



**3RD INTERNATIONAL CONFERENCE
ON
RECENT ADVANCES IN MECHANICAL ENGINEERING
RESEARCH AND DEVELOPMENT
(ICRAMERD-2022)**



Organised by
**Department of Mechanical Engineering, ITER,
Siksha 'O' Anusandhan (Deemed to be University)**
in collaboration with
IIIE Odisha Chapter

11th to 13th August' 2022, Bhubaneswar

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Technical Programme Schedule

Cordinators for Parallel Sessions

PS-1 Dr. Ankur Soam and Mr. Debashis Dey

PS-2 Mr. Ashok Sahoo and Dr. Tanmayee Khuntia

PS-3 Dr. Bhabani Mohanto and Dr. Anupama Routray

PS-4 Dr. Prasanta Kumar Sahoo and Mrs. Sangita Sarangi

PS-5 Dr. Pragyan Senapati and Ms. Rashmi Ray

PS-6 Dr. Ajay Behera and Dr. Binayak Pattanayak

PS-7 Dr. Priyaranjan Biswal and Mr. S.A Ohid



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Date: 12th August'2022
Technical Session-I 12:45 PM-2:15PM
Parallel Session 1

Theme: Design and Dynamics
Session Coordinator: Dr. Ankur Soam and Mr. Debashis Dey
Date & Time: 12th Aug 2022, 12:45 PM to 2:15 PM

Sl.No.	Paper ID	Title	Authors
1	ICRAMERD-22_6118	Finite Element Analysis of Cranked Beam with Reinforcement Detailing of SP 34 (1987)	Bipul Sharma, Neelam Rani and M Abdul Akbar
2	ICRAMERD-22_6197	Mechanical and Control System Design, Stress, Static, Dynamic And Control Analysis Of 4 - axes SCARA Robot For Automation In Poultry And Vegetable Industry	Lakshmi Girish and Pramod Sreedharan
3	ICRAMERD-22_7555	Atlas Generation of Leg Mechanisms for Walking Platforms using Creative Synthesis	Manoj Awaghade and Pankaj Vinayak Dorlikar
4	ICRAMERD-22_8979	Modelling of a severe accident in a VVR-type research reactor using MELCOR accident analysis code	Salauddin Omar, Abid Hossain Khan, Mikhail Vasilievich Kascheev, Azmaeen Bin Amir
5	ICRAMERD-22_0858	Comparative analysis, hardware design and simulation of solar tracker system	Sayak Roy, Chitralkha Jena, Arjyadhara Pradhan, Lipika Nanda, Babita Panda, Sarita Samal, Tarakanta Jena
6	ICRAMERD-22_6083	Chaotic Dynamics of fluid conveying pipe	Shashendra Sahoo, Lokanath Panda, Bamadev Sahoo and Dharendra Nath Thatoi

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Parallel Session 2

Theme: Recent Advances in Engineering and Research
Session Coordinator: Mr. Ashok Sahoo and Dr. Tanmayee Khuntia
Date & Time: 12th Aug 2022, 12:45 PM to 2:15 PM

Sl.No.	Paper ID	Title	Authors
1	ICRAMERD-22_4595	Seismic Analysis of a G+3 Confined Masonry Building with AAC Infill Using SAP 2000	Sachin Kumar, M Abdul Akbar and Ankur Thakur
2	ICRAMERD-22_8246	Reinforced Cement Concrete (RCC) Shelter and Prediction of its Blast Loads Capacity	S M Anas and Mehtab Alam
3	ICRAMERD-22_9812	Digital Manufacturing Approach for Process Simulation and Layout Optimization	Milind P. Sardar, K. G. Rajmore, M. K. Rodge and Khoman Kumar
4	ICRAMERD-22_4389	Maximization of Compressive Strength of Fused Deposition Modeled Antibacterial Polylactic Acid by Taguchi Method	Madala Ajay Kumar, Dipabrata Banerjee, Swayam Bikash Mishra, Basanta Kumar Nanda and Santosh Kumar Nayak
5	ICRAMERD-22_7938	Facile Synthesis of Porous LaFeO ₃ Hexagons for Acetone Sensing	Farida Ashraf Ali, Rasmita Nayak, P.Ganga Raju Achary, Dilip Kumar Mishra, Susanta Kumar Sahoo, Udai P. Singh and Binita Nanda
6	ICRAMERD-22_3225	Experimental Investigations on Mechanical and Water Absorption Properties of Epoxy Resin Matrix Sugarcane and Tamarind Shell Powder Reinforced Bio-Composites	Jayaraman R, Viknesh M and Girmurugan R



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Parallel Session 3

Theme: Optimization Applications in Engineering
Session Coordinator: Dr. Bhabani Mohanto and Dr. Anupama Routray
Date & Time : 12th Aug 2022 , 12:45 PM to 2:15 PM

