



**GUJCOST Sponsored International Conference on Recent Advances in Mechanical Infrastructure  
(ICRAM-2021)  
August 6-8, 2021**



## Instructions for Presentations

- All the oral presentations must be made in English.
- Lasting 10 minutes, plus 5 minutes for Q&A.
- The powerpoint of the oral presentation must be written in English.
- Keynote speech will start at 10 AM on Saturday and Sunday.
- Please join online presentation by 9.55 AM.
- For details of how to present by Google Meet, please visit:

<https://support.google.com/meet/answer/9308856?co=GENIE.Platform%3DiOS&hl=en&oco=1>

- **Online link:**

<https://meet.google.com/sdk-kcwx-kvy>



# GUJCOST Sponsored International Conference on Recent Advances in Mechanical Infrastructure (ICRAM-2021)

August 6-8, 2021

Day 2: 07/08/2021 Saturday

Time: 11.00 AM-12.30 PM

Session 1

Theme: Thermal

Session Chair: Dr. Sreedhar Babu Metikela; Co-chair: Dr. PL. RamKumar

Sl. No.	Paper Title	Presenter	College/ University
1.	Effect Of Combustible Fractions Of A Sustainable Producer Gas Fuel On SI Engine Combustion, Performance And Emission – An Experimental Analysis	Sreedhar Babu Metikela (Guest Speaker)	Jain College Of Engineering Belagavi
2.	Performance analysis of desiccant material prepared by simple mixing of Silica-gel and Calcium Chloride	Bhushan C. Behede	O. P. Jindal University, Raigarh
3.	Flow And Thermal Characteristics Of Jet Impingement On A Dimple Plate Using Large Eddy Simulation	Ashutosh Narayan Singh	National Institute Of Technology Manipur
4.	Numerical Investigation And Performance Comparison Of Double Tube Helical Heat Exchanger Incorporating Four Turn And Six Turn Models Using Several Nanaofluids	Sanket Ishwar Benni	Jain College Of Engineering Belagavi
5.	Passive Cooling And Human Thermal Comfort: A Case Study	Neeraj Agrawal	Dr B A Technological University Lonere
6.	Heat Transfer Correlation Development For Solar Air Heater Duct Having Artificial Roughness	Anil Singh Yadav	Lakshmi Narain College Of Technology, Bhopal



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**Day 2: 07/08/2021 Saturday**

**Time: 12.30-1.30 PM**

**Session 2**

**Theme: Design, Robotics and Controls**

**Session Chair: Dr. Ganesh Iyer; Co-Chair: Dr. Jagat Rath**

<b>Sl. No.</b>	<b>Paper Title</b>	<b>Presenter</b>	<b>College/ University</b>
1.	Design of Bluetooth Controlled Floor Cleaning Robot	Unmesh Gornade	IITRAM, Ahmedabad
2.	Detection of Sensor fault in a DC microgrid using Supertwisting Observer	Kalyana veluvolu	Kyungpook National University
3.	Computer vision guided Human-Robot collaboration for Industry 4.0: A Review	Jaimin pandya	Gujarat Technological University
4.	Design and Fabrication of Mini Woodworking Lathe Machine	Param Jogidas	IITRAM



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Day 2: 07/08/2021 Saturday

Time: 2.30-4.15 PM

Session 3

Theme: Planning Design and Controls

Session Chair: Dr. Gautam Choubey; Co-Chair: Dr. Kamlesh Joshi

Sl. No.	Paper Title	Presenter	College/ University
1.	Implementation Of Kaizen In Industries And Its Challenges	Mudit Saxena	INDUS
2.	Review on How IIoT Has Revolutionized Greenhouse, Manufacturing and Medical Industries	Visheshgiri Goswami	Nirma University
3.	Fracture Analysis of Crack Positioned perpendicular to the Poling direction in Piezoelectric Material using XFEM	Srinivasu Chadaram	IITRAM
4.	Experimental Investigation Of Solar Panel Integrated With Mirror Reflector And Cooling	Dileep K Gupta	IITRAM
5.	FE Analysis and Optimization of Excavator Bucket Teeth	Smriti Sahay	Madan Mohan Malviya University of Technology, Gorakhpur



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**Day 2: 07/08/2021 Saturday**

**Time: 4.15-6.15 PM**

**Session 4**

**Theme: Manufacturing**

**Session Chair: Dr. Rakesh Chaudhari; Co-Chair: Dr. Sumit Tripathi**

<b>Sl. No.</b>	<b>Paper Title</b>	<b>Presenter</b>	<b>College/ University</b>
1.	Multi-response optimization and effect of alumina mixed with dielectric fluid on WEDM process of Ti6Al4V	Rakesh Chaudhari (Guest Speaker)	Pandit Deendayal Petroleum University, Gandhinagar
2.	Friction stir welding for automotive and electric vehicle	Karn kavathia	Pandit Deendayal Energy University
3.	A review on cloud manufacturing technologies of Industry 4.0	Rakesh chaudhari	Pandit Deendayal Petroleum University, Gandhinagar
4.	Effect of different tool electrodes (wire) of WEDM process of Inconel 718	Jaykumar Vora	Pandit Deendayal Energy University, Gandhinagar
5.	Effect of Speed and Temperature on the Tribological Behaviour of ADI	Vishwanath Khadakbhavi	S G Balekundri Institute of Technology
6.	Investigation on effect of reinforcing fillers and matrix on polymer bio-composites – A Review	Sumit Das Lala	Parul Institute of Engineering and Technology, Parul University, Vadodara,



