

**INTERNATIONAL CONFERENCE ON ADVANCES IN MATERIALS  
AND MECHANICAL ENGINEERING**

**ICAMME-2022**

18<sup>th</sup>-19<sup>th</sup> February 2022

**TECHNICAL PROGRAMME SCHEDULE**

**Date: 18-02-2022**

**SESSION-1: MATERIALS AND TECHNOLOGIES (PART-1)**

**TIMINGS: 11:30 AM-2:15 PM (IST)**

| <b>S. No.</b> | <b>Name of Presenter</b> | <b>Title of Paper</b>   |
|---------------|--------------------------|---|
| 1             | Suha K. Shihab           | Mechanical and Physical characteristics of Hybrid Particles/Fibers-Polymer Composites: A review                         |
| 2             | Bhavin Mehta             | Synthesis and characterization of $\gamma$ -Al <sub>2</sub> O <sub>3</sub> -Water Nanofluid with and without surfactant |
| 3             | Rajat Kumar              | Temperature and strain rate dependent tensile behavior of polycrystalline nanocopper under dynamic loading              |
| 4             | Sidra Ajmal              | Recent progress in Development and Applications of Biomaterials   |
| 5             | Lubaid Nisar             | Defects analysis in Friction stir processing of Magnesium based surface composites.                                     |
| 6             | Shashikant Awasthi       | Optimization of Magnesium ZK60A/SiC/B <sub>4</sub> C Hybrid Composite Fabricated by Friction Stir Processing            |
| 7             | Md. Ziyaur Rahman        | Multi-response Optimization of Gap Parameters on Mechanical Properties of Surface Composite                             |

**SESSION-2: MATERIALS AND TECHNOLOGIES (PART-1)**

**TIMINGS: 11:30 AM-2:15 PM (IST)**

| <b>S. No.</b> | <b>Name of Presenter</b> | <b>Title of Paper</b>  |
|---------------|--------------------------|--|
| 1             | Gaurav Kumar             | Multi Performance Characteristics Optimization of End Milling Parameters on Surface Quality and Micro-hardness of SS-304 |
| 2             | Shailendra Kumar Yadav   | Recent Advances in Aluminium Metal Matrix Composites: A Critical Review  |
| 3             | Tanveer Majeed           | Electrochemical Behaviour of Friction Stir Welded Joints; Effect of Tool Shoulder Diameter                               |
| 4             | Ingilela Aswith Babu     | A comprehensive review on the influence of reinforcement materials and wear characteristics of metal matrix composites   |
| 5             | Akash Ahlawat            | Analysis of wear assessment of FDM printed specimens with PLA, Multi-Material and ABS via hybrid algorithms              |

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|---|---------------------|---|
| 6 | Mohamed Serier      | Parametric studies of friction stir welding with tool using a vibrating shoulder                          |
| 7 | Santosh Kumar Sahoo | A critical review on industrial/agricultural waste as reinforcement materials for metal matrix composites |

### **SESSION-3: MATERIALS AND TECHNOLOGIES (PART-1)**

**TIMINGS: 11:30 AM-2:15 PM (IST)**

| <b>S. No.</b> | <b>Name of Presenter</b> | <b>Title of Paper</b>   |
|---------------|--------------------------|---|
| 1             | Mahesh Kumar Gupta       | Computational mechanical behavior of nanocrystalline copper-tantalum alloy  |
| 2             | Santosh Kumar Rai        | Compositional Ligno-cellulosic Behaviour of Some Residual Biomass   |
| 3             | Mahboob Amin             | Mechanical Properties of Natural Fiber Reinforced Polymer Composites: A Critical Review                             |
| 4             | Ankit Kumar              | Investigation of Mechanical Properties of Heat-Treated A356/SiC Composite Fabricated Through Stir Casting Technique |
| 5             | Ajay Mittal              | Recent progress in the fabrication of volumetric superhydrophobic materials   |
| 6             | Akash Yadav              | Experimental investigation on mechanical property of concrete with hybrid supplementary cementitious materials.     |
| 7             | Surya Prakash            | Overview and in-silico Pharmacological Profiling of Gliadin: A Potential Biomaterial                                |