Sl.No.	Paper ID	Title	Authors
1	ICRAMERD-22_0643	Optimization of process parameters for centrifugal cast single point cutting tools using the Grey-Taguchi technique	Shubhashree Mohapatra, Hrushikesh Sarangi and Upendra Kumar Mohanty
2	ICRAMERD-22_0584	Study of mechanical properties of reinforced Polypropylene (PP)/nettle fibers biocomposites and its application in automobile industry	Munmun Priyadarsini, Trinath Biswal and S K Acharya
3	ICRAMERD-22_7079	Multi-Response Optimization of Dry Turning Parameters: A Comparison between Hybrid Taguchi Based TOPSIS and VIKOR Method	Bikashjyoti Das, Sarthak Dwivedi, Vishwash Singh, Abhishek Kumar and Sujit Kumar Pattanayak
4	ICRAMERD-22_3887	Prediction of erosion rate by a novel method and parametric optimization of EDM of novel SiC insulated Ceramic reinforced with Carbon Nano Tube	Pallavi Chaudhury and Dr. Sikata Samantaray
5	ICRAMERD-22_8310	Optimization of Quench Polish Quench (Qpq) Coating Process Using Taguchi Method	M. Sravanan, M. Vasanth, B Sampath and V. Hari Balaji
6	ICRAMERD-22_0584	Study of mechanical properties of reinforced Polypropylene (PP)/nettle fibers biocomposites and its application in automobile industry	Munmun Priyadarsini, Trinath Biswal and S K Acharya



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Parallel Session 4

Theme: Advanced Materials, Property testing and characterization
Session Coordinator: Prasanta Kumar Sahoo and Mrs. Sangita Sarangi
Date & Time : 12th Aug 2022 , 12:45 PM to 2:15 PM

1	ICRAMERD-22_8686	Effect in Mechanical and Physical Properties of Bricks due to Addition of Waste Polyethylene Terephthalatein	Anurag Wahane, Shivendra Dwivedi and Divya Bajaj
2	ICRAMERD-22_5619	Influence on mechanical, dielectric and SHG efficiencies by Neodymium doped KDP crystals – A detailed analysis	R Hanumantha Rao and Ch V V Ramana
3	ICRAMERD-22_2509	Structural, Chemical network and Optoelectronic Properties of Ag Catalyzed CVD Grown Gallium Nitride Nanowires in Reduced Atmosphere	Umesh Rizal and Bibhu Prasad Swain
4	ICRAMERD-22_7630	Effect of heat treatment on structural properties of CeO ₂ prepared by chemical-route method	Tarek Sbera, Harapriya Nayak, Venkata Rama Rao Medicherla and Sushanta Kumar Kamilla
5	ICRAMERD-22_4853	Experimental examinations on corrosion behaviour of casted AZ31 magnesium alloy	Pabak Mohapatra, Nirmal Kund and Sambeet Sahu
6	ICRAMERD-22_9659	Ammonium picronitrate: An organic crystal for generation of higher harmonics and photonic applications	Redrothu Hanumantha Rao, CH. V V Ramana, Pakki Suresh Patnaik



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Parallel Session 5

Theme: Heat Transfer and Fluid flow
Session Coordinator: Dr. Pragyan Senapati and Ms. Rashmi Ray
Date & Time : 12th Aug 2022 , 12:45 PM to 2:15 PM

Sl.No.	Paper ID	Title	
1	ICRAMERD-22_0870	Pressure Exertion and Heat dissipation analysis on uncoated and ceramic (Al ₂ O ₃ , TiO ₂ and ZrO ₂) coated braking pads	K Sunil Kumar and <u>Deepika Bishnoi</u>
2	ICRAMERD-22_7108	A study on indoor air quality of air-conditioning system using duct insulation and filters for industrial applications	Debasmita Mishra and Amit Behera
3	ICRAMERD-22_2098	Performance Studies on Proton Exchange Membrane Fuel Cell with Slightly Tapered Single Flow Channel for Dissimilar Cell Potentials	Girimurugan R, Anandhu K, Thirumoorthy A, Harikrishna N, Makeswaran E, Prasanna S and Krishnaraj R
4	ICRAMERD-22_4878	Apriori Vs FP-Growth For Recommendation System	Sarath U and Nima S Nair
5	ICRAMERD-22_6897	Spam email classification using Machine Learning techniques with the Grey Wolf Optimization Algorithm	Akhil Purushothaman, Maya L Pai
6	ICRAMERD-22_7060	Fault Detection of a Li-ion Battery using SVM based Machine Learning and Unscented Kalman Filter	S Chatterjee, R K Gatla, P Sinha, C Jena, S Kundu, B panda, L Nanda and A Pradhan

