Wednesday, November 11 - Research Posters				
Submission Code	**Poster Number**	**Submission Name**	**First Name**	**Last Name**
187798	R1	Thermal Analysis of Window With Phase Change Materials Having Different Melting Points	Esam	Alawadhi
188561	R2	Mining the Tails: Finite-Size Effects and Defect Distributions in High-Entropy Perovskites for Solar Water Splitting	Carlos	Domínguez
190521	R3	Leveraging Synthetic Data to Enhance Human Activity Recognition Performance Through Augmentation and Replacement	Samuel	Murphy
190624	R4	Thermal Performance of Cascaded Multi-Phase Change Material-Embedded Microchannel Heat Sinks Under Unsteady Duty Cycles: A Numerical Investigation	Joongyeon	Choi
190795	R5	Decarbonizing Czech Road Transport: the Role of Renewables and Nuclear Energy	Pavel	Charvat
190815	R6	Computational Fluid Dynamics Characterization of Discharge and Inertance Coefficients in Neonatal Septal Defects Under Pulsatile Flow	Javier	Pratdesaba
191159	R7	Tunable Memory-Effect Nanofluidic Memristor for Neuromorphic Reservoir Computing	Qinyang	Fan
191262	R8	Estimation Method of Fatigue Properties of SBR-Based Binder in Graphite Anode for Lithium-Ion Battery Using Simplified Mechanical Model	Yota	Ohteki
191331	R9	Ultrasonic Assessment of Dynamic–Static Elastic Modulus Correlation in Recycled-Glass Aggregate Concrete	HECTOR	CARREON
191478	R10	Layering Direction and Stiffness Grading Effects on the Impact Performance of CFRP Honeycomb Core Sandwich Panels	Yuki	Ohno
191519	R11	High-Resolution Nanopore Detection of Post-Translational Modifications at Specific Positions of Tau Protein Using a Bipolar Peptide Carrier	Junzhou	He
191595	R12	Deformation Prediction of PVDF-Based Graphite Anode Material for Lithium-Ion Battery Using DEM-FEM Coupled Simulation	Yuma	Koike
191607	R13	Magnetorheological Actuator Based on Carbonyl Iron Particles for Mechanical Characterization of Soft Biomaterials	Solomon	Apuu
191671	R14	Design and Parametric Optimization of Additively Manufactured Multi-Functional Snap-Fit Joints for Rapid Assembly of Structures	Ethan	Rocheville
191723	R15	Characterization of Plasma-Enhanced Graphene Coatings on TI-6AL-4V by Non-Destructive Means	HECTOR	CARREON
191735	R16	A Rapid Review of Computer Simulations and Artificial Intelligence for Safer Vehicle Design	Alvaro	Espinosa
191893	R17	Bioresorbable Polymer Leaflets for Pediatric Heart Valves	Tre	Welch
191910	R18	Hybrid Solar and Waste Heat Recovery Using High-Temperature Orc for Power and Steam Generation	Youssef	Maaned
191996	R19	Deriving Design Requirements From Perceptual Uncertainty in Hospital Laundry Bag Handling	Teresa	Lau
192012	R20	Cfd Analysis of Sudden Leaks in Natural Gas Transmission Pipelines: Assessment of Pressure Losses and Energy Efficiency in the Context of the Camisea Syste	Juan Diego	Mendoza Huillca
192111	R21	Improving the Accuracy of Transient Plane Source Thermal Conductivity Measurements: Novel Analytical Models, Fitting Approaches, and Systematic Sensitivity	Jiaqi	GU
192134	R22	Vacuum Flash-Boiling System for Oil Dehydration	Geonchan	An
192173	R23	Process-Induced Thermal Conductivity Degradation in Cu Micro Pads for 3d-Ic Hybrid Bonding Revealed by Spatially Resolved Frequency-Domain Thermoreflec	Yang	LU
192177	R24	A Method for Enhancing Manufacturing Precision of DLP Ceramic Microstructures Based on Multi-Exposure Per Layer	Wentong	Hong
192178	R25	Evaluation of Coating Strength for Lithium-Ion Battery Anode Materials Using Finite Element Analysis	Daiki	Ariyama