### **SESSION-4: ADVANCED MANUFACTURING TECHNOLOGIES (PART-1)**

**TIMINGS: 3:00 PM-5:45 PM (IST)**

| <b>S. No.</b> | <b>Name of Presenter</b> | <b>Title of Paper</b>   |
|---------------|--------------------------|---|
| 1             | Mayur Sanas              | Evaluating biological behavior of Kelvin cellular bone scaffold   |
| 2             | Gaurav Kalia             | Use of Three-Dimensional Printing Techniques for developing Biodegradable applications: A Review investigation                |
| 3             | Pooja Dwivedi            | Investigation on Aluminum Based Surface Composite through FSP using Metal (Fe-Sn-Mn) and Ceramic (SiC) Reinforcements         |
| 4             | Mouminah Amatullah       | Effect of Tool Rotational Speed on the Friction Stir Welded Aluminum Alloys: a review   |
| 5             | Nirmal Garg              | Process Parameter Optimization on The Dimensional Accuracy of Additive Manufacture Thermoplastic Polyurethane (TPU) Using RSM |
| 6             | Ashish Sharma            | Review of Various Methods of Keyhole Removal In Friction Stir Welding Sheets And Pipes  |
| 7             | Ahmad Shamoon            | Role of energy technologies in response to climate change   |

**SESSION-5: ADVANCED MANUFACTURING TECHNOLOGIES (PART-1)****TIMINGS: 3:00 PM-5:45 PM (IST)**

| <b>S. No.</b> | <b>Name of Presenter</b> | <b>Title of Paper</b>   |
|---------------|--------------------------|---|
| 1             | Sonakshi Hazra           | Experimental Investigation of Powder Mixed Micro-Electrical Discharge Drilling on SS304 substrate                                       |
| 2             | Narender Singh           | Multi-Objective parametric optimization during micro-EDM drilling of Ti 5.6Al-3.6V using Teaching Learning Based Optimization algorithm |
| 3             | Mohammad Arif            | Friction Stir Welding and Friction Stir Spot Welding of Acrylonitrile Butadiene Styrene: A review                                       |
| 4             | Prashant Choudhary       | Microstructural Investigation on Friction Stir Welded AA6063 Pipe   |
| 5             | Santosh V. Angadi        | Recent Advancements in the Manufacture of Nitinol Including its Characterization and Properties   |
| 6             | Abhijit Singh            | Modeling of Laser aided Direct Metal Deposition of Stainless Steel using Supervised Deep Learning Algorithms                            |
| 7             | Chetan Swaroop           | Natural fibre reinforced composites: A review based on additive manufacturing routes and biodegradability perspective                   |

**Date: 19-02-2022****SESSION-6: MATERIALS AND TECHNOLOGIES (PART-2)****TIMINGS: 9:00 AM- 11:45 PM (IST)**

| <b>S. No.</b> | <b>Name of Presenter</b> | <b>Title of Paper</b>   |
|---------------|--------------------------|---|
| 1             | R Srinivasan             | Effect of addition of Titanium carbide and Graphite reinforcement on Al7075 hybrid metal Matrix composites by gravity stir casting method |
| 2             | Vineet Kumar             | Vibration Analysis of the Rectangular FG Materials Plate with Variable Thickness on Winkler-Pasternak-Kerr Elastic Foundation             |
| 3             | Ahmad Majid Qazi         | The impact of smart materials, digital twins (DTs) and Internet of things (IoT) in an Industry 4.0 integrated automation industry         |
| 4             | Shahazad Ali             | Robotic MIG Welding Process Parameter Optimization of Mild Steel EN24T  |
| 5             | Bhavya Prakash           | The Study of Mechanical and Metallographic Properties of Friction Stir Processed AMMCs Using Different Reinforcement                      |

