

**2024 Sixth International Conference on  
Materials Science and Manufacturing Technology (ICMSMT 2024)**  
03 - 04, MAY 2024 | Coimbatore, India

**Program Schedule**

Date	Time	Event
03.05.2024	10.00 am to 10.30 am	Inaugural Function
	10.30 am to 11.00 am	<b>Keynote Address #1:</b> <b>Dr. M. Seenivasan</b> Associate Professor & Deputy Director - CDOE, Department of Mathematics Annamalai University, Chidambaram
	11.10 am to 04.00 pm	Session 01: CE01(Online)
		Session 02: EC01(Online)
		Session 03: ME01(Online)
		Session 04: ME02(Online)
	Session 05: PH01(Online)	
04.05.2024	11.10 am to 04.00 pm	Session 06: EC02(Online)
		Session 07: ME03(Online)
		Session 08: APC01(Online)
		Session 09: ME04(Online)
		Session 10: ME05(Online)
04.05.2024	04.15 pm	<b>Valedictory Session</b>

CE - Civil Engineering  
ME - Mechanical Engineering  
EC - Electronics & Communication Engineering  
PH - Applied Physics  
APC - Applied Physics & Chemistry

**Note:**

1. Start time given above indicates Indian Standard Time (IST).
2. Presentation will be conducted using Google meet platform.
3. Participants can join their respective sessions by clicking the meet link given
4. Mode of presentation should be powerpoint presentation (ppt or pptx)
5. Duration of presentation: 10 minutes (presentation) + 5 minutes (Queries)
6. Participant SHOULD join the session at least 30 minutes prior to their scheduled time.
7. Participants are requested to follow the scheduled time; especially regarding the time for your talk.
8. Participants are requested to contact the respective session coordinators for presentation related queries.
9. If any problem connecting to session, please text to the respective session In-Charges (Or) ICMSMT Whatsapp group during presentation date(s).

## Session 1: CE01 - ONLINE

Date: 03.05.2024

Time: 11.10 am to 04.00 pm

Session Chair : DR. R.VIGNESH, Akshaya College of Engineering & Technology

Session Link: <https://meet.google.com/tvc-dqfb-aje>

Time	Paper ID	Paper Title
11.10 am	MS 9116	Evaluation of Modified Asphalt Containing Reclaimed Asphaltic Pavement and Coir Powder
11.25 am	MS 9127	Design of Flexible Pavement using a Sustainable Mix of Ferrochrome Slag and Soil in Subgrade
11.40 am	MS 9139	Strength parameters of graded concrete made in combination with traditional and blended concrete of different grades in different layers.
11.55 am	MS 9141	Mechanical Properties of Geopolymer Concrete made from an Amalgamation of Red Mud and Ground Blast Furnace Slag under Ambient Curing Condition
12.10 pm	MS 9186	Masonry Workers Risk Assessment with Different Trowels Using ARIMA Model Forecasting
12.25 pm	MS 9197	Experimental Research on the effect of Structural glass fibre in the Tensile Strength Ratio and Retained Stability of VG40 Bituminous mix
12.40 pm	MS 9208	Customized Solutions to Typology Based Leakages in High-Rise Residential Buildings
02.15 pm	MS 9219	Novel approach for strengthening of column by external wrapping with Carbon Fiber and Internally Embedded Damper System for resilient infrastructure
02.30 pm	MS 9220	Novel Retrofitting Technique for Beam by External Wrapped with Glass Fiber and Internally Embedded Damper System for Sustainable Construction
02.45 pm	MS 9234	Compressive strength study of fibre reinforced concrete
03.00 pm	MS 9291	Comparative study of flexible and rigid floor diaphragm using dual system
03.15 pm	MS 9388	The effect of dolomite powder and flyash on durability properties of self-compacting concrete
03.30 pm	MS 9470	To Investigate The Effect Of Shear Wall And Bracing In RCC Frame Subjected To Seismic Load
03.45 pm	MS 9295	Effects of Bracing Systems in Various Positions for Earthquake-Resistant Building