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Parallel Session 6

Theme: Numerical Modeling and analysis in Engineering

Session Coordinator: Dr. Ajay Behera and Dr. Binayak Pattanayak

Date & Time : 12th Aug 2022 , 12:45 PM to 2:15 PM

Sl.No.	Paper ID	Title	Authors
1	ICRAMERD-22_0845	Numerical study of pressure drop calculation for Newtonian slurry through a multi-segmented HDPE pipeline ⁵¹⁷	Sai Swapnesh Mishra, Sibajyoti Danapriya Sahoo, Amrit Sagar Khuntia, Ashish Kumar Parida, Shrutam Saha, Sambit Kumar Mohanty, Dhirendranath Thatoi and Namballa Dharma Rao
2	ICRAMERD-22_1788	Performance of a Single Turn Pulsating Heat Pipe at Varying gravity	K Satyanarayana , N.V.S.M Reddy and P Rosang
3	ICRAMERD-22_3437	Free convection from isothermally heated hollow tube with annular fins	Vakacharla Bharat Kumar, <u>Basanta Rana</u> and <u>Swarup Nayak</u>
4	ICRAMERD-22_7466	Effect of core geometrical characteristics on performance and pressure drop of rotary regenerator	Manas Ranjan Padhi, Prakash Ghose, Achinta Sarkar, Basanta Kumar Rana , Manoj Ukamanal, Jitendra Kumar Patel, Swarup Kumar Nayak
5	ICRAMERD-22_4751	CFD Analysis of Heat Transfer Coefficient and Pressure Drop in a Shell and Tube Heat Exchanger for Various Baffle Angles	Anandan R, Sivaraman G, Rajasankar M and Girimurugan R
6	ICRAMERD-22_9157	Study of Flow Distribution in the Falling Film Evaporator Manifold	Pankaj G. Anjankar, Sanjay S. Lakade, Atul Padalkar and Sandeep Nichal



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Parallel Session 7

Theme: Design and Dynamics

Session Coordinator: Dr. Priyaranjan Biswal and Mr. S.A Ohid

Date & Time : 12th Aug 2022 , 12:45 PM to 2:15 PM

Sl.No.	Paper ID	Title	Authors
1	ICRAMERD-22_3330	A Feasibility Study to Obtain Biodiesel from Avocado Wastes in the Lambayeque Region, Peru	Flavio Ronald Yovera-León, Zaida Brenilda Chavez-Romero, Carlos Alexis Alvarado-Silva and Geraldo Cesar Rosario de Oliveira
2	ICRAMERD-22_6087	Performance study on Solar Assisted Fuel Cell Electric Vehicle (FCEV) With Parametric Optimization	R. Sharath Prasanna, Vatambedu Rupesh Kumar, R. Shanthi and B. Mullai Sudaroli
3	ICRAMERD-22_9158	Power quality improvement of a hybrid renewable energy systems using dynamic voltage restorer with pi controller	Hitesh Tata, Sai Veerraju and Siva Rama Krishna Madeti
4	ICRAMERD-22_5532	Arc Faults Detection Using VMD based DTEO in A PV-Battery Based DC Microgrid	Kanche Anjaiah, P.K Dash, Ranjeeta Bisoi and Jonnalagadda Divya
5	ICRAMERD-22_9106	Frequency stability improvement in a four-area power system with FOPIID controller	Narendra Kumar Jena, Subhadra Sahoo, Amiya Kumar Naik and Binod Kumar Sahu
6	ICRAMERD-22_1083	Effect of initial pH and substrate to inoculum ratio on the production of methane and hydrogen from food waste	Chinmay Deheri and Saroj Kumar Acharya



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Technical Session-II 3:00PM-4:30PM

Parallel Session 1

Theme: Numerical Modeling and Analysis in Engineering
Session Coordinator: Dr. Ankur Soam and Mr. Debashis Dey
Date & Time : 12th Aug 2022 , 3:00 PM to 4:30 PM

Sl.No.	Paper ID	Title	Authors
1	ICRAMERD-22_5244	Design, Analysis and Optimisation of Chassis for a Utility Vehicle	Bhaskarabhatla Jahnvi Manaswini, Kolakotla Abhishek, Nuthalapati Hemanth, B Anjaneya Prasad and A Somaiah
2	ICRAMERD-22_0243	Design and Fabrication of Electric three-wheeled scooter for Disabled Persons	S. Magibalan, C. Ragu, D. Nithish, C. Raveeshankar and V. Sabarish
3	ICRAMERD-22_6127	Design and Analysis of Coir Fibre Reinforced Polypropylene based Internal Car Door Panel	Ronak Swayam, Somya Prasad Sahoo, Manohar Nayak, Aditi Sahoo and Tanmayee Khuntia
4	ICRAMERD-22_8939	Developing local rubber mixture for seismic base isolation system type high damping rubber bearing	Bahaa Eddin Ghrewati , Kheir Eddine Tarsha Kurdi and Trilochan Jena
5	ICRAMERD-22_7985	FAILURE ANALYSIS OF COMPOSITE PLATE UNDER BALLISTIC IMPACT	Pradeep Rout, Aditya Kumar Jha, Pankaj Gupta, Bhagat Singh and Sasanka Choudhury
6	ICRAMERD-22_1321	Analysis of Interdependence of Structural Irregularity in Connected Buildings	Rakesh Pasunuti and M Abdul Akbar
7	ICRAMERD-22_7306	Pedobarography based Prosthetic Foot Design and Optimization Methodology	Akash Lawand and Pankaj Vinayak Dorlikar



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Parallel Session 2

Theme: Material Properties and Characterization
Session Coordinator: Mr. Ashok Sahoo and Dr. Tanmayee Khuntia
Date & Time : 12th Aug 2022 , 3:00 PM to 4:30 PM