192180	R26	Proposal of a Fracture Criterion for 3D Printed Objects and Its Verification Using Specimens Fabricated at Various Printing Angles	Seiya	Watanabe
192191	R27	Surrogate Modelling of Transient Heat Transfer Intube-In-Tube Heat Exchangers With Annular Pin Fins	Martin	Zalesak
192196	R28	Dynamic Thermal Switching and Dual Phase-Change Storage for All-Day Solar-Heating/radiative-Cooling Photovoltaic-Thermoelectric Generation	Wei	JING
192200	R29	Experimental Investigation of Thermal-Hydraulic Behavior and Heat Transfer Enhancement of a Tube-In-Tube Heat Exchanger With Additively Manufactured Exte	Lubomir	Klimes
192434	R30	Biomimetic Fish-Rib Inspired Morphing Mechanism for Camber Adaptation of a Naca 4415 Airfoil: A Cfd-Driven Approach for Uav Aerodynamic Optimization	Anish	Diwanji
192523	R31	Engineering the Funnel: Strategic Pipelines, and Inclusive Mentorship for the 21st Century	Prashanthkumar	Vijayakumar
192580	R32	Sensitivity Analysis of Blade Geometric Parameters for Optimizing Hydraulic Performance in a Kaplan Turbine	Haram	Oh
192644	R33	Controlled Pzt Wave Propagation for Identifying Strength-Related and Stiffness-Sensitive Features in Early-Age Concrete	Hasti	Gharavi
192778	R34	A Segmented Triple-Edge Winglet for Passive Vortex Diffusion: A Computational Aerodynamic Design Investigation for Light Aircrafts	Nitish	Makvan
192918	R35	Biomass Briquettes: A Renewable Approach to Sustainable Energy Generation	Nitish	Makvan
193183	R36	Prediction of Material Behavior of Al-Si Coated Hot Stamping Steel With Heterogeneous Phase Field	Minki	Kim
193195	R37	Effect of Pre-Deformation on Material Properties and Plastic Instability of Low Carbon Steel at High Temperatures	Minki	Kim
193255	R38	Machine Learning Assisted Multi-Objective Optimization of Relative Density and Productivity of Stainless Steel SS316L in LPBF	Kawtar	ZAHFIR
193290	R39	Flexible Bifunctional Sensor for Strain and Temperature Monitoring in Wearable Applications	Rishikesh	Govindarajan
193350	R40	Optimization of Hydraulic Ram Pump Performance Through Solar-Powered Wastewater Recirculation System	Ashokkumar	Sharma
193408	R41	Making a Structural Battery with 3D Printed Carbon Black PLA, Carbon-Fiber, and Lithium Iron Phosphate Layered Composite	Serdar	Tumkor
193464	R42	An Examination of Hexagonal and Corrugated Core Designs for Packaging Applications Using Fused Deposition Modeling	Sikandar	Khan
195514	R43	Electrodeposition Transfer Printing for Flexible Electronics	Yuxin	Jiao
195607	R44	Assessment of Fatigue Lifetime of Welded Stiffened Pressure Hull Considering Initial Defects & Phase Transformation	Jiawei	He
196296	R45	Study on Uniformity and Energy Consumption of Microwave Vacuum Drying of Pineapple Slices	Wei-Mon	Yan
196623	R46	Study on Flow and Vibration Characteristics of Flapping Wings with Hard-Soft Layers Utilizing Photo-Patterning Polymerization	Yuta	Sobue

196833	R47	Community Water Supply Systems and Microgrids: Enhancing Economic Efficiency and Resilience	Abdulmunim	Guwaeder
196906	R48	3d-Scanning a Clarifier Cover for Agitator Application	Michael	DeCapua
196992	R49	Mitigating Thermal Stress in High-Concentration Pv/t Systems With Dynamic Beam Splitting	Abdelrahman	Kandil
197010	R50	Engineering a Decellularized Human Amniotic Membrane Nanoparticle Coating for Vascular ePTFE Materials	Bo	Wang
197169	R51	Mxene-Assisted Interfacial Engineering of Flexible Bi_2te_3-Based Thermoelectric Generators for Enhanced Performance	Syed Sheraz	Ali