## Session 2: EC01 - ONLINE

Date: 03.05.2024

Time: 11.10 am to 04.00 pm

**Session Chairs** : Mrs. K. Nimisha, Akshaya College of Engineering & Technology

**Session Link:** <https://meet.google.com/yim-xjss-oho>

Time	Paper ID	Paper Title
11.10 am	MS 9075	Classical Explanation of Absorption Spectra
11.25 am	MS 9135	Synthesis and Characterization of Microwave Dielectric Properties of (1-x) Li <sub>3</sub> MgNbO <sub>5</sub> -(x) Sr <sub>3</sub> V <sub>2</sub> O <sub>8</sub> Composite for Antenna Application
11.40 am	MS 9183	Enhancing the DL models for detection of ICH using multimodal image datasets
11.55 am	MS 9213	Classification of Motor Imagery EEG signals using Fully Connected Convolution Neural Network
12.10 pm	MS 9241	Application of Deep Learning Methods to the Agricultural Sector for the purpose of Image-Based Disease Diagnosis in Crop Leaves
12.25 pm	MS 9265	Design of Efficient Approximate Multipliers using 4-2 Compressor for Optimization and Error Management
12.40 pm	MS 9285	Design and Analyze of EOQ Model for Seasonal Products with Demand as a Sinusoidal Function of Time and Variable Holding Cost
02.15 pm	MS 9287	Accelerating Linear Congruential Generators with Carbon Nanotube Field-Effect Transistors
02.30 pm	MS 9288	Facile Synthesis of Mg-doped ZnO nanoparticles by Solution Combustion Method and its Characterization, Electrical, Optical Properties, and Photocatalytic Study
02.45 pm	MS 9289	Optimizing CSRAM using Leakage Power Reduction Technique for Low Power Systems
03.00 pm	MS 9290	Performance Power Trade-offs in Parallel Pipelined Architecture for Low-Energy Computing
03.15 pm	MS 9293	Electrochemical assessment of Adenosine in human serum using polythiourea-modified pencil electrode
03.30 pm	MS 9292	Deflection of Light Rays in Electric Field
03.45 pm	MS 9316	Charting New Paths in Diabetes Care: Integrating IoT and MATLAB for Enhanced Monitoring

### Session 03: ME01 - ONLINE

Date: 03.05.2024

Time: 11.10 am to 04.00 pm

**Session Chair : Mr. P. SATISH**, Akshaya College of Engineering & Technology

**Session Link:** <https://meet.google.com/fro-itwt-msm>

Time	Paper ID	Paper Title
11.10 am	MS 9028	Structure and Wet-Sliding Characterization of a Laser Powder Bed Fusion Ti-6Al-4V Biomedical Alloy: Effect of Laser Surface Modification
11.25 am	MS 9045	Study on solidification sequence and solid-state transformations in high-boron multi-component alloys by Differential Scanning Calorimetry
11.40 am	MS 9078	Effect of TMCP/accelerated cooling parameters on the microstructure and mechanical properties of 40 mm thick sheets of X70 steel grade produced from heavy slabs
11.55 am	MS 9122	Higher order chemical reaction of Joule Heating Manganetised Williamson Ferrite Nanofluid with Heat generation/absorption
12.10 pm	MS 9126	Optimization of geometrical design parameters using FEA for better processing of abrasable coating
12.25 pm	MS 9136	Manufacture of cable tension testing device of the dynamic system control mechanism with peripheral connection to transmit measurement data
12.40 pm	MS 9140	A Comprehensive Review on Depolymerization of Polyethylene Terephthalate for Circular Economy
02.15 pm	MS 9150	Enhancing Corrosion Resistance in AZ64 Magnesium Alloy through PEO Coating and Polydimethylsiloxane (PDMS) Application
02.30 pm	MS 9151	Investigation of Thermomechanical and Flammability Behaviors of Hemp/Polypropylene Reinforced Polylactic Acid Composites
02.45 pm	MS 9154	Evaluation of the Mechanical and Thermal Characteristics of Polypropylene Composites Reinforced with Benzoylation-Processed Banana fibre and Sisal Fibers
03.00 pm	MS 9155	Improving Epoxy Resin Performance with Sepiolite and Al <sub>2</sub> O <sub>3</sub> -Doped Sepiolite: Flame Retardancy and Thermal Stability
03.15 pm	MS 9156	Impact of Surface-Modified Carbon Fiber on Fire and Mechanical Behaviors of Epoxy Composites
03.30 pm	MS 9157	Enhancing Wear Resistance in AA5128/TiCp Composites: A Combined Approach Using Taguchi Methodology and GRA-PCA Analysis