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August 6-8, 2021

Day 3: 08/08/2021 Sunday

Time: 11.00 AM-12.30 PM

Session 5

Theme: Infrastructure Planning and Design

Session Chair: Dr. Navneet Khanna; Co-Chair: Dr. Ajit Kumar

Sl. No.	Paper Title	Presenter	College/ University
1.	A Novel technique for the surface texture inspection of Electrical Discharge Machined surfaces using vision system	Kiran MB	Pandit Deendayal Energy University, Gandhinagar
2.	A review on key technologies of Industry 4.0 in manufacturing sectors	Jaykumar Vora	Pandit Deendayal Energy University
3.	Modification and Upgradation of Semi-Automated Hydraulic Extruder to Enhance Its Performance	Rushabh Shah	Institute Of Technology, Nirma University
4.	Design of Pitch Controlling System for two-wheel self-balancing vehicle based on Arduino	Mahmmadabararkhan Diwan	Knowledge Institute of Technology and Engineering, Bakrol, Anand, Gujarat
5.	Design and development of the wheelchair components using the Topology Optimization method	Pankaj Sahlot	Pandit Deendayal Energy University, Gandhinagar
6.	A Review on Improving the surface characteristics of Aluminium Alloy via Friction Stir Processing	Pankaj Sahlot	Pandit Deendayal Energy University, Gandhinagar



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**Day 3: 08/08/2021 Sunday**

**Time: 2.00 PM-3.45 PM**

**Session 6**

**Theme: Thermal**

**Session Chair: Dr. Dheeraj K Singh; Co-Chair: Dr. Dileep K Gupta**

<b>Sl. No.</b>	<b>Paper Title</b>	<b>Presenter</b>	<b>College/ University</b>
1.	Strain Engineered Electronic and Thermoelectric Properties of Two Dimensional SnGe	Hardik Kagdada	IITRAM
2.	Techno-Economic Assessment of IGCC Power Plant Retrofitted with Chemical Looping Combustion for Carbon Capture	Pulkit kumar	IITRAM
3.	Design and Development of a Novel Technique for the Maintenance of a Gas Turbine–A Case Study	M. B. Kiran	Pandit Deendayal Energy University, Gandhinagar
4.	An experimental study on performance assessment of solar updraft tower (SUT) plant with guide vanes	PRITAM DAS	National Institute of Technology Warangal
5.	The Effect Of Using Phase Change Material On The Performance Of Natural Convection Indirect Type Solar Dryer During Drying Ivy Gourd	Mulatu C. Gilago	National Institute of Technology Warangal
6.	Effect Of Taper And Perforation On Heat Transfer Coefficient Of A Passive Horizontal Heat Sink	Ayush Kumar Rao	National Institute of Technology, Manipur
7.	Review of recent advances on Pulsating Heat Pipes	Kamlesh Parmar	IITRAM, Ahmedabad



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**Day 3: 08/08/2021 Sunday**

**Time: 3.45-5.15 PM**

**Session 7**

**Theme: Manufacturing**

**Session Chair: Dr. Jaykumar Vora; Co-Chair: Dr. Pramod Bhingole**

<b>Sl. No.</b>	<b>Paper Title</b>	<b>Presenter</b>	<b>College/ University</b>
1.	Experimental investigations and optimization of WEDM parameters using Taguchi analysis of pure titanium	Dr. Jaykumar Vora (Guest Speaker)	Pandit Deendayal Energy University, Gandhinagar
2.	Multi-response optimization of alumina powder mixed WEDM process using Taguchi-TOPSIS approach of Nitinol SMA	Rakesh Chaudhari	Pandit Deendayal Energy University, Gandhinagar
3.	Rail Welding Technology: Processes and Welding Quality	Trushil A Patel	Pandit Deendayal Energy University, Gandhinagar
4.	Evaluation of Mechanical and Thermal properties of Banana/Aramid/E-glass Powder Hybrid Composite Plate	D.R.Rajkumar	CARE College of Engineering, Tiruchirappalli
5.	Enhancing Productivity of a Manufacturing Company Using Value Stream Mapping -A Case study	Kiran MB	Pandit Deendayal Energy University, Gandhinagar
6.	Classical Lean Manufacturing Philosophy– A Review	Kiran MB	Pandit Deendayal Energy University, Gandhinagar





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**Day 3: 08/08/2021 Sunday**

**Time: 5.15 PM-6.30 PM**

**Session 8**

**Theme: Infrastructure Planning and Design**

**Session Chair: Dr. Mithilesh Dixit; Co-Chair: Dr. Saurabh Kumar Yadav**

<b>Sl. No.</b>	<b>Paper Title</b>	<b>Presenter</b>	<b>College/ University</b>
1.	Optimization of Process Parameters Using Response Surface Methodology to Improve Surface Finish in Face Gear Grinding	Aditya Nema	Pandit Deendayal Energy University
2.	Influence of machining parameters of Fiber laser cutting on Al6061-T6	Rakesh Chaudhari	Pandit Deendayal Petroleum University, Gandhinagar
3.	A review on machining aspects of Shape memory alloys	Rakesh chaudhari	Pandit Deendayal Petroleum University, Gandhinagar
4.	2D Simulation to study the effect of flaps on various Aerofoils at different angles	Vishal Kaushik	Nagpur University
5.	Investigation Of Thermophysical Properties Of Synthesized N-Hexacosane Encapsulated Titania Phase Change Material For Enhance Thermal Storage Application.	Sakshum Khanna	Pandit Deendayal Energy University, Gandhinagar