

2023 Second International Conference on
Modern Materials for Engineering and Research (ICMMER 2023)

26 - 27, OCTOBER 2023 | Tiruchengode, India | <http://www.icmmer.com/>

Program Schedule

Date	Time	Event
26.10.2023	10.00 am to 10.30 am	Inaugural Function
26.10.2023	10.30 am	Keynote Address Dr. Rajamani <i>Production Engineering</i> <i>PSG College of Technology</i>
26.10.2023	11.00 am to 04. 20 pm	Session 01: ICMMER(OFFLINE)
		Session 02: ME01(online)
		Session 03: ME02(online)
		Session 04: CE01(online)
		Session 05: CHE01(online)
		Session 06: PH01(online)

ME - Mechanical Engineering; PH - Applied Physics

CHE – Chemical Engineering, CE – Civil Engineering

Note:

1. Start time given above indicates Indian Standard Time (IST).
2. Presentation will be conducted using Google Meet.
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 using Google Meet will be admitted at any time prior to their scheduled time.
7. Participant using Google Meet SHOULD join the session at least 30 minutes prior to their scheduled time.
8. Participants are requested to follow the scheduled time; especially regarding the time for your talk.
9. Participants are requested to contact the respective session Chairs/coordinators for presentation related queries.

Session 01: ICMMER(OFFLINE)

Date: 26.10.2023

Time: 11.45 am to 12.30 pm

Session Chair : Dr. Senthilkumar

Venue: : Auditorium, Sengunthar Engineering College

Time	Paper ID	Paper Title	Authors
11.45 am	MMER 5023	Exploring Transparent ZnO-Based Memristors: Synaptic Emulation and Conduction Mechanism with Varied Top Electrodes	P. Hajara, P. Praveen, T. Priya Rose, K. J. Saji

Session 02: ME01

Date: 26.10.2023

Time: 11.00 am to 03.40 pm

Session Chair(s):

1. Dr.K.Umadevi, HoD/EEE & Dean- P&D
2. Dr.C.Aarthi , HoD/ECE
3. Dr.T.R.Chinnusamy, Dean – Mech. Sci

Session Coordinator: Dr.K.Umadevi, HoD/EEE & Dean- P&D**Google Meet ID** : <https://meet.google.com/zbg-pbsd-egd>

Time	Paper ID	Paper Title	Authors
11.00 am	MMER 4006	Mechanical Characterization of Magnesium-Hydroxyapatite Surface Composite Fabricated by Friction Stir Processing	Syeda Romana, Nagaveni Thallapalli
11.20 am	MMER 4009	Surface Texture, Microstructure and Properties of Laser-Based Additive Manufactured Inconel Alloy 718 Modified by Barrel Finishing, Ultrasonic Shot Peening, Ultrasonic Impact Peening and Shot Peening Techniques	Dmytro Lesyk
11.40 am	MMER 4017	Experimental Investigation on Fracture Toughness of Hydrogen Embrittled Cu-Al-Be Shape Memory Alloy	S Prashantha, Sunil B, P C Arunakumara
12.00 noon	MMER 4018	Synthesis and Characterization of Biodegradable Particle Board using Rice Husk and Agar Biopolymer	V. Srinivas, V. Hari Kiran, P Sadhana, Sheik Hidayatulla Shariff, B. Divakar, T. Rajesh Kumar Dora
12.20 pm	MMER 4045	Near Dry Electrical Discharge Machining on Inconel 718 and Ti6Al4V	Ganesh Dongre, Ravi Raut, Apurva Kulkarni, Nikhil Jagdale, Digvijay Jagtap, Yash Sakhale, Yash Jajoo, Siddharth Karambelkar and Aditya Kale
12.40 pm	MMER 4078	Experimental Investigation and Characterization for Glass Fiber Epoxy Reinforced with and without Aluminium Alloy for Automotive Applications	S D Sathishkumar
02.00 pm	MMER 4094	Microstructural Characterization of FGM Specimens Produced by DMD Using Stainless Steel and Inconel Powders	D. Dev Singh, Suresh Arjula, A. Raji Reddy
02.20 pm	MMER 4095	Effect of grain refining on the primary phase of morphology rheocast processed ADC12 Alloy	Bipin Kumar Singh, Abishake L, Raghul K K, Theena Dayalan V, Hariharan A and Sujeet Kumar Gautam