## Session 04: ME02 - ONLINE

Date: 03.05.2024

Time: 11.10 am to 04.00 pm

**Session Chair : Mr. B.SUDHAKAR**, Akshaya College of Engineering & Technology

**Session Link:** <https://meet.google.com/yim-xjss-oho>

Time	Paper ID	Paper Title
11.10 am	MS 9170	Multi-plate modelling of fastener joints in a composite to metal plate connection
11.25 am	MS 9188	A Numerical Investigation of Pressure Drop in Automotive Catalytic Converter
11.40 am	MS 9199	Impact of Deposition Power on Optical, Wettability, and Anti-Icing Properties of Sputtered Zirconium Nitride Coatings
11.55 am	MS 9206	Optimizing Dry Sliding Abrasive Wear Behavior in Coir Fiber Reinforced PVA Composites: A Grey-Based Taguchi Method Approach
12.10 pm	MS 9218	Analysis of chip in machining Haynes 25 superalloy
12.25 pm	MS 9231	Experimental Study During Plasma Arc Cutting of Magnesium Alloy AZ91
12.40 pm	MS 9236	Tool condition monitoring using a predictive machine learning algorithm: a comparative study
02.15 pm	MS 9238	Experimental evaluation of modified seed cotton stone/immature bolls removal system
02.30 pm	MS 9240	Investigating the Synergistic Impact of TiB <sub>2</sub> and ZrO <sub>2</sub> Reinforcements on Forged AA7075-Based Hybrid Metal Matrix Composites
02.45 pm	MS 9244	Effect of Fibre Reinforcement on Compressive Strength and Compressive Modulus of Epoxy Granite
03.00 pm	MS 9257	Numerical Analysis of Thermal Cycling and Residual Stresses in GdPO <sub>4</sub> Thermal Barrier Coatings
03.15 pm	MS 9263	A Comparative Analysis and Predictive Modelling of AA5754-O and AA6061-O in Single Action Sheet Metal Forming for Automotive Structural B-Pillar
03.30 pm	MS 9264	Surface Characteristics and Corrosion Resistance of Multiple Shot Peened Ti-6Al-4V Weld
03.45 pm	MS 9309	Analysis of the built time of 3D printed parts for fused deposition modeling based on multi-infill patterns

## Session 5: PH01 - ONLINE

Date: 03.05.2024

Time: 11.10 am to 04.00 pm

**Session Chairs** : Mrs. VIJAYA LAKSHMI, Akshaya College of Engineering & Technology

**Session Link:** <https://meet.google.com/fax-iszf-nox>

Time	Paper ID	Paper Title
11.10 am	MS 9006	Leaf-Shaped Nanostrip Fed Graphene Plasmonic Nano-Antenna for Optical Near Field Applications
11.25 am	MS 9046	Tellurium doped p-n device fabrication by thermal diffusion on GaSb-VDS-Substrate
11.40 am	MS 9052	Physical and Upconversion photoluminescence Properties in Nd <sup>3+</sup> -Yb <sup>3+</sup> Doped Lead Borate Glasses at 980 nm Excitation
11.55 am	MS 9094	Absorption and emission maxima prediction of fluorescent organic materials using optimized neural network models
12.10 pm	MS 9115	Studies on Synthesis, Physical and Optical Properties of Dysprosium Ion-Doped Transparent Heavy Metal Oxide Glasses
12.25 pm	MS 9117	Study Of Synthesis, Characterization, DC Conductivity and Activation Energy of Polyaniline And Zinc Oxide Composite
12.40 pm	MS 9121	Applications, Functionalization, Characterization, and Synthesis of Iron Oxide (Fe <sub>3</sub> O <sub>4</sub> )
02.15 pm	MS 9142	To investigate the crystalline grain size, morphological structure and microwave properties of PANI/PbO composite materials
02.30 pm	MS 9215	Simulations of Physical Properties of Alkoxy-Azoxybenzene Liquid Crystalline Homologous Series and Comparison with Experimental Results
02.45 pm	MS 9216	Computation of Intermolecular Potentials and Odd-Even Effect for a Homologous Series of Alkyl Azoxybenzene Compounds to Understand Intrinsic Molecular Dynamics
03.00 pm	MS 9237	Influence of sintering temperature on microstructure and dielectric properties of Strontium Calcium Titanate (Sr <sub>0.9</sub> Ca <sub>0.1</sub> TiO <sub>3</sub> ) ceramics
03.15 pm	MS 9242	Investigating Gold Doping Configurations in 1D Silicene
03.30 pm	MS 9258	A Study on $\gamma$ -Ray Attenuation in MnO
03.45 pm	MS 9335	Understanding of dental material Triethylene Glycol Dimethacrylate (TEGDMA) using molecular dynamics method