Sl.No.	Paper ID	Title	Authors
1	ICRAMERD-22_1277	Application of Evolutionary Technique for Mapping onto Network on Chip	Subhashree Choudhury, A.S. Das, Sarita Misra, Ismail Hossain, Tarapasanna Dash and Kaliprasanna Swain
2	ICRAMERD-22_1283	Optimization of Liquefied Petroleum Gas Refrigeration System using Artificial Bee Colony Algorithm	Sampath Boopathi, M. Sureshkumar, S. Sathiskumar
3	ICRAMERD-22_5696	Stability and Quality Analysis of Solar Energy Based Electrical Network Using an Improved Artificial Neural Network	Niranjan Nayak, Anshuman Satpathy, Naeem M.S. Hanoon and Jagatjotiranjana Das
4	ICRAMERD-22_7613	Convolutional and Artificial Neural Network Collated to Descry Brain Tumour	C Athira, Dhanya J R and M Soumya Krishnan
5	ICRAMERD-22_5873	A Generalized Oppositional Differential Evolution Algorithm for parameter extraction of different Photovoltaic models	Shubhranshu Mohan Parida and Pravat Kumar Rout
6	ICRAMERD-22_1379	Power Conversion Efficiency Optimization of LaFeO ₃ Mott Insulator Based Solar Cell With Metal Oxide Transport Layers Using SCAPS	Malaya Das, Soumyakanta Panda and Niharika Mohapatra



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Parallel Session 3

Theme: Design and Dynamics

Session Coordinator: Dr. Bhabani Mohanto and Dr. Anupama Routray

Date & Time : 12th Aug 2022 , 3:00 PM to 4:30 PM

Sl.No.	Paper ID	Title	Authors
1	ICRAMERD-22_0761	Ergonomic Risk Assessment of Rubber Tappers using Rapid Upper Limb Assessment (RULA)	Abi Varghese, Vinay V. Panicker, Abhishek Prasad, Ansan P Sam, Albin Alex Uzhuvathu ,Ananthu Ramesh 2
2	ICRAMERD-22_6834	Correlation of Structural Irregularity in Circular Buildings using Vital Signs	Renil Sabhadiya and M Abdul Akbar
3	ICRAMERD-22_7204	Optimal fractional steam governor damping controller with variable solar penetrations	Narayan Nahak , Jyotiswarup Samal , Santosh Kumar Swain Swain and Samarjeet Satapathy
4	ICRAMERD-22_9315	Effect of Curve angle on Prestressed Box-Girder Bridges	Preeti Agarwal and Deepak Kumar Singh
5	ICRAMERD-22_8554	Wear prognosis in rolling friction of AISI SS304 steel through worn out particle analysis	Sangita Sarangi, Ajit Kumar Mishra and Seshadev Sahoo
6	ICRAMERD-22_6309	Analysis of Community Engagement on Social Networking Site during Kerala Floods 2018	Sumit Kumar , Arun Thomas and Vinay V Panicker
7	ICRAMERD-22_813	Wildfire Prevention - An Image Processing Approach	Rekha K , Sandra Luiz and R Nandakumar



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Parallel Session 4

Theme: Advanced Materials, Property testing and characterization
Session Coordinator: Prasanta Kumar Sahoo and Mrs. Sangita Sarangi
Date & Time : 12th Aug 2022 , 3:00 PM to 4:30 PM

Sl.No.	Paper ID	Topic	Authors
1	ICRAMERD-22_5487	Mathematical modeling and Reliability analysis for Pellet manufacturing unit of a Polymer section	Janender Kumar, Suneev Anil Bansal and Munish Mehta
2	ICRAMERD-22_7485	Numerical simulation of solar parabolic trough collector with helical grooves using Cu nanoparticles	Ipsita Mishra, Pragyana Senapati and Mukundjee Pandey
3	ICRAMERD-22_2519	Modelling the creep curves of RAFM steel employing a dislocation density reliant model	Nilesh Kumar and Surya D. Yadav
4	ICRAMERD-22_7670	Numerical investigation on the testing and selection of different phase change materials for peak-load reduction in buildings of Indian climates	J Dhayanithi, Mayank Kumar Gupta, Tapano Kumar Hotta and Tapaswinee Das
5	ICRAMERD-22_1924	Design and Aerodynamic Analysis of SG6043 Airfoil Based Small HAWT Blade Using a Novel Computational Approach	Devashish, Sanatan Kumar, Madhu Singh, Kaushik Paul, Pampa Sinha, Chitrallekha Jena, Subhra Debdas and Tarakanta Jena
6	ICRAMERD-22_5330	Mathematical Investigation on Circularity Error of FDM built parts	Dipabrata Banerjee, Omkar Mohanty, Debarghya Mallik, Swayam Bikash Mishra and Basanta Kumar Nanda
7	ICRAMERD-22_4342	A numerical study of the effect of building height and shape on the amount of wind energy available on the roof	Belal Jawhara, M. Ameen Alnounou and Swetapadma Panda



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Parallel Session 5

**Theme: Recent Advances in Mechanical Engineering
Session Coordinator: Dr. Pragyan Senapati and Ms. Rashmi Ray
Date & Time : 12th Aug 2022 , 3:00 PM to 4:30 PM**