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| 6 | Abhijeet Kumar       | Influence of process parameters on capital cost, efficiency of CSP based solar power plants- A Review      |
| 7 | Richa Rani           | Smartly Engineered “Off-On” Switchable Probe: For the Recognition of Toxic Analytes in Semi-aqueous Medium |
| 8 | Mustufa Haider Abidi | A Study on Grain Size Variation Across Thick Section Friction Stir Weldments                               |

## **SESSION-7: ADVANCED MANUFACTURING TECHNOLOGIES (PART-2)**

**TIMINGS: 9:00 AM- 11:45 AM (IST)**

| <b>S. No.</b> | <b>Name of Presenter</b> | <b>Title of Paper</b>   |
|---------------|--------------------------|---|
| 1             | Deepti Ranjan Sahu       | Surface integrity analysis in powder mixed EDM of Nimonic 263   |
| 2             | Vishal Kumar             | Parametric Study and Optimization of GMAW Based AM process for Multi-layer Bead Deposition                          |
| 3             | Fayaz Ahmad Mir          | Friction based solid State welding- A Review  |
| 4             | Mohammad Arif            | Friction Stir Welding and Friction Stir Spot Welding of Polymethyl methacrylate (PMMA) to other materials: A Review |
| 5             | Om Prakash               | Investigation on the Friction Stir assisted Lap joining of pure copper and aluminium 6063 alloy                     |
| 6             | Aryan Rai                | Fused deposition modelling (FDM) based 3D and 4D printing: A State of Art Review                                    |
| 7             | Siddharth Mishra         | Effect of Infill Pattern and Infill Density on Mechanical Behaviour of FDM 3D Part – A Review                       |

## **SESSION-8: DESIGN, SIMULATION AND ANALYSIS**

**TIMINGS: 12:30 PM- 3:15 PM (IST)**

| <b>S. No.</b> | <b>Name of Presenter</b> | <b>Title of Paper</b>   |
|---------------|--------------------------|---|
| 1             | Mohamed Serier           | Numerical study of a cantilever beam carries a crack by response surface methodology                                |
| 2             | Sujata Kaushik           | Machine Vision based automated inspection approach for Clutch Friction Disc (CFD)                                   |
| 3             | Shwet Shikha             | Flexural analysis of functionally graded sandwich plate with piezoelectric face sheet based on Lagrangian Mechanics |
| 4             | Navneet Kumar Suman      | Composite support system for 1.5 Tesla whole-body MRI cryostat  |
| 5             | Alok Vardhan             | Effect of various functional parameters on the dynamic trend of bent-axis motor                                     |

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|---|-------------------|--|
| 6 | Alr Prathyusha    | A Review on Additive Manufacturing and Topology Optimization Process for Weight Reduction Studies in Various Industrial Applications |
| 7 | Shubham Choudhary | Effect of Material Removal Characteristics with Varying Incident Angle in Fluid Jet Polishing Process                                |
| 8 | Gaurav Kumar      | A State of Art Review of instability in Parallel Channels of supercritical fluid in nuclear applications                             |

### **SESSION-9: DESIGN, SIMULATION AND ANALYSIS**

**TIMINGS: 12:30 PM- 3:15 PM (IST)**

| <b>S. No.</b> | <b>Name of Presenter</b> | <b>Title of Paper</b>   |
|---------------|--------------------------|---|
| 1             | Arkadeep Paul            | Numerical simulation to predict printed width in EHD inkjet 3D printing process                       |
| 2             | Kaleru Aparna            | Development of efficient compressor wheel for turbocharger by varying number of blades                |
| 3             | Abdul Khaliq Ansari      | Effects of damping behavior of aluminium matrix composite rotor on bearing vibration                  |
| 4             | Abhishek Pratap Singh    | Numerical Study of Pollutant Exposure of Urban Street Canyon Buildings                                |
| 5             | Yukta                    | Design and Development of All Wheel Drive Transmission System for an All-Terrain Vehicle              |
| 6             | William Kery Gadwala     | Modelling and Analysis of Car Wheel rim for Weight Optimization to Use Additive Manufacturing Process |
| 7             | Priya Singh              | Post-combustion carbon capture by polymeric membrane: A Review  |