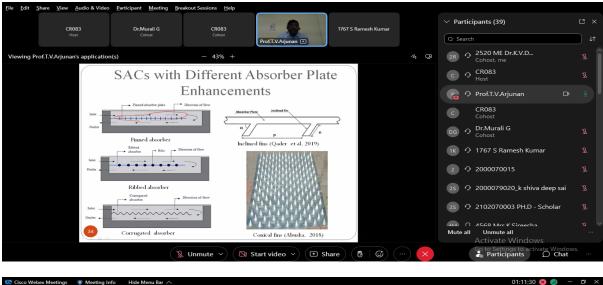


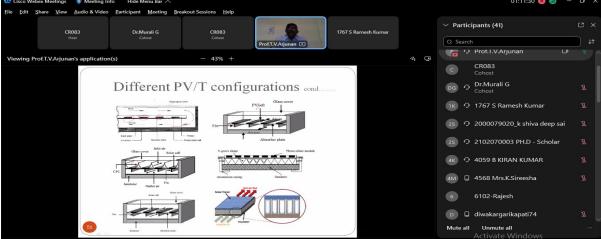
Dr. T. V. Arjunan, Professor and Head, Department of Mechanical Engineering, Guru Ghasidas Vishwavidyalaya, Chattisgarh presented keynote address on "Recent Progress in Solar Thermal Collectors". He explained working of solar thermal collectors, classification of solar thermal collectors, classification of solar flat plate collectors, working principle of flat plate solar water heater, performance of solar thermal collector, Collector Design factors, Performance enhancement techniques in working with Nanofluids, Nano fluids preparation, Energy storage materials.





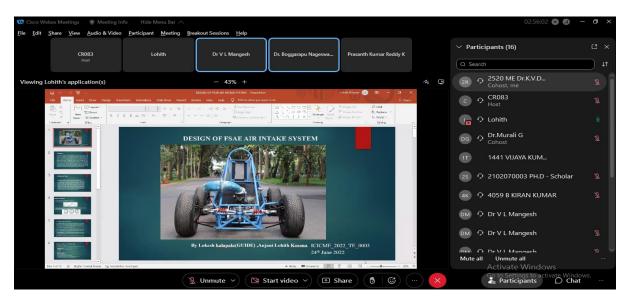
Keynote speaker explained all about solar collector with triple concentric tube latent heat storage system, PCM incarported Thermosyphon Solar Water heating system, Working of Flat Solar Air Heater, Performance controlling factor for Solar Air Heater, Classifications of Flat Solar Air Collectors, SAC's with different Absorber plate Enhancements, Different absorber geometries of SAC with PCM, Different PV/T Configurations, Evacuated tube configuration and classification, Solar energy potential in industries. At last, he clarified doubts raised by participants.



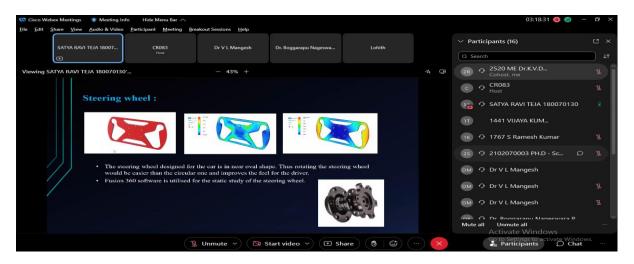


# Paper presentations on Day-2 (AN)

TE\_003



TE\_004



At the end of conference, Vote of thanks presented by Dr. B. Nageswara Rao Sir and feedback collected from participants.

V.Ng

**Event Organiser** 



DVA Rama Sastry HOD-ME