02.40 pm	MMER 5010	Modeling and simulating the effect of car brake power distributary on the roundabout	Nguyen Thanh Tung, Luong Van Van
03.00 pm	MMER 5016	Analysis of Core Loss in Permanent Magnet Synchronous Motors with Different Materials using FEM Analysis	Ajay Anand, Raja Gandhi, Dibyadeep Bhattacharya, Sadhan Gope and Rakesh Roy
03.20 pm	MMER 5020	Tribological Characteristics of Fly Ash Cenosphere-Aluminum Syntactic Foams	Arun C Dixit, Ashok B C, Mohan Krishna S A, Harshavardhan B
03.40 pm	MMER 6016	Influence of infill patterns on the tensile strength of Specimens cast through additive manufacturing for PLA material	K. SelvaKumar, Bipin Kumar Singh, R. Anistonrahul, D.Harish

Session 03: ME02

Date: 26.10.2023

Time: 11.00 am to 03.40 pm

Session Chair(s):

1. Dr.B.Sujatha, Dean- Academics
2. Dr.K.Vignesh, AP/Physics

Session Coordinator: Dr.B.Sujatha, Dean- Academics**Google Meet ID** : <https://meet.google.com/btq-eduw-ojg>

Time	Paper ID	Paper Title	Authors
11.00 am	MMER 5061	Numerical Investigation on The Thermal Management of Lithium-Ion Battery System and Liquid Cooling Performance	Chelsea Tatenda Chinyamutsotsonya, Dattatraya Ganpatrao Subedhar
11.20 am	MMER 5068	The impact of FFF parameters on the flexural strength of alumina ceramic derived from ceramic-polymer filament	Anton Smirnova, Ekaterina Kuznetsova and Yuri Pristinskiy
11.40 am	MMER 5086	Microstructure and Mechanical Behavior of Al-Co Coating on Mild Steel Fabricated by Friction Surfacing	RamakrishnanT, Vinodh S, Sudhir Krishna S, Mohan T, Mithun S, Chandreeswari K
12.00 noon	MMER 5087	A Field Study on Harnessing Coir Fibres for Natural Fibre Composites: Advancing Sustainability	Arpit Anil Panwar, S Neelakrishnan
12.20 pm	MMER 5088	Flat stiffened CFRP panel design and analysis	Gayathri R, John Weslin M, Ponmary Puspaha Latha D and Brindha S
12.40 pm	MMER 5094	Dynamic behavioral study CFRP hat stiffened panel using LS dyna	Gayathri R, Jims John Wesley G
02.00 pm	MMER 6009	Investigation of flexural Properties of Jute Fibre Reinforced Hybrid Composite Material for Axial Flow Fan Blades	Sushma Chinta, Nagini Yarramsetty, Kiran Kumar Amireddy and P Radha Krishna Prasad
02.20 pm	MMER 6010	Analyzing Temperature Variation in Underground Soil with Seasonal Effect	Malabika Adak, Anirban Mandal, Akshaykumar Meshram, Nitin J. Wange
02.40 pm	MMER 6011	Effect of Castor Oil based bio-resin on Mechanical and Thermo-Mechanical of Flax Fiber Embedded Epoxy Composites	Sekar kannan, Sathyaraj Sankar lal
03.00 pm	MMER 6012	Influence of Epoxy Methyl Ricinoleate On Mechanical and Visco-Elastic Properties of Flax Fiber Reinforced Epoxy Composite	Sathyaraj Sankar lal, Sekar Kannan

Session 04: CE01

Date: 26.10.2023

Time: 11.00 am to 04.00 pm

Session Chair(s):

1. Dr. P. RameshKumar, Dean /R&D
2. Dr. M. Sudha, Professor /Physics

Session Coordinator: Dr. P. RameshKumar, Dean /R&D**Google Meet ID** : <http://meet.google.com/grk-wuat-pie>