## Session 06: EC02 - ONLINE

Date: 04.05.2024

Time: 11.10 am to 04.00 pm

Session Chair : Dr. K.G .DHARANI

Session Link: <https://meet.google.com/atd-prvm-biu>

Time	Paper ID	Paper Title
11.10 am	MS 9299	Analysis of AlInN/GaN based MOSHEMT Performance with Mole Fraction and Barrier Thickness Variation
11.25 am	MS 9301	Classical Explanation of Photoelectric Effect
11.40 am	MS 9328	Exploring QPSK Modulation for Wireless Communication: An Experimental Study
11.55 am	MS 9331	An Efficient CNN Based Stereo Vision Algorithm With Less Disparity
12.10 pm	MS 9333	Deep Learning Solution for Lung Cancer Identification and Classification on Chest CT-Scans
12.25 pm	MS 9340	Design of Optical S-Bend Power Splitter
12.40 pm	MS 9393	Investigating Reflection Properties Of Wearable Materials In 5G Environments
02.15 pm	MS 9404	InceptionNet-based Cardiovascular Disease Detection
02.30 pm	MS 9418	Design of 8T DTMOS Schmitt Trigger SRAM Cell For Various Low Energy Applications
02.45 pm	MS 9430	A Deep Learning Approach To Detect Fetus Brain Anomalies Using Ultrasound Images
03.00 pm	MS 9476	Design of Optimized One bit Arithmetic Logic Unit in QCA -Quantum-Dot Cellular Automata
03.15 pm	MS 9054	Enhancing Closed Loop Performance: I-PD Controller Design for Integrating Processes with Time Delay and Inverse Response Characteristics
03.30 pm	MS 9172	Analysis and Simulation of Tie-Line Bias Control in Multi Area Power Systems



## Session 07: ME03 - ONLINE

Date: 04.05.2024

Time: 11.10 am to 04.00 pm

Session Chair : Dr.S.THILLIKKANI

Session Link: <https://meet.google.com/czv-krsm-vau>

Time	Paper ID	Paper Title
11.10 am	MS 9270	Effect of anomalies of clutch release bearing on wear and tear of clutch and pressure plates
11.25 am	MS 9280	Investigations and evaluation of tool wear in high-speed drilling
11.40 am	MS 9319	Parametric Experimental Investigation of Abrasive Jet Machining on Borosilicate Glass
11.55 am	MS 9323	Effects of heat generation and variable density on uniform thermal stresses in solid disks
12.10 pm	MS 9326	Analytical Performance And Related Emission of Emulsified Palm Biodiesel on a Single Cylinder Engine
12.25 pm	MS 9334	Analysis of Cutting Parameters for Enhanced Machining Efficiency and Tool Life in Milling of Nickel Titanium Alloy through FE Simulation
12.40 pm	MS 9336	A Study on Effect of Cast Iron Chills on Aluminium LM13 and Nano Zirconium Oxide Composite Using Cryogenic Solidification
02.15 pm	MS 9337	Optimizing connecting rod through design modifications
02.30 pm	MS 9338	A Study on Effect of Mild Steel Chills on Aluminium LM13 and Nano Zirconium Oxide Composite Using Cryogenic Solidification
02.45 pm	MS 9344	Design, Analysis and Automation of Two-wheeler Side Stand
03.00 pm	MS 9345	Experimental Study Of Manufacturing Artificial Light Weight Coarse Aggregate
03.15 pm	MS 9354	Innovations in Friction Stir Welding from Fundamentals to Future Frontiers
03.30 pm	MS 9399	Enhancing Anti-Blast Capabilities of Pipelines with High-Performance Composite CFRP Laminate: Computational Fluid Dynamics-Based Predictive Analysis
03.45 pm	MS 9440	In Pipe Pico Hydro Power Generation by Tesla Turbine

