

3rd international and 15th National Conference on Industrial Problems on Machines & Mechanisms (IPRoMM 2024) Session _Paper Details

DAY-2

Machine and Mechanisms (PARALLEL SESSION 1), Room No: 211,DJLHC

Date: 20 th December 2024		Time: 10:30 AM - 12:00 PM	Room No.: DJLHC
Sl. No.	Paper ID	Title	First Author
1	IPRoMM_2024_paper_11	Design and Analysis of Flexure-Based Screw Motion Mechanism	Subrat
2	IPRoMM_2024_paper_20	Design Analysis, Motion Control Study and Development of an Autonomous Robot for Glass Canopy Cleaning	Ravindra Bisht
3	IPRoMM_2024_paper_26	Vibration Analysis of Rectangular Plates with Effect of Piezoelectric Smart Materials	K. Meera Saheb
4	IPRoMM_2024_paper_51	Design and Development of Dryer for Semi-Automatic Parboiling Machine for Marginal Farming	Mohit Kumar Sharma
5	IPRoMM_2024_paper_55	Machine Learning Approach for designing Link Press with improved Slider-Guideway pair	Mohan R. Nagurkar

Manufacturing Science (PARALLEL SESSION 2), Room No: 210, DJLHC

Date: 20 th December 2024		Time: 10:30 AM - 12:00 PM	Room No.: DJLHC
Sl. No.	Paper ID	Title	First Author
6	IPRoMM_2024_paper_21	Predicting the reliability of TIG weld joint of aluminum alloy using soft computing techniques	Kapilash S
7	IPRoMM_2024_paper_19	Transient Analysis of a Sigmoid Functionally Graded Material Hyperbolic Paraboloid Shell Panel under Thermo-Mechanical Loading	Shashank Pandey
8	IPRoMM_2024_paper_74	A Review of Extrusion Mechanisms in 3D Food Printing for Affordable Conversion of Conventional 3D Printers	Shrishti Massey
9	IPRoMM_2024_paper_128	Mechanical performance assessment of PLA parts with different 3D printing infill strategies	Mumtaz Rizwee
10	IPRoMM_2024_paper_102	Machine learning based bidirectional predictive modeling for analysis of wire arc additively manufactured low carbon steel	Avishek Samanta

Industrial Problems (PARALLEL SESSION 3), Room No: 203, DJLHC

Date: 20 th December 2024		Time: 10:30 AM - 12:00 PM	Room No.: DJLHC
Sl. No.	Paper ID	Title	First Author
11	IPRoMM_2024_Industry_01	Failure Analysis of Centre Buffer Coupler (CBC) Mounting Housing Frame of Torpedo Ladle Car	Aditya Jain
12	IPRoMM_2024_Industry_02	Case Study on Frequent Joint Failures in Steel Cord Bucket Conveyor Belts and Mitigation Strategies	Kaushal kumar Singh
13	IPRoMM_2024_Industry_03	Failure Analysis and Design Optimization to Improve Reliability in Stacker cum Reclaimer (SCR)	Archit Mudugu
14	IPRoMM_2024_paper_139	Intuitive Control of Virtual Drone for Teaching Drone Pilots using Leap Motion in Unity Environment	Dhanush Eshwar Rendi
15	IPRoMM_2024_paper_146	Design and development of a Sustainable Simple gear train based energy harvester to generate green energy from sea waves	Ramesh Chandra Nayak

Bio-Mechanics (PARALLEL SESSION 4), Room No: 204, DJLHC

Date: 20 th December 2024		Time: 10:30 AM - 12:00 PM	Room No.: DJLHC
Sl. No.	Paper ID	Title	First Author
16	IPRoMM_2024_paper_45	Myoelectric Signal-based Finger Movement Classification and Simulation	Eashita Chowdhury
17	IPRoMM_2024_paper_73	Development and Actuation of a Biomimetic Soft-Robotic Gripper with Integrated Sensor for Dexterous Manipulation	M. Durga Susmitha
18	IPRoMM_2024_paper_124	Effect of Swelling on Thermal and Electrical Behaviour of Polyacrylamide Hydrogel - A Molecular Dynamic Study	Rahul Kumar
19	IPRoMM_2024_paper_049	Generic Inverse Kinematics for 6-axis Serial Manipulators with Prismatic and Revolute Joints in RoboAnalyzer	Tuhin Basu
20	IPRoMM_2024_paper_137	Genetic Algorithm based Optimization of PID Gains for Active Control of Railway Pantograph-Catenary System	Venkat Sai Vardhan Potluri
21	IPRoMM_2024_paper_159	Retinal Image Classification Using Deep Learning Models on Low Resource Devices	Chandrashekhara Azad