197204	R52	Ahigh-κ Homogeneous Ink for Printable Electroluminescent Devices	Tao	Li
197275	R53	Bridging the Data Gap: Generative AI Based Diffusion Framework for Coverage-Aware Child Facial Emotion Data Augmentation in Emotion-Aware Childcare Rob	Sikandar	Ali
197483	R54	Optimizing FFF Parameters for PPA CF in Aerospace Applications	Hannah	Jones
197597	R55	Nondestructive Characterization of High-Performance Concrete Subjected to Sulfate Ion Exposure	Viktor	Helgason
197915	R56	Effects of Nozzle and Bed Temperature on Thermal Distribution in Fdm 3d Printing: An Ntc Thermistor Calibration and Corner Warp Study Using a Flir Ax5 Therma	Aarav	Bedi
197932	R57	Interface-Mediated Acoustofluidic Cryo-Em for Enhanced Imaging and Single Particle Analysis	Shu	Lan
198021	R58	Simulating Breath Aerosol Deposition in Impaction Filters Using Openfoam and Empirical Flowrates	Austin	Hayes
198025	R59	Design and Optimization of Metal Foam Heat Exchangers for Efficient Waste Heat Recovery	ABDUL QADEER	KHOSO
198052	R60	Pedagogical Theories and Affective Engagement in Game-Based Learning: A Systematic Review of Impact Measurement Approaches	Adegboyega	Adebayo
198098	R61	Multi-Fidelity Inverse Design Framework for Commercial UAV Propellers Geometry Recovery	Maheswaran	S
198110	R62	Physics-Informed Machine Learning Framework for Prediction and Control in Additive Manufacturing	Tariku Sinshaw	Tamir
198114	R63	Simulation-Driven Machine Learning Surrogate Model for Hotspot Temperature and Hotspot-Die Prediction in Heterogeneous Chiplet Packages	Dewang	Kulkarni
198169	R64	Adaptive Stiffness Metamaterials for Vibration Control in Lightweight Structures	Cassidy	Powers
198172	R65	A Micro-Turbojet Test Facility for Fuel Specific Performance Evaluation of Alternative Aviation Fuels	Siddharth	Sharma
198177	R66	Reduced Order Model for Digital Twin Applications of 3-Bed RCO Systems	Mukyeong	Kim
198208	R67	Virtual Testing Approach for Hybrid Fastening Systems with Dissimilar Substrates	Kunle	Adeyemo
198218	R68	Multi-Modal Monitoring-Based Anomaly Detection in Component Manufacturing Process	YEWON	CHOI
198224	R69	Development of Brownian Dynamics Simulation for Spherical Particles with Particle Diameter Distribution	Seiya	Suzuki
198226	R70	First-Principles Investigation of VC2N4 Monolayer as a High-Performance Anode for Lithium-Ion Batteries	Sheraz	Ahmad
198231	R71	Extracting Generalizable Design Rules Using Interpretable Machine Learning	Jacob	Martin
198235	R72	Additive Manufacturing-Assisted Soft Tooling for Out-of-Autoclave CFRP Tube Manufacturing by Bladder Molding	Dave	Kim
198236	R73	Price vs. Mileage: A Linear Regression Investigation	Oscar	Tan
198263	R74	Foot Mounted Mems Sensor for Terrain Sensing With a Quadruped Robot	Shayok	Mukhopadhyay
198266	R75	Development of a Remote Monitoring System for Evaluation of Real-World Marine Engine Pm Emissions	Simon	Jobst
198271	R76	Multi-Objective Passive Balancing for Lithium-Ion Battery via Off-Policy Reinforcement Learning with Variable Resistor	Donghae	Kim
198274	R77	Evaluating Drop-in Low-Carbon Marine Fuels Through Shipboard and Laboratory Emissions Measurements	Felipe	Bezerra
198278	R78	Hybrid Brownian Dynamics–Monte Carlo Simulation of NéEl and Brownian Relaxation in Magnetic Nanoparticles	Kazuya	Okada
198280	R79	Channeled Hydrogels to Remedy Chronic Wounds: A Capillary-Diffusion Effects Study	Fatma	Alzamel
