

PROGRAM SCHEDULE

5th INTERNATIONAL CONFERENCE ON

Smart and Sustainable Developments in Materials, Manufacturing and Energy Engineering

(SME-2023)

Invited Talk 1	
Date: 19.12.2023	Time: 11.45 to 12.30
Mr. Srivatsha Senior Principal Engineer, Autoliv India, Bangaluru, Karnataka	
Invited Talk 2	
Date: 20.12.2023	Time: 9.30 to 10.30
Dr. Ketan Kotecha Director at Symbiosis Institute of Technology, Dean of Faculty of Engineering at Symbiosis International University, Pune, Maharashtra, India	
Invited Talk 3	
Date: 20.12.2023	Time: 3.00 to 3.45
Dr. Neyara Radwan Associate Professor, Industrial Engineering Dept, College of Applied Sciences, Al MAAREFA University, Saudi Arabia & Associate Professor, Mechanical Dept, Faculty of Engineering, Suez Canal University, Egypt	

Date:19.12.2023		Time:2.00 to 3.15PM (Session 1)	
Session Chairs: Dr. Muralidhara Rao, Dr. Gururaj Upadyaya			
ID	Authors and Paper Title (8 papers)		
23	An Industry 4.0 Approach: Data Acquisition and Machine Monitoring for Welding Machines		
36	Refrigeration cooling system for machining Ti-6Al-4V alloy and optimization using COPRAS		
37	Design of Robotic Manipulator and its Control Techniques		
39	Real-time Geometric Error (Form) Compensation on a Vertical Milling Machine		
45	Investigation and Parametric Optimization of Abrasive Water Jet Machining of AA7075 through Response Surface Methodology		
69	Multi-objective WEDM Process Parameter Optimization for Machining of LM5 Aluminium alloy using Grey Relational Analysis		
78	Enhancement of Productivity by Reducing Time in Housing for Power Steering using Lean Manufacturing Process		
OP-01	Experimental Investigations on measurement of milled pocket depth surface using structurally prestressed piezo actuator based active vibration isolation system		

Date:19.12.2023		Time:3.30 to 4.45 (Session 2)	
Session Chairs: Dr. Suman Kundapur, Dr. Veeresh R K			
ID	Authors and Paper Title (8 papers)		
33	IoT Based EV Charge prioritizing System for PV-Powered Smart Buildings		

34	PV Characteristics Plotting Portable Data Logger
38	Examining the Influence of Stacking Sequence on the Mechanical Properties of Hybrid Abaca-Jute Vinyl Ester Composites
46	Optimization of Mechanical Properties for High Strength Concrete by Artificial Neural Network Modelling
64	Experimental Studies on strength and durability properties of structural light weight concrete using pumice as a coarse aggregate and polypropylene
65	Monitoring the early-strength of Self-Compacting Concrete using IoT
75	Developing Sustainable Circular Economy through Sustainable Manufacturing Practices-Evidence from Small Indian Firms
OP-02	Optimization of Rolling Process Parameters using design of experiments and FEM for simulation

Date:20.12.2023		Time: 10.45 to 12.00 (Session 3)	
Session Chairs: Dr. S S Sharma, Dr. Vijeesh V			
ID	Authors and Paper Title (8 papers)		
4	Effect of Water Head on Mechanical Characteristics of Submerged Friction Stir Welded 6061-T6 Aluminium Alloy		
5	Assessment of Different Biomaterials Based on Stress Distribution at The Bone-Implant Interface Using A Numerical Approach		
54	Investigating Microstructural Aspects of Cr3C2-NiCr Laser Cladding for Erosion-Resistant T91 Steel		
60	Modeling and Optimization of Process Parameters of Submerged Friction Stir Processing on AZ31B Alloys		
70	Correlational Study of Ultimate Tensile Stress and Hardness of Friction Stir Welded Al-Ce-Si-Mg Aluminium Alloys		
73	Influence of Impact Angle and Temperature on Solid Particle Erosion Behavior of Titanium-31		
74	Tribological characterization of Al ₂ O ₃ Filled Nickel Coated Carbon Fiber Reinforced Epoxy Composites		
OP-03	Friction Stir Welding of Commercially Pure Titanium		

Date:20.12.2023		Time: 12.15 to 1.15 (Session 4)	
Session Chairs: Dr. Kiran M D, Dr. Narasimha Marakala			
ID	Authors and Paper Title(8 papers)		
9	Assessment of Durability Elements and SEM/EDX Characterization of Ferrock Mortars		
17	Characterization and Mechanical Studies of Reduced Graphene Oxide Filled with Glass Fabric Thermosets		
26	Evaluating Mechanical Properties of ALSI7MG0.3/TIB2 Composite with Different Casting Temperatures		
28	Mechanical and Wear Studies on Epoxy Composites with Glass Fibre Reinforcement and Carbon Powder Fillers		
31	Enhancing High-Strength Polymer with Modified Cement Mortar		
49	An Investigation into the Production and Properties of Aluminium Metal Matrix Composites for Use in Automobiles		
57	Enhancing the Wear Resistance of AA2024 Alloys through Ni and MgO Composite Reinforcements		

67	Effect of Hot Forging Process on Mechanical and Microstructure Characteristics of 37cr4 Steel
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Date:20.12.2023		Time: 12.15 to 1:15 (Session 5)	
Session Chairs: Dr. Keerthi Kumar N Dr. Mallikappa			
ID	Authors and Paper Title (8 papers)		
43	Cellulose Aerogels: Revolutionary Nanomaterials		
44	A Performance Study on Corn Cob Based Sustainable Water Purification Technique in Rural Areas		
50	Cellulose-based Hydrogel in Water Purification		
52	Assessing Energy and Water Utilization via Food Consumption Profiles: A Case Study of a Girls' Hostel in an Engineering College		
55	Experimental Investigation of Salt Hydrate PCM (Shape-Stabilized) Applied to a Solar Collector		
72	Zero-Energy Buildings-A New Advancement on Energy Saving		
76	Hydrogen and Hydrogen-Blended Mahua Biodiesel Comparative Investigation in CI Engines operating under HCCI Combustion Mode with EGR Variation		
OP-05	Effect of Injection Timing on Performance of CI Engine Fueled with Raw Cardanol and Kerosene Blends		

Date:20.12.2023		Time: 1.45 to 2.45 (Session 6)	
Session Chairs: Dr. Govind Raju, Dr. H S Kumar			
ID	Authors and Paper Title (7 papers)		
22	Understanding the Influence of Amino Resin Percentage on the Hybrid Abaca-Kenaf Polyester Composite's Mechanical Properties		
40	Analysis of Materials Expansion Properties for computation of Thermal Error Compensation values for Machine Tool applications		
53	Modeling the Enablers of Lean and Agile for Viable MSMEs Supply Chain – An ISM Approach		
59	Enhancing Mechanical Properties of PLA/Kevlar Fiber Composites with ZrO ₂ Nanorod Interface Modification for High-Performance Applications		
68	Photocatalytic Degradation of Ciprofloxacin and Ibuprofen Utilizing Nanoparticles: A Comprehensive Review		
71	Coir fiber filled Polylactic Acid composites: Study of fracture toughness and Biodegradable property		
OP-04	Optical Studies of An Organic Ligand Reinforced PVA Composite Films		