Sl.No.	Paper ID	Title	Authors
1	ICRAMERD-22_0875	Characterization of an Al-Cu alloy using fly ash and graphite Metal Matrix Composite	Srinivasan Vishwanath, Raj Kumar, Pradyut Anand and Nitish Bhandari
2	ICRAMERD-22_2070	Electrical Characteristics of Multiferroic BiFeO ₃ Electronic System	Digvijaysinh Chauhan, Sanjib Kumar Pradhan, Satyaprakash Narayan Das and Satyanarayan Bhuyan
3	ICRAMERD-22_3441	Structural and Impedance Spectroscopy Characterization of Stannic Oxide electronic System	Limali Sahoo, Satyanarayan Bhuyan and Satyaprakash Narayan Das
4	ICRAMERD-22_3829	Synthesis and characterization of Poly (Methyl methacrylate)/Chitosan (derived from oyster shell powder)	Deepti Rekha Sahoo, Trinath Biswal and S K Acharya
5	ICRAMERD-22_4329	Green synthesis and characterization of CeO ₂ and Ni-doped CeO ₂ nanoparticles and its dielectric properties	Sthitiprajna Muduli and Tapas Ranjan Sahoo
6	ICRAMERD-22_6237	Synthesis and Characterization of Ladle Furnace Slag on the Mechanical Properties of Self-Compacting Concrete	Bibekananda Naik, A.K. Chaubey, Syed Mohammed Mustakim, Sriparna Paul, Abhishek Barua and Siddharth Jeet
7	ICRAMERD-22_8750	Acoustical and Heat characterization of Recycled Fibre Reinforced Bricks	Shivendra Dwivedi, Divya Bajaj, Devika Sahu and Tarun Kumar Rajak



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Parallel Session 6

Theme: Numerical Modeling and analysis in Engineering
Session Coordinator: Dr. Ajay Behera and Dr. Binayak Pattanayak
Date & Time : 12th Aug 2022 , 3:00 PM to 4:30 PM

Sl.No.	Paper ID	Topic	Authors
1	ICRAMERD-22_0112	Dielectric and conduction property of double perovskite for energy storage devices	Lutu Sahoo , Rajanikanta Parida and Bichitra Nanda Parida
2	ICRAMERD-22_0152	Effect of Nd doping on KDP Crystals – implications on structural and optical studies	R Hanumantha Rao, Ch V V Ramana and B. Venkaata Rao
3	ICRAMERD-22_1116	Experimental study on bio-corrosion behaviour of magnesium alloy using sodium chloride solution	Sambeet Sahu, Nirmal Kund and Pabak Mohapatra
4	ICRAMERD-22_0697	Experimental Investigation of Concrete with Cementitious Waste Material such as GGBS & Fly Ash over Conventional Concrete	Anant Kumar and Krishna Deep
5	ICRAMERD-22_3045	Effect of Stirring Speed on the Morphology of Nanosilica by Sol-Gel Method	Km Deepanjali Gautam and A V Ullas
6	ICRAMERD-22_8607	Influence of Fe doping on the dielectric properties of green synthesized Cerium Oxide nanoparticles using Acacia Concinna fruit extract	Sthitiprajna Muduli and Tapas Ranjan Sahoo
7	ICRAMERD-22_0640	Development of Automobile Recommender System using Machine Learning and AHP Algorithms	Sanjeev Kumar, A Sarangi, Prof. R P Mohanty



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Parallel Session 7

Theme: Material Modifications

Session Coordinator: Dr. Priyaranjan Biswal and Mr. S.A Ohid

Date & Time : 12th Aug 2022 , 3:00 PM to 4:30 PM

Sl.No.	Paper ID	Title	Author
1	ICRAMERD-22_0913	Exploring the Influence of Ionic Liquid and Temperature on the Dielectric Properties and Microwave Absorption of SWCNT based PVDF/PANI Blend Nano composites	Debashish Meher, Tapan Kumar Bastia and Bibhu Prasad Sahoo
2	ICRAMERD-22_0998	Effect of Replacing the Lead Core with Rubber on the Mechanical Properties of Lead Rubber Bearing	Bahaa Eddin Ghrewati , Mostafa Dada, Ibrahim Alyosef and Trilochan Jena
3	ICRAMERD-22_1370	Sulfur doped FeSe: A first-principles study of its electronic and superconducting properties	Sandeep Kumar, Mamraj Singh, Rahul Kumar and Ankur Soam
4	ICRAMERD-22_4091	MECHANICAL PROPERTIES AND MORPHOLOGY BEHAVIOR OF BANANA FIBER/ RICE HUSK/ EPOXY RESIN HYBRID COMPOSITES	Deepan S, Jeyakumar R, Mohankumar V and Manojkumar A
5	ICRAMERD-22_6368	Enhanced Dielectric Properties of the ZnO Nanoparticles Dispersed PU/PANI Blend Nanocomposites	Kalyani Dash and Bibhu Prasad Sahoo
6	ICRAMERD-22_6787	Multifunctional Carbon-Basalt Hybrid Composites Against Bird Strike	Sarang Joshi, Kumar Maharshi, Nikunj Goyal, Shivdayal Patel and Ravi Panwar
7	ICRAMERD-22_4523	NSM Technology with GFRP and Sisal Rope Fibre For Flexural Strengthening of RC Beams	Aman Jitendra Dhadiwal and Tarun Kumar Rajak
8	ICRAMERD-22_8901	Experimental analysis on tensile and hardness results of fabricated aluminum SiC metal matrix composites by using stir casting process	Debashis Mishra and Alok Kumar Nanda