198298	R80	Dynamic Failure in Plastic Moderately Thick Shell Using Phase-Field Modeling	Van-Hoi	Nguyen
198302	R81	Efficient Stability-Preserving Load Regulation Approach for Thermoelastic Systems	Thanh	Banh
198303	R82	Charge-Engineered Graphene Oxide-Cof Membranes for High-Flux Nanofiltration of Organic Micropollutants	NIAZ ALI	KHAN
198307	R83	Long-Term Effects of Ionizing Radiation on Bone Structure and Mechanical Properties in a Clinically Relevant Rat Model	Bo	Wang
198312	R84	Experimental Characterization of a Hydrogen-Diesel Dual-Fuel Engine: Performance and Emissions on an Engine Dynamometer	Eric	Davis
198337	R85	Mechanics of Curved Needle Insertion in Soft Tissue: Experimental and Computational Study	Doyoung	Kim
198345	R86	An Open-Source Shell-and-Hinge Framework for Simulating Non-Rigid Origami	David Arturo	Rodriguez Herrera
198347	R87	Impact Behavior of Hybrid Aircraft Fuselage Composites with Integrated Lightning Protection	Nachiket	Makh
198357	R88	Experimental Evaluation of Pyroshock Reduction Using a Polyamide 6 Interface Layer in CFRP-Metal Assemblies	Sungjune	Lim
198400	R89	Developing a Skin Sensor to Enhance Long-Term Muscle Activity Monitoring	Giovanni	Ferraresso
198408	R90	Numerical Investigation of Fuel–air Mixing in Supersonic Hythane Combustion Using a Validated Cfd Framework	Amanullah	Moral
198421	R91	Electrochemical–Thermal Coupled Modeling and Thermal Non-Uniformity Analysis of Lithium-Ion Batteries Under Real Flight Conditions	Dain	Kim
198504	R92	Enhanced Graphene–water Thermal Transport via Edge Functionalization Without Compromising In-Plane Thermal Conductivity	John	Crosby
198516	R93	Molecular Dynamics Study of Cholesterol Effects on Membrane Fusion	Seunghun	Song
198534	R94	Fillet Radius Optimization for Bending-Induced Buckling of Mass-Constrained Thin-Walled PLA Cantilever Sections: A Parametric Finite Element Study	Semanti	Pattanayak
198535	R95	Semi-Automatic Method for Preparation of Engineering Drawings for Batch Processing of Libraries of Standardized CAD Models of Fittings	Oleksandr	Bilokon

198539	R96	Cool Under Pressure: Polycrystalline Diamond Rolling Elements for High-Speed Bearings	Joe	Kirkup
198556	R97	Simulation-Driven Investigation of Low-Power Carbon-Assisted LPBF of Ti-6Al-4V for Melt Pool Control	Advait	Deshmukh
198557	R98	Advancing Integrated VR Animations for Dynamics Education and Mechanical System Prototyping	Logan	Kozlowski
198572	R99	Enhanced CFD Simulation of a Horizontal Gravity Separator Using an Eulerian Multiphase Model	Juneyeol	Jung
198576	R100	Trapping Characteristics of Spherical and Cubic Particles in a Hagen-Poiseuille Flow	Takeru	Yamanouchi
198578	R101	A CFD-Based Methodology for Hazard Radius Assessment of Buried Hydrogen Pipeline Leaks	Hee Kyung	Park
198580	R102	AI-Driven Biomechanical Analysis of Industrial Falls Through Multimodal Sensing and OpenSim Modeling	Gloria	Moro
198586	R103	Surrogate Prediction of Blast-Induced Particle Dispersion Using DEM Simulation Data	Dongwoo	Sohn
198689	R104	Benchmark-Driven SLA 3D-Printed Feed Spacers for Reverse Osmosis: Material Selection, Dead-End Membrane Screening, CFD-Guided Design and Fouling-Va	Sikandar	Khan
198693	R105	A Sensor-Aware Cyber-Physical Digital Twin for Real-Time Monitoring and Multi-Robot Synchronization in Additive Manufacturing	Zaynab	Ganz
198723	R106	Designing Tough Hydrogel Composites Through Inclusion Placement: A CNN Latent-Space Approach	Santosh	Chhetri
