

**International Conference on Recent Advances in Mechanical Infrastructure (ICRAM-2022)**  
**December 16-18, 2022**

## **Instructions for Presentations**

- All oral presentations must be made in English.
- Lasting 10 minutes, plus 2 minutes for Q&A.
- The PowerPoint of the oral presentation must be written in English.
- For details on how to present by Microsoft Team, please visit:

<https://support.microsoft.com/en-us/office/present-from-powerpoint-live-in-microsoft-teams-28b20e74-7165-499c-9bd4-0ad975d448ad>

<https://support.microsoft.com/en-us/office/show-your-screen-during-a-meeting-90c84e5a-b6fe-4ed4-9687-5923d230d3a7>

- **Online link for online oral presentation:**

[https://teams.microsoft.com/l/meetup-join/19%3ameeting\\_NzExNGFjNWQtNTM1MS00NWVjLTliMzUtODZlYmFhNThhMDE3%40thread.v2/0?context=%7b%22Tid%22%3a%22a8cb5f0d-3a47-4ee0-b1c6-dc4b96f09bdb%22%2c%22Oid%22%3a%22ad9f735a-5361-4d75-a942-28695a7b01fc%22%7d](https://teams.microsoft.com/l/meetup-join/19%3ameeting_NzExNGFjNWQtNTM1MS00NWVjLTliMzUtODZlYmFhNThhMDE3%40thread.v2/0?context=%7b%22Tid%22%3a%22a8cb5f0d-3a47-4ee0-b1c6-dc4b96f09bdb%22%2c%22Oid%22%3a%22ad9f735a-5361-4d75-a942-28695a7b01fc%22%7d)

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**Day 2: 17/12/2022 Saturday**

**Time: 10:30 AM - 11:45 AM**

**Session 2**

**Theme: Manufacturing**

**Session Chair: Dr. Rakesh Chaudhari, PDEU**

<b>Sl. No.</b>	<b>Paper Title</b>	<b>Presenter</b>	<b>College/ University</b>
1.	Optimization of 3D Printing Process Parameters using Design of Experiments for ABS Material	Keval Bhavsar	Aditya Silver Oak Institute of Technology
2.	Research Prospects of Friction Stir Additive Manufacturing	Shuja Ahmed	Ahmedabad University
3.	Experimental and Numerical Analysis of TiAlN Coated Tool for Varying Cutting Speeds Using DEFORM-3D	Atharv Bhangale	Indian Institute of Technology Bhilai, Raipur
4.	Recent Advancements in the Fabrication of Multi-Material Structures by Additive Manufacturing	Jay Vora	PDEU
5.	An Integrated MADM approach for Welding Process Selection	Ravindra S. Saluja	K. K. Birla Goa Campus, BITS Pilani,
6.	Synthesis and Characterization of Fiber Based Composites Made from Naturally Available Reinforcement	Salot M	Indus University

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**Day 2: 17/12/2022 Saturday**

**Time: 11:45 AM - 1:00 PM**

**Session 3**

**Theme: Infrastructure Planning and Design**

**Session Chair: Dr. Saurabh Yadav, IITRAM**

<b>Sl. No.</b>	<b>Paper Title</b>	<b>Presenter</b>	<b>College/ University</b>
1.	Design, Investigation and Modification of Triple Step Helical Transmission Casing Utilizing Numerical Techniques Anticipating Several Materials	Ronak D. Gandhi	Navrachana University, Vadodara
2.	Kinematic Study of Modified Jansen Linkage for Development of a Hexapod Robot	Keval Bhavsar	Aditya Silver Oak Institute of Technology
3.	Identification of Faults in Ball Bearing using Maximum Overlap Discrete Wavelet Transform and Mutual Information	Keval Bhavsar	Aditya Silver Oak Institute of Technology
4.	Design of the Tie Bar for the 250 Tonne Injection Moulding Machine	Swapnil Vegad	Aditya Silver Oak Institute of Technology
5.	Tolerance Stack-up Analysis of Toggle Mechanism for Clamping Unit of an Injection Moulding Machine	Shuja Ahmed	Ahmedabad University
6.	Kinematic Analysis of Planar Mechanisms by means of Computer-Aided Design Software	Amit Talli	KLE Technological University, Hubli

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**Day 2: 17/12/2022 Saturday**

**Time: 2.00 PM – 3.15 PM**

**Session 4**

**Theme: Thermal**

**Session Chair: Dr. Uday Raj, IIT Bhilai**

<b>Sl. No.</b>	<b>Paper Title</b>	<b>Presenter</b>	<b>College/ University</b>
1.	Production of biogas and the associated factors: A guide for successful implementation of a biogas digester	Mahatma Patel	Pandit Deendayal Petroleum University
2.	Geometrical Optimization of Single Crystal Tungsten-Based-Magneto-Resistive Heat Switch for Applications at milli-Kelvin Temperatures	B. Kiran Naik	National Institute of Technology Rourkela, Rourkela
3.	Performance Enhancement of an Adsorbed Natural Gas Storage System Using Various Nanofluids: A Heat and Mass Transfer Approach	Anupam Chaudhary	Indian Institute of Technology (Indian School of Mines), Dhanbad
4.	Review on Loop Heat Pipe: An Effective Heat Dissipation Device	Saket Tripathi	IITRAM, Ahmedabad
5.	Optimal Design and Performance Analysis of Shell and Tube Heat Exchanger using HTRI Package	Juluru Pavanu Sai	Vignan's Foundation for Science, Technology & Research, Guntur
6.	Unified Higher Order Beam Theory for Behavioral Study of FG beams	Deepak Mahapatra	IGKV, Raipur
7.	Thermal Performance Comparison of Closed Loop Pulsating Heat Pipe with DI Water and Al <sub>2</sub> O <sub>3</sub> /DI Nanofluid	Kamlesh Parmar	IITRAM, Ahmedabad