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IIIE Odisha Chapter

13th August'2022
Technical Session-III 09:30AM-11:30AM

Parallel Session 1

Theme: Design and Dynamics

Session Coordinator: Dr. Ankur Soam and Mr. Debashis Dey

Date & Time : 13th Aug 2022 , 9:30 AM to 11:30 AM

Sl.No.	Paper ID	Topic	Authors
1	ICRAMERD-22_2194	A study on the selection of electrode materials for hepatic radiofrequency ablation: a numerical approach	Subhamshree Avishek, Sikata Samantaray
2	ICRAMERD-22_0491	Parametric optimization of A-TIG welding process parameters for joining of 304L stainless steel	A. Sahoo, S. Tripathy, Tapas Kumar Sahoo
3	ICRAMERD-22_3887	Prediction of Erosion Rate by A Novel Method and Parametric Optimization of EDM of Novel Sic Insulated Ceramic Reinforced With Carbon Nano Tube	Pallavi Chaudhury, Dr. Sikata Samantaray
4	ICRAMERD-22_0517	Supplier Selection for an Industry using MCDM techniques	Dhiren Kumar Behera, Shashwat Beura
5	ICRAMERD-22_0295	Mathematical Modeling of Maize Drying at Different Temperatures	Pranjal Jyoti Pathak, Siba Shankar Mohapatra, Malay Kumar Pradhan, Himanshu Sekhar Mohanty
6	ICRAMERD-22_9470	Design of a simple measurement system to monitor the parameters of solar energy	Suraj K. Panigrahi, Sushree S. Biswal, Durga P. Kar, Renu Sharma, Satyanarayan Bhuyan
7	ICRAMERD-22_1518	Parametric Optimisation of PMEDM for Ti-6Al-7Nb Biomedical Material using MGA Optimisation Method	Smrutiranjana Biswal , S Tripathy, D.K.Tripathy



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Parallel Session 2

Theme: Recent Advances in Nanocomposite
Session Coordinator: Mr. Ashok Sahoo and Dr. Tanmayee Khuntia
Date & Time : 13th Aug 2022 , 9:30 AM to 11:30 AM

Sl.No.	Paper ID	Title	Authors
1	ICRAMERD-22_1581	Experimental investigations on corrosion performance of heated-treated AZ91 Mg alloy	Sambeet Sahu, Nirmal Kund and Pabak Mohapatra
2	ICRAMERD-22_3409	Experimental study of Al ₂ O ₃ -H ₂ O nanofluid in a square natural convection cavity	Debashis Dey, Abhilash Kanungo and Sukanta Kumar Dash
3	ICRAMERD-22_4422	Experimental Investigation of Paver Block using Polypropylene Waste and Industrial Ashes	Anant Kumar, Nikhil Sahu, Jay Kumar Sahu and Aditya Sahu
4	ICRAMERD-22_4875	To Study the Effect of Geopolymer Concrete by Using Metakolin & Bottom Ash	Chandresh Kumar Gautam and Parvej Alam
5	ICRAMERD-22_6422	Experimental Study on Nano Alumina Based Concrete with Metakaolin	Manisha Verma and Parvez Alam
6	ICRAMERD-22_3585	Studies on Light weight Concrete using Leca Material	Meyyappan PI, Karthiga Murugan and Kathirval Kumar
7	ICRAMERD-22_8853	Experimental studies on corrosion performance of reheated AZ31 magnesium alloy	Pabak Mohapatra, Nirmal Kund and Sambeet Sahu



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Parallel Session 3

Theme: Advances in Material Processing
Session Coordinator: Dr. Bhabani Mohanto and Dr. Anupama Routray
Date & Time : 13th Aug 2022 , 9:30 AM to 11:30 AM

Sl.No.	Paper ID	Title	Authors
1	ICRAMERD-22_0893	Influence of Cu and Al interfacing foil on Al7075/A360 FGMs Fabricated by Gravity Casting	Tankala Raviteja, B. Surekha and Nitin Sharma
2	ICRAMERD-22_6346	Simulation of microstructure evolution for Laser-powder bed fusion process of AlSi10Mg alloy	Bibhu Kalyan Panda, Seshadev Sahoo, Cheruvu Siva Kumar and Ashish Kumar Nath
3	ICRAMERD-22_6789	Influence of honeycomb core height on the blast mitigation of sandwich panel	Murlidhar Patel and Shivdayal Patel
4	ICRAMERD-22_9300	Mathematical Approach to Find Warpage Deformation of FDM Build Parts	Dipabrata Banerjee, Madala Ajay Kumar, Ankesh Pandey, Dr. Swayam Bikash Mishra and Bharat Chandra Routara
5	ICRAMERD-22_6396	Direct Growth of Hierarchically SnS ₂ Layered Nanostructure on Nickel Foam for High-Performance Solid-State Supercapacitors	Prasanta Kumar Sahoo, Niraj Kumar, S M Saurabh and Abhishek Tripathi
6	ICRAMERD-22_7543	Experimental Studies on partial replacement of Crumb Rubber as a Fine Aggregate In M30 Grade Concrete	Meyyappan PI, S. D Anitha Selvasofia, M. Asmitha, S. Janani Praveena and P. Simika



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Parallel Session 4

Theme: Advanced Materials, Property Testing and Characterization
Session Coordinator: Prasanta Kumar Sahoo and Mrs. Sangita Sarangi
Date & Time : 13th Aug 2022 , 9:30 AM to 11:30 AM