Fluid & Thermal (PARALLEL SESSION 5), Room No: 211, DJLHC

Date: 20 th December 2024		Time: 3:15 - 4:45PM	Room No.: DJLHC
Sl. No.	Paper ID	Title	First Author
22	IPRoMM_2024_paper_24	Streamline's Shape Theory: A Mathematical Validation for Newtonian Fluid Flows	Yuvaraj George
23	IPRoMM_2024_paper_43	Enhanced Efficiency and Flow Control: Benefits of Multi-Pump Summation Systems	Rakesh Kumar Nayak
24	IPRoMM_2024_paper_136	Thermoelectric Study of Materials for Waste Heat Recovery Systems in Automobiles	Shivam Bhardwaj
25	IPRoMM_2024_paper_120	Current status and advancement in Materials used for Gas Turbine Engines	Sayan Samanta
26	IPRoMM_2024_paper_152	Comparison of Entropy Generation inside a Porous Quadrantal Enclosure when bottom-heated isothermal-ly and Sinusoidally	Saddam Hossain Mullick
27	IPRoMM_2024_paper_112	Low Maintenance Combustion System with Innovative PCPF Blocks for SP-1, DSP	Md. Sharique Aman

Industrial Problems (PARALLEL SESSION 6), Room No: 210, DJLHC			
Date: 20 th December 2024		Time: 3:15 - 4:45PM	Room No.: DJLHC
Sl. No.	Paper ID	Title	First Author
28	IPRoMM_2024_Industry_05	Case study on Effect of increase in Radial clearance & Surface roughness in hydrodynamic bearing of Finishing stand of Hot strip mill and	Ankush Sharma
29	IPRoMM_2024_Industry_06	Life Assessment, Contact Stress and Critical Thickness Calculation of Bull Gear at LD Vessel, TSJ	Nihit Raj
30	IPRoMM_2024_Industry_08	A Case Study of Chronic issue elimination of CDQ-10 Vibro-feeder	Mayur
31	IPRoMM_2024_paper_64	Time-of-Flight-based Approach for level-2 Damage Identification in Tank Gun Barrel Using Lamb Waves	Deepak Kumar
32	IPRoMM_2024_paper_28	Grasping Force Estimation based on EMG	Ankita Das
33	IPRoMM_2024_paper_33	Strength Evaluation of 3D Concrete Printed Layers using In-situ Parameters Monitoring	Rajan Sahai

Machine and Mechanisms (PARALLEL SESSION 7), Room No: 203, DJLHC			
Date: 20 th December 2024		Time: 3:15 - 4:45PM	Room No.: DJLHC
Sl. No.	Paper ID	Title	First Author
34	IPRoMM_2024_paper_42	Development of Large Deflection Single Degree of Freedom Compliant Rotary Joint	Subrat
35	IPRoMM_2024_paper_103	Design Analysis and Development of a Benchtop 3D Concrete Printer	Utkarsh Bassi
36	IPRoMM_2024_paper_50	Enhancing Soaking and Steaming Parameters to Optimize the Parboiling Process	Sumit Kumar Singh
37	IPRoMM_2024_paper_52	Standalone C# Based Graphical User Interface for Recursive Dynamic Simulator	Prachiti Sujit Chandratreya
38	IPRoMM_2024_paper_25	Modal Analysis and Experimental Investigations of Fiber Metal Laminated Composite Structures	K. Meera Saheb
39	IPRoMM_2024_paper_158	Fire Detection and Suppression with An Automated Fire Extinguishing System	Vijay Kumar dalla

Machine and Mechanisms(PARALLEL SESSION 8), Room No: 204, DJLHC			
Date: 20 th December 2024		Time: 3:15 - 4:45PM	Room No.: DJLHC
Sl. No.	Paper ID	Title	First Author
40	IPRoMM_2024_paper_44	Dynamic Performance Analysis of Valve-Controlled Hydromotor Powered by Accumulator Energy	Shubhyanshu Singh
41	IPRoMM_2024_paper_92	Large amplitude vibration of doubly curved beam with rotationally restrained boundary: Foundation of multi-scale framework analyzing nonlinear dynamic properties of anti-curvature lattices	Sushanta Ghuku
42	IPRoMM_2024_paper_67	Ball bearing fault detection using Adaptive Superlet Transform and 2-D CNN	Samrat Mandal
43	IPRoMM_2024_paper_138	A Contact Quality Investigation of Vibratory Systems Interacting with Flexible Beam	Yaswanth Bangi
44	IPRoMM_2024_paper_154	Material Optimization for Flexible Race Bearing: A Numerical Study	Apoorva verma
45	IPRoMM_2024_paper_23	Distributed Control for Differential Drive Autonomous Mobile Robot	Yuvaraj George