Time	Paper ID	Paper Title	Authors
11.00 am	MMER 4063	Comparative study of Alkali Activated Concrete manufactured using Manufactured sand and Granulated Blast Furnace Slag	Devanand R, Harsha H N, Amar R, Chethan B A, Sachin K C
11.20 am	MMER 4065	Effect of Wetting-drying Process on Unconfined Compressive Strength of Natural Rubber Modified Soil Cement	Anuchit Uchaipichat
11.40 am	MMER 5019	Prediction of Compressive strength of M 20 Grade Concrete made with Biomedical Waste Ash	Srishaia Jagalur Mahalingasharma, Subramanya P G, Veerabhadrapa Algur and Pruthvi Rani K M
12.00 noon	MMER 5021	Exploring Mechanical Characteristics of Fly Ash Ground Granulated Blast-Furnace Slag (GGBS) Geopolymer Concrete with Crumb Rubber Aggregates	Najeeb Manhanpally, Suba S, Bikash Gupta, Praveen Nagarajan
12.20 pm	MMER 5024	Rocking Field Response of Machine based Pile Foundation under Dynamic Conditions	Surya Prakash Sharma and Shiva Shankar Choudhary
12.40 pm	MMER 5028	Performance Analysis of Different Types of Bricks	Arti Chouksey, Rachit, Aman Ahlawat, Saurabh Jaglan
02.00 pm	MMER 5043	Stabilization of Black Cotton Soil using Sodium Hydroxide and Fly Ash	Khamar Madiha Afnan, Durga Chaitanya Kumar Jagarapu, Syed Hamim Jeelani, Moriba M Moriba Traore, M A Mohammed Aslam, Arunakanthi Eluru, B. Sarath Chandra
02.20 pm	MMER 5064	Exploitation of Incinerated Biomedical Waste Ash and Micro Silicate in Geopolymer Concrete	Anandh Babu Malayali, K Sri Ram Gopal, A Santhanamahalingamarunagiri, K Ananthi and Sri Balaji P

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02.40 pm	MMER 5067	Waste Foundry Sand Partially Replaces Fine Aggregate in Paver Blocks	N.Mahamood ul hasan, R.Madhavaperumal, E.S Karthic, S.Premkumar, M.Manoharan
03.00 pm	MMER 5069	Predicting Impact of Mineral Admixture on Strength Characteristics of Concrete Using ANN	G. Shyamala, B.Hemalatha and P.G. Seetharam
03.20 pm	MMER 6001	Structural performance of R.C. Beam with septage ash and hybrid fibre	K. Rajesh Kumar
03.40 pm	MMER 6003	A Provisional Mix Design of Porous Asphalt Pavement Using Crumb Rubber Modified Bituminous Mixes	K. Rajesh Kumar

Session 05: CHE01

Date: 26.10.2023

Time: 11.00 am to 03.00 pm

Session Chair(s):

1. Dr.E.Geetha, Prof./ MDE
2. Dr.N.Kandasamy, ASP/Chemistry

Session Coordinator: Dr.E.Geetha, Prof./ MDE**Google Meet ID** : <https://meet.google.com/abz-apfo-vrr>

Time	Paper ID	Paper Title	Authors
11.00 am	MMER 4014	A Comparative Analysis of Parameters using Iron and Aluminium Plate Electrodes for Nitrates Removal by Electrocoagulation Technique and its Optimization - RSM	N.V.V.R. Nagalakshmi, V.V. Srimannarayana, Venkata Rao Poiba, Meena Vangalapati
11.20 am	MMER 4040	The Study of Edible Film from Maranta arundinacea AND Amylose maize with Cymbopogon citratus essential oil	Mohammed Anfas M K, Risvi Muhammed Kunhi, Shanmugam Palanisamy
11.40 am	MMER 4060	Fabrication of Nocardia hydrocarbonoxydants, Saccharomyce cerevisiae and Candida slooffi microorganisms immobilized glass balls for the biodegradation of phenol – A comparative study	P S Sagar, Deepshikha Datta, Bimal Das, Sudipta Kumar Das, Subhra Halder, Sampurna Santra, Dharmana Tejeswararao
12.00 noon	MMER 4072	Biofuels as advanced eco-friendly substitute to develop a sustainable energy for real time application-A review	Sampurna Santra, Bimal Das, Dharmana Tejeswararao, Subhra Halder, Sayantan Sarkar, Priyasi Bhangar, Deepshikha Datta
12.20 pm	MMER 4076	Role of Methyl ester (Biodiesel) production by synthesized Nanocatalyst: Analysis of product, properties, composition, Cost estimation	Veluru Sridevi, B. Meenakshi, Husam Talib Hamzah, Thamer Adnan Abdullah, Poiba Venkata Rao, Hemanth Kumar Tanneru, Chukka Vinodh Kumar, Appala Naidu, Tukaram Bai, Avula Gowtham, Karri Naveen Kumar
12.40 pm	MMER 5026	Experimental Studies on Helical Coiled Heat Exchanger with Al ₂ O ₃ /Water Nanofluid	Sandeep Parma and B.S.V.S.R.Krishna
02.00 pm	MMER 5054	Synthesis of bioplastic from potato starch	Shreeja Gawande, Hemlata Karne
02.20 pm	MMER 5058	Integrated Screw Conveyor-Based Heating System for Innovative Black Water Treatment	Hemlata Karne, Aniruddha Deshpande, Arya Warunjikar, Yash Patil, Rohit Zagade, Rahul Wasnik and Nitesh Valavi
02.40 pm	MMER 5097	Mechanical Behavior Analysis on hybridization of fibres in ternary blended concrete	V. Anish, J. Logeshwari
03.00 pm	MMER 6004	Technical feasibility of water treatment plant sludge as concrete paver block	B.Hemalatha, G. Shyamala, M.Dinesh Babu, V.Pramila