Sl.No.	Paper ID	Title	Authors
1	ICRAMERD-22_2071	Structural Analysis of Experimentally Fabricated Glass Fiber Reinforced (GFRP) Composites	K V S Phani, Basanta Kumar Nanda, Swayam Bikash Mishra and Santosh Kumar Nayak
2	ICRAMERD-22_3651	Analysis of structural defects with the chemical composition of rGO/GaN nanocomposites using Raman spectroscopy	Sumitra Nongthombam, Naorem Aruna Devi, Sayantan Sinha, W. Ishwarchand Singh and Bibhu Prasad Swain
3	ICRAMERD-22_5500	The mechanical behaviour of unsaturated polyester matrix (UPM) composite filled with pistachio shell particles (PSP)	Saiswapna Rautaray, Harekrushna Sutar, Pragyan Senapati and Rabiranjana Murmu
4	ICRAMERD-22_7808	Tribological Analysis of Jute Reinforced Composites with Different Nano-fillers	Swagat Suman Dash, K. Jatgadish and Nilesh Dalai
5	ICRAMERD-22_8387	Double superposition hypothesis for smart composite plates- Two approaches	Tapaswinee Das and Jayanta Nath
6	ICRAMERD-22_2795	Synthesis and study of the Mechanical properties of polypropylene/banana Nano filler composites	Deepti Rekha Sahoo, Trinath Biswal and S K Acharya



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Parallel Session 5

Theme: IoT advances in Engineering

Session Coordinator: Dr. Pragyan Senapati and Ms. Rashmi Ray

Date & Time : 13th Aug 2022 , 9:30 AM to 11:30 AM

SI No	Paper ID	Title	Authors
1	ICRAMER D-22_4444	Concrete bridge crack detection by image processing technique by using the Improved OTSU method	V. Vivekananthan, R. Vignesh, S. Vasanthaseelan and E. Joel
2	ICRAMER D-22_9727	Automated Artificial Pancreas (AP) based on the JAYA Optimized PID Controller (JAYA-PIDC)	Akshaya Kumar Patra, Anuja Nanda and Ramachandra Agrawal
3	ICRAMER D-22_4232	Power Generation Improvement in Unsymmetrical PV Arrays during Partial Shading via MR Technique	Priya Ranjan Satpathy, Sudhakar Babu Thanikanti, Belqasem Aljafari, Siva Rama Krishna Madeti and Renu Sharma
4	ICRAMER D-22_6397	Deterministic Wind Speed Prediction with VMD Based Kernel Random Vector Functional Link Neural Network	Snigdha Sarangi, Pradipta Kishore Dash, Ranjeeta Bisoi and Badri Narayan Sahoo
5	ICRAMER D-22_0658	LPG Gas Leakage Detection System using IoT	Bibekananda Jena, Subit Kumar Pradhan, Raghuvvar Jha, Sonali Goel and Renu Sharma
6	ICRAMER D-22_6472	Hydro governor damping controller to improve dynamic stability of wind integrated power system	Narayan Nahak , Jyotiswarup Samal , Santosh Kumar Swain and Samarjeet Satapathy
7	ICRAMER D-22_5765	IoT-Enabled Door Opening and Closing System for Monitoring Body Temperature and Face Mask	S. Magibalan , R. Dhineshkumar, S.Manojkumar, M.Kaviraj, B.Tamilrasan



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Parallel Session 6

Theme: Recent Trends in Thermal Engineering
Session Coordinator: Dr. Ajay Behera and Dr. Binayak Pattanayak
Date & Time : 13th Aug 2022 , 9:30 AM to 11:30 AM

Sl.No.	Paper ID	Title	Authors
1	ICRAMERD-22_0100	Performance analysis of solar desalination system with thermal energy storage materials	Nafiu Ishaq Adamu, Dillip Kumar Biswal, Madhu Kalyan Reddy Pulagam and Sachindra Kumar Rout
2	ICRAMERD-22_3917	Tailoring properties of nano-crystalline CdO thin films by incorporation Al for enhanced photo-voltaic applications	Ram Prasanth R, Manikandan P, Muthukumar J and Veeamanipriya E
3	ICRAMERD-22_9992	A Novel Nonlinear Control for Renewable Energy Based Micro Grid	Anshuman Sathpathy, Satis Choudhury, Niranjana Nayak
4	ICRAMERD-22_7012	PERFORMANCE ANALYSIS OF 700 kw SOLAR PV GRID CONNECTED SYSTEM: AN EMPIRICAL STUDY	Gnanasekaran Sasikumar, Sivasangari Ayyappan , U.Sudhakar
5	ICRAMERD-22_3506	Prioritizing the Factors affect in Covid-19 Vaccines, A Fuzzy-AHP approach	A K Das, S Ray, A K Sahoo, P Mohapatra and B C Routra
6	ICRAMERD-22_0196	Clean Energy Products and its Circulation, Earnings Compilation Model	Shiv Sankar Das, Bijaya Bijeta Nayak, Debashree Debadatta Behera, Soumya Ranjan Giri and Manoranjan Dash
7	ICRAMERD-22_9921	Thermal management of thermo-electric refrigeration system applying nano fluids through a mini channel heat sink	Bibhuti Bhusan Nayak, Subham Thakur and Upashana Sah