DAY-3			
Manufacturing Science (PARALLEL SESSION 9), Room No: 211, DJLHC			
Date: 21 th December 2024		Time: 10:30AM-12:30 PM	Room No.: DJLHC
Sl. No.	Paper ID	Title	First Author
46	IPRoMM_2024_Industry_07	Chronic issues of BLT Hopper Weighment at Blast Furnaces	Mayur
47	IPRoMM_2024_paper_69	Progress and Obstacles in Extrusion Additive Manufacturing: A Professional Evaluation	Manish Thakur
48	IPRoMM_2024_paper_107	Multiojective path planning for the 6-6 Stewart platform manipulator using the singularity free tube	Nishanth Adithya Chandramouli
49	IPRoMM_2024_paper_121	Bi-axial Deformation Induce Phase Transformation in Fe-Cr-Ni alloys: A Molecular Dynamics Simulation Based Study	Arun Kumar
50	IPRoMM_2024_paper_141	Ceramic Composites and Bioactive Glass in Bio Implants: A Review	Gaurav Pant
51	IPRoMM_2024_paper_79	Hygro-Thermo-Elastic Studies of Multi-layered Laminated composite plate	Vinod Kumar Shukla
Machine and Mechanisms (PARALLEL SESSION 10), Room No: 210, DJLHC			
Date: 21 th December 2024		Time: 10:30AM-12:30 PM	Room No.: DJLHC
Sl. No.	Paper ID	Title	First Author
52	IPRoMM_2024_paper_161	Nature-Inspired Innovation in Underwater Vehicle Technology	Vijay Kumar dalla
53	IPRoMM_2024_paper_98	Design and Analysis of a 3RRR Robot for Printing Application	Utkarsh Saha
54	IPRoMM_2024_paper_116	Comprehensive study of the position and orientation workspaces of the 6-RSS parallel manipulator and its experimental validation	Shreyas Kumar
55	IPRoMM_2024_paper_157	Design and Simulate a gas sensor using one port multilayer SAW Device	Baruna Kumar Turuk
56	IPRoMM_2024_paper_132	Estimation on Influence of On-orbit Satellite Loads on Mechanism Appendages	V Sri Pavan RaviChand
57	IPRoMM_2024_paper_61	Design of a foldable bus staircase for disabled people	G. Sai Vikas Kumar

Machine and Mechanisms (PARALLEL SESSION 11), Room No: 203, DJLHC			
Date: 21 th December 2024		Time: 10:30AM-12:30 PM	Room No.: DJLHC
Sl. No.	Paper ID	Title	First Author
58	IPRoMM_2024_paper_93	Trajectory tracking control of an Underwater vehicle with DELTA parallel manipulator	Arun Krishnan K S
59	IPRoMM_2024_paper_84	Design, Implementation and Evaluation of Low-Cost Master device for Teleoperation	Pranali Ingole
60	IPRoMM_2024_paper_57	A Novel Device for Automatic Removal of 3D Printed Parts from Build Platforms	B Sankar
61	IPRoMM_2024_paper_60	Design and Development of a Dynamically Stable Wheeled Mobile Robot	Prashant Raturi
62	IPRoMM_2024_paper_155	A Numerical and Analytical Study of Structural and Thermal Performance in Conventional, 3D Printed and Composite Ball Bearings	Apoorva verma
63	IPRoMM_2024_paper_160	Tackling Still Water Pollution: Design, Analysis and Implementation of a Litter Whale Robot	Vijay Kumar Dalla
64	IPRoMM_2024_Industry_04	Frequent Joint Failures in Steel Cord Bucket Conveyor Belts: Analysis and Mitigation Strategies	Kaushal Singh
Fluid & Thermal (PARALLEL SESSION 12), Room No: 204, DJLHC			
Date: 21 th December 2024		Time: 10:30AM-12:30 PM	Room No.: DJLHC
Sl. No.	Paper ID	Title	First Author
65	IPRoMM_2024_paper_145	Tribological performance of HVOF sprayed coatings: A review	Mukund Kumar
66	IPRoMM_2024_paper_150	Comparative Study of Bio-Surfactant and Synthetic Surfactant Fluids in Grooved Heat Pipes: A CFD Approach	Rinku Kumar Gouda
67	IPRoMM_2024_paper_48	FSI investigation of fluid flow through different angles of hydraulic joints	Amit kumar
68	IPRoMM_2024_paper_156	Experimental Investigation on the Performance of Cabinet Solar Grain Drain in Natural Convection	Dr Krishna Deo Prasad Singh
69	IPRoMM_2024_paper_151	Numerical Examination of Entropy Formation during Natural Convection inside a Square Enclosure Heated Non-uniformly from Top	Saddam Hossain Mullick
70	IPRoMM_2024_paper_54	Electrifying the Future: Replacing Petrol and Diesel Leaf Collectors with Green Technology	Vivek Brahmabhatt
71	IPRoMM_2024_paper_148	Performance analysis of evacuated tube solar water heater using flat plat diffuse reflector and twisted tape	Tuna Mahato