Session 06: PH01

Date: 26.10.2023

Time: 11.00 am to 04.00 pm

Session Chair(s):

1. Dr.K.L.Palanisamy , Dean- S&A
2. Dr.M.Sakthivel, HoD/CSE

Session Coordinator: Dr.K.L.Palanisamy , Dean- S&A**Google Meet ID** : <https://meet.google.com/teu-jsaf-bvn>

Time	Paper ID	Paper Title	Authors
11.00 am	MMER 4055	Synthesis and Structural, Vibrational and Optical Properties of Cellulose Nanofiber/Polyaniline Film Composite	Aditi Jain, A. Sharma, J. Singh, H.S. Dager and J. Tripathi
11.20 am	MMER 4064	Optical Properties of Niobium (V) Oxide Nanoparticles Synthesized by Thermolysis Method	Kavita Mandre, Jaiveer Singh, Jitendra Tripathi, Netram Kaurav and Puja Singh
11.40 am	MMER 5017	Study on crystallizing and characterizing NaBr doped Tris thiourea magnesium chloride	S.Shanmugha soundare, I.Jeyasheela and S.Ariponnammal
12.00 noon	MMER 5059	Effect of silver nanoparticle on the upconversion emission of Dy ³⁺ /Er ³⁺ co-doped zinc tellurite glasses	Sukhdev Bairagi, K. S. Bartwal, S. K. Dhiman, Ghizal F. Ansari
12.20 pm	MMER 5060	Synthesis and Characterization of Strontium Titanate (SrTiO ₃) Nanoparticles Doped with Silicon and Eggshell by Solid State Reaction Method	R. Mahendiran, N. Iyandurai, V. Karthiga, M. Muniyappan and C. Indira Priyadharsini
02.00 pm	MMER 6000	Polymer-Based COSPAS-SARSAT Flexible U-Slotted Patch and Meander Line Antenna Design	Mehmood Mirza, Hidayath Mirza, Nishat Sultana, Eman Abdel Fattah Harb, Rais Ahmad Sheikh, Haja Banu Shaikh
02.20 pm	MMER 6017	Physical and Frequency Upconversion Properties of Ho ³⁺ Doped Tungsten Tellurite Glass Samples	Anil Ashutosh, Rajiv Kuma, Sukhdev Bairagi, Ghizal F. Ansari
02.40 pm	MMER 6020	An Overview of Topological Insulators: Design, Types and Future Prospects	Anushka Banerjee

03.00 pm	MMER 6021	Antibacterial Applications of an Alkaline Electroless Green NiP-W Nanocomposite Coating	Aleem Ansari, Suriaya Hassan, Sulaxna Sharma, Sumit pokhriyal and Awanish Sharma
03.20 pm	MMER 6023	Deposition of Ni-P-W Coating by Electroless Method and its Corrosion Performance	A. Ansari, S. Hassan, Arvind Kumar, S. Sharma and Awanish Sharma
03.40 pm	MMER 6027	Flexible Search and Rescue Antennas using Rectangular Electromagnetically Coupled Patch and Bow-Tie Antennas Based on PDMS Substrate	Hidayath Mirza, Nishat Sultana