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Parallel Session 7

Theme: Contemporary Optimization Algorithms and Engineering
Session Coordinator: Dr. Priyaranjan Biswal and Mr. S.A Ohid
Date & Time : 13th Aug 2022 , 9:30 AM to 11:30 AM

Sl.No.	Paper ID	Topic	Authors
1	ICRAMERD-22_0542	Experimental Investigation based on MCDM Optimization of Electrical Discharge Machined Al-WC-B4C Hybrid Composite Using Taguchi-MARCOS Method	Smrutiranjana Biswal, Bibhuti Bhusan Sahoo, Siddharth Jeet, Abhishek Barua, Kanchan Kumari and Bibekananda Naik
2	ICRAMERD-22_9570	Parametric Appraisal of Mahua Bio-Diesel Powered Compression Ignition Engine to Improve Performance Characteristics by RSM coupled WASPAS- Simulated Annealing and Genetic Algorithm	Bibhuti Bhusan Sahoo, Shakti Prakash Jena, Abhishek Barua, Siddharth Jeet, Kanchan Kumari, Dilip Kumar Bagal and Madhumanjari Saran
3	ICRAMERD-22_2462	Comparative Study Based on Static and Modal Analysis of Existing Motorcycle Rear Sprocket's Material with Metal Matrix Composite Using FEA	Bibhuti Bhusan Sahoo, Bibhu Prasad Panda, Abhishek Barua, Siddharth Jeet, Kanchan Kumari and Dilip Kumar Bagal
4	ICRAMERD-22_2517	Synthesis of TiO ₂ nanoparticles for supercapacitor application by a solution based approach	Rajan Lakra, Rahul Kumar, Sandeep Kumar, Dhirendranath Thatoi and Ankur Soam
5	ICRAMERD-22_5795	Parametric Optimization of Resistance Spot Welded Dissimilar Metals Utilizing Advanced Hybrid Taguchi-MARCOS Method	Bhabani Shankar Kamilla, Bibhuti Bhusan Sahoo, Abhishek Beura, Siddharth Jeet, Kanchan Kumari, Dilip Kumar Bagal, Bibhu Prasad Panda
6	ICRAMERD-22_4287	Experimental investigation and optimization of FDM process using PLA.	Sujata Sahoo, Prasant Ranjan Dhal, Pragyana Senapati, Bhabani Shankar Mohanta, Harekrushna Sutar and Subrat Kumar Baral



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13th August'2022
Technical Session-IV 03:00PM-04:30PM

Parallel Session 1

Theme: Recent Trends in Thermal Engineering

Session Coordinator: Dr. Ankur Soam and Mr. Debashis Dey

Date & Time : 13th Aug 2022 , 3:00 PM to 4:30 PM

Sl.No.	Paper ID	Topic	Authors
1	ICRAMERD-22_1560	Design and Analysis of a 3-Blade Vertical Axis Wind Turbine	Subhadeep Prasad Bose, Amit Samantaray, Shreemay Samantaray, Mansha Mishra
2	ICRAMERD-22_4477	Graphitic carbon nitride a revolutionary semiconducting material for photo electrochemical water splitting using visible- light: A review	Rashmi Acharya, Suryamani Sahoo
3	ICRAMERD-22_4030	Multi optimization of be-cu alloy machined by electrical discharge machining	Pallavi Choudhury, Pravat Satpathy, Atyasha Nanda, Mohit Kumar
4	ICRAMERD-22_6184	Optimization of Performance Characteristic of Electrical Discharge Machining of Beryllium Copper Alloy by Hybrid Optimization Method	Pallavi Choudhury, Dr Sasmeeta Tripathy, Dr. Sikata Samantaray
5	ICRAMERD-22_5681	Numerical investigation on the effect of inclination angle of the wall fin on the hydrogen - air micro-combustion	K A Srinivasa Raghavan ¹ , E Rajesh ¹ , V R K Raju ¹ and S Srinivasa Rao
6	ICRAMERD-22_3943	Thermodynamic Performance Analysis of an Indirect Rotating Tray Type Solar Dryer for Drying Tendu Leaves	Chandan Kumar Sethi, S K Acharya, P P Patnaik
7	ICRAMERD-22_2575	Design and development of semi - automated manual transmission	Kamlesh sasane , Dr. Aqleem S ,Suryateja, ShantoMathai, QuireniusMendonsa, Aldrin Rego, Melissa Vazapully



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Technical Session-IV 03:00PM-04:30PM

Parallel Session 1

Theme: Recent Trends in Thermal Engineering

Session Coordinator: Dr. Ankur Soam and Mr. Debashis Dey

Date & Time: 13th Aug 2022 , 3:00 PM to 4:30 PM

Sl.No.	Paper ID	Topic	Authors
1	ICRAMERD-22_8119	Storage, Handling and Disposal of Hazardous Waste	Sonali Goel and Renu Sharma
2	ICRAMERD-22_1051	Optimization of EDM process parameters in machining of titanium alloy used for aerospace applications	Khitin K Mahapatra, S Tripathy, D N Thatoi, S Biswal
3	ICRAMERD-22_8101	Wear and corrosion behaviour of WS 2 reinforced Al based composites	Swetarani Biswal, Seshadev Sahoo



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13th August'2022
Valedictory Ceremony 5: 00 PM-5:30 PM

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