198731	R107	Mechatronic Enhancement of the Ambulatory Rehabilitation System by Integrating AI Strategy	Devdas	Shetty
198742	R108	Why Plants Grow the Way They Do: An IRL Approach to Biological Constitutive Laws	Kishore	Shenoy
198755	R109	Quasi-Static Mechanical Properties of Open-Cell Aluminum Foam: Influence of Orientation on Elasticity and Orthotropy	Raymond	Millero
198756	R110	Order-Domain Harmonic Phase-Matching Selective Assembly for Reducing Transmission Error in Two-Tooth-Difference Swing-Rod Movable-Tooth Reducers	kunlong	li
198766	R111	Effect of Laser Powder Bed Fusion Process Parameters on Pore Geometry of Additively Manufactured Inconel 718 Porous Structures for Filtration Applications	Sikandar	Khan
198792	R112	Robust Bearing Fault Diagnosis Using Transfer Learning and Sisa-Based Machine Unlearning	Jie	Zhang
198797	R113	Control Response Asymmetry in Hybrid Dlc-Crac Data Center Cooling: Energyplus-Based Quantification and Feed-Forward Fan Control Potential	Junyoung	Lee
198810	R114	Nanoscale Investigation of Morphological Influence on Seeded Nucleation - Relevance to Selective Laser Melting	Ram	Mohan
198815	R115	Toward the Design of Anti-Washout Admixtures for Underwater Concrete Additive Manufacturing: A Molecular Dynamics Study	Sabit	Timilsina
198818	R116	Requirement Knowledge Graphs as Structured Memory for AI Agents in Engineering Design	Alessandro	Stefanone
198821	R117	Dripping–Jetting Transitions and Governing Mechanisms in Co-Flowing Microfluidics with Viscoelastic Fluids	Ram	Mohan
198832	R118	Multiscale Finite Element Modeling and Characterization of Brain White Matter Response in Traumatic Brain Injury	Assimina	Pelegri
198834	R119	Numerical Investigation of the Separation-of-Scales Assumption in Unit Cell Homogenization for Multiscale Topology Optimization	Andrew	Burke
198841	R120	Coupling 2d Kirigami With 3d Architecture for Multi-Step, Tunable Deployment	Hadi	Khezam
198848	R121	Machine Learning Based Digital Twin Framework for Predicting the Mechanical Performance of Fdm Manufactured Thermoplastic Aerospace Structures	Busra	Unlu
198851	R122	Fracture of Polymer-Like Networks with Topological Heterogeneity	Francisco Jose	del Campo Melchor
198874	R123	Mechanical Characterization of 3d-Printed Japanese Joinery: Experimental Evaluation and Cad Library Development	Martin	Maestre
198881	R124	Jovet: Jointly Optimized Mode-Embedded Transformers for Wind-to-Hydrogen LCOH Forecasting	Doha	Bounaim
198898	R125	Enhancing Interfacial Bond Strength in FFF Tri-Composites via Dual-Extrusion & VAI	Colby	Martinez
198906	R126	Plane-Constrained Camera Calibration and World-Frame Localization for Robotics Applications Using MATLAB	Kay	Morgan
198924	R127	Poster: Throatless Biomass Gasifier for Improved Fuel Flexibility in the Circular Bioeconomy	Gerardo	Diaz
198938	R128	NSF IRES US-Japan Program: Development of a CMOS-Sensor-Based Microfluidic Point-of-Care Testing (POCT) Device for Fluorescent Pathogen Detection	Nick	Svoboda
198950	R129	High-Resolution Cfd Simulation of Structure-to-Structure Ignition in the Maui Wildfire	Zheng	Wei
198964	R130	On the Accuracy Limitations of Standard Computational Methods in Handling Singularities	Eva	Panin
198969	R131	Design, Simulation and Analysis of Electric Assist System for Mobility Enhancement in Wheelchairs	Devdas	Shetty
199010	R132	Design, Thermal Characterization, and Field Validation of a Controlled Heating System for Potato Heat-Stress Studies	Soumik	Banerjee