## Session 08: APC01 - ONLINE

Date: 04.05.2024

Time: 11.10 am to 04.00 pm

Session Chair : Mrs. R. SANGEETHA

Session Link: <https://meet.google.com/evp-cgpo-sgd>

Time	Paper ID	Paper Title
11.10 am	MS 9049	Comparison of Hardness by Electrolytic and Electroless Deposition of Nickel on Aluminium
11.25 am	MS 9132	Study of Effect of C/N ratio on Biogas production from Banana peels
11.40 am	MS 9177	Hydroxyapatite Materials and their Characterization Study for Effective Development of Cast at war-front scenario.
11.55 am	MS 9189	Studies on the Biosynthesis, Characterisation and Adsorption of Magnesium oxide nanoparticles utilizing <i>Parmotrema perlatum</i>
12.10 pm	MS 9224	Studies on removal of Metanil Yellow - (MY) dye using Magnesium Nanoparticles by adding organism: Characterization, Equilibrium studies, Kinetics and Thermodynamics
12.25 pm	MS 9225	Studies On The Removal Of Xylenol Orange Dye Using Eucalyptus Tereticornis Leaf Powder And Optimization Using Central Composite Design
12.40 pm	MS 9297	Enhancing Thiazine dye removal by Green tea- Aluminum nanoparticles (GT-Al Nps); Characterization, Isotherms, Kinetics and thermodynamics
02.15 pm	MS 9300	Synthesis of Eucalyptus Globulus – Titanium-Magnesium Nano Composite (EuTiMg Nc) for the Removal of Methylene Blue by Adsorption Process – Optimisation by Response Surface Methodology
02.30 pm	MS 9464	Evaluating the best plastic processing technology in bipolar fuzzy environment
02.45 pm	MS 9279	The Effect Of Structural, Morphological, Transport And Sensing Properties of ZnO Composite Polyaniline
03.00 pm	MS 9286	Highly Sensitive And Flexible Capacitive Pressure Sensor with PVDF Dielectric And Copper Electrode Fabricated On Kapton Substrate
03.15 pm	MS 9303	Enhancing low field magneto resistance in Nd doped Lanthanum Manganite( $\text{La}_{0.5}\text{Ca}_{0.35}\text{Nd}_{0.15}\text{MnO}_3$ )
03.30 pm	MS 9320	Study of structural, dielectric properties of $\text{ZnFe}_2\text{O}_4$ : effect of thermal annealing
03.45 pm	MS 9456	Studies of Structural and Optical Properties of Nickel Chloride and Glycine Doped Potassium Hydrogen Phthalate (KHP) Crystal

### Session 09: ME04 - ONLINE

Date: 04.05.2024

Time: 11.10 am to 04.00 pm

Session Chair : Dr.A. KARTHIK

Session Link: <https://meet.google.com/rpn-phwd-fbc>

Time	Paper ID	Paper Title
11.10 am	MS 9342	Biodegradation Studies of Atrazine Herbicide By Pseudomonas aeruginosa MTCC 2581
11.25 am	MS 9296	A Study on Machine Learning Methods: Application for Amido black Dye Adsorption Prediction onto Green algae powder-Activated carbon
11.40 am	MS 9502	Removal of Flouride From Water Using Magnesium Doped Tamarind Seed Powder
11.55 am	MS 9176	Hydrogen as an alternate fuel for automotive industry: Challenges and opportunities
12.10 pm	MS 9112	A literature review on the analysis of plastic injection molding using finite element analysis
12.25 pm	MS 9161	Sensor Based Smart Bins For Solid Waste Segregation
12.40 pm	MS 9042	IoT-Based EV Charging, Monitoring & Safety Management System
02.15 pm	MS 9243	Experimentation and analysis of Industrial Chimneys and solar chimney power plant: "A comprehensive literature review
02.30 pm	MS 9214	Bike Crash Detection System
02.45 pm	MS 9162	Evaluation of Paper Industry waste sludge and nano materials on properties of concrete

## Session 10: ME05 - ONLINE

Date: 04.05.2024

Time: 11.10 am to 04.00 pm

Session Chair : MR.M. SELVARAJU,

Session Link: <https://meet.google.com/vmy-avrz-edq>

Time	Paper ID	Paper Title
11.10 am	MS 9138	Wear Studies of HVOF Sprayed WC-Co (94%-6%) coating powder on EN-8 Steel Substrate
11.25 am	MS 9209	Fall Detection Monitoring and Alarm System Using IoT
11.40 am	MS 9496	Hot Ductility Behaviour of AA7075-T651 Aluminium Alloy
11.55 am	MS 9497	Material Selection and Optimization of Green Drilling of Aluminium Alloys: MCDM-Pareto ANOVA and T-SRC
12.10 pm	MS 9143	Wheat straw as a reinforcement in green composite material: A review
12.25 pm	MS 9053	Mechanical, Structural, Thermal, and Morphological Characterisation of Calamus tenuis Fibers Reinforced Epoxy Composites
12.40 pm	MS 9084	Electrochemical Additive Manufacturing : A Comprehensive Literature Review
02.15 pm	MS 9373	Investigation on effect of Sustainable Filler incorporated into Rubber Compound for Tyre Production
02.30 pm	MS 9507	Construction and Seismic Performance Evaluation of Concrete Water Tanks
02.45 pm	MS 9461	Hybrid Solar-Hydropower Systems for Green Energy Production: A Comprehensive Analysis
03.00 pm	MS 9260	A Comprehensive Literature Review of Graphene Oxide Composite Materials: Synthesis, Properties, and Applications