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**Day 2: 17/12/2022 Saturday**

**Time: 3:45 PM – 5:00 PM**

**Session 5**

**Theme: Manufacturing**

**Session Chair: Dr. Jay Vora, PDEU**

<b>Sl. No.</b>	<b>Paper Title</b>	<b>Presenter</b>	<b>College/ University</b>
1.	Utilization of CO2 as Refrigerant for Supermarket Application: An Energy and Economic Assessment	Dileep Kumar Gupta*	IITRAM
2.	Importance of High Strength Steels and their Welding in Petrochemical Industries	Hemenkumar H Thakar	Gujarat Technological University, Chandkheda
3.	Ergonomic & Hygienic Footwear Rack System for Use at Religious Places	Dr. Siddheshwar Tuljapure	Walchand Institute of Technology, Ashok Chowk
4.	Adoption of Cyber-Physical Systems in Manufacturing Industries	Vishal Ashok Wankhede	Pandit Deendayal Petroleum University
5.	Innovative Approach of mechanized GMAW Procedure Qualification of X65 Grade S-Lay Offshore Sour Pipeline	Jay Vora	Pandit Deendayal Energy University
6.	Finite Element Simulation of Milling Operation using Uncoated and Titanium Aluminium Nitride Coated Tools with Different Coating Thicknesses	Syamantak Bera	Indian Institute of Technology Bhilai, Raipur
7.	Performance Enhancement of Hole Entry Textured Journal Bearing by Using Genetic Algorithm	Saurabh K Yadav	IITRAM

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**Day 3: 18/12/2022 Sunday**

**Time: 10.30 AM-11:45 PM**

**Session 6**

**Theme: Thermal**

**Session Chair: Dr Sumit Tripathi, IITRAM**

<b>Sl. No.</b>	<b>Paper Title</b>	<b>Presenter</b>	<b>College/ University</b>
1.	Impingement of Supersonic Under-Expanded Jet on Flat and Wedge-Shaped Deflector	Thanggoulen Hmangte	National Institute of Technology, Manipur
2.	A Review of Parametric Studies on Core-Annular Flow	Shreyaskar Gautam	IITRAM, Ahmedabad
3.	Performance Prediction of Hollow Fiber Membrane-Based Liquid Desiccant Dehumidifier Using PCA-Integrated OGM (1, N) and SVM Machine Learning Tools	B. Kiran Naik	National Institute of Technology Rourkela, Rourkela
4.	Performance Analysis of an Ejector Based CO <sub>2</sub> Transcritical Refrigeration System with Integrated Mechanical Subcooling For Dairy Application	Vaishak S	Birla Institute of Technology and Science, 333031-Pilani
5.	On the Hybrid Methods Used for Solving Inverse Heat Transfer Problems	Sanil Shah	IITRAM, Ahmedabad
6.	Numerical Investigations on Effect of Textured Tools on Heat Transfer during Machining	Rishabh Ranjan	Indian Institute of Technology Bhilai, Raipur
7.	Improvement in CI engine performance using blend of diesel-ionic liquid	Nisarg Tiwari	IITRAM, Ahmedabad

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Day 3: 18/12/2022 Sunday

Time: 11:45 PM-1.00 PM

Session 7

Theme: Manufacturing

Session Chair: Soni Kumari, GLA university

Sl. No.	Paper Title	Presenter	College/ University
1.	Machinability study of laser beam drilling on GFRP composites using Taguchi-based utility function approach	Rahul	IITRAM
2.	Design and Analysis of Aircraft Wing Aileron employing various composites to find the optimal material	Soni Kumari	GLA University, Mathura
3.	Experimental Analysis on Surface Roughness of Nano-graphene mixed Wire-Electrical Discharge Machining for Nitinol SMA	Jay Vora	Pandit Deendayal Energy University
4.	Challenges and Barriers of Rooftop Solar Adaption in Rural : A study from Rural Part of Gujarat India	Dileep Kumar Gupta*	IITRAM
5.	Estimation of energy transmission to workpiece during wire electrical discharge machining process	Parth Sathavara	IITRAM
6.	FINITE ELEMENT ANALYSIS OF PRESSURE VESSEL WITH DIFFERENT END CONNECTIONS	Kushagra Roy	IITRAM
7.	Machinability study of laser beam drilling on GFRP composites using Taguchi-based grey relational analysis	Rahul	IITRAM
8.	A Review on Fabrication of Inconel Alloys Using Different Additive Manufacturing Techniques	Kamlesh Joshi	IITRAM