

Wednesday, November 19 - Government Agency Posters

Submission Code	Poster Number	Submission Name	First Name	Last Name
166127	G1	Synthesis of Multi-Principal Element Silicide Thin Films Using Pulsed Laser Deposition	Lance	Spiegel
167007	G2	Boron Oxide Nanoparticle Enhanced Biofuel Droplet Combustion	Gabriel	Mejia
171730	G3	Understanding Droplet Evaporation in Aerosol Jet Printing to Mitigate Adverse Drying Effects	Bella	Guyll
172162	G4	A Numerical Investigation of Oscillating Flow and Condensation in Natural Porous Structures Using the Lattice Boltzmann Method and	Ben	Xu
172556	G5	Explainable Machine Learning Models for Real-Time Estimation of Melt Pressure and Temperature in Polymer Extrusion Processes	Mohammad	Akram
172643	G6	Design and Optimization of a Compliant Mechanism for Energy-Efficient Prosthetic Legs	Collin	Klomp
172734	G7	Position and Force Control for a Tendon Driven Scrubbing Robot for Surface Cleaning	Aaron	Mazzeo
172888	G8	Development of an Integrated Underwater Imaging System for Real-Time Bubble Characterization and Flow Measurement	Xuchen	Ying
172890	G9	Influence of Soil Texture on Heavy Metal Uptake by Vetiver Grass (Chrysopogon Zizanioides) From Leachate-Impacted Soils	Anika	Mahzabin
172891	G10	Repair of Ss316l Substrates Using Cold Spray Additive Manufacturing: A Study on Surface Defect Restoration and Bond Strength Evalua	Abishek	Kafle
172922	G11	Mechanical Design of a Target Ladder for the B13 Neutron Lifetime Experiment	Daryen	Rodriguez-Saucedo
172927	G12	Metal Passivation Strengthens the Interface in Metal Nanocomposites Reinforced With Boron Nitride Nanotubes	Zihan	Liu
172977	G13	Heterobarrier In-Situ Phonon Recycling in Semiconductor Diodes	Lorenzo	Franceschetti
173002	G14	Direct Ink Writing Silver/pvdf/mxene Multilayered Multifunctional Tactile Sensor	Yun	Li
173006	G15	A Soft Multimodal Optoelectronic Array Interface for Multiparametric Mapping of Heart Function in Vivo	Nathaniel	Quirion
173020	G16	Microstructure-Informed Mechanical Degradation Pathways in Silicon-Graphite Composite Electrodes	Sameep Rajubhai	Shah
173035	G17	Memory-Efficient Replay for Domain-Incremental Gesture Recognition in Human–robot Interaction	Kanchon Kanti	Podder
173037	G18	Wireless Real-Time Microplastic Monitoring System	Madeline	Potter
173039	G19	Corner Topology of Woven Baskets Inspires Stiff, Yet Resilient Metamaterials	Guowei	Tu
173041	G20	Optimizing Machine Learning Models for Real-Time Ultrasonic Quality Monitoring in Pharmaceutical Tablet Manufacturing	Christian	Di Spigna
173057	G21	Electrospinning Process Monitoring From Multi-Streaming Videos	Raahil	Pattan
173062	G22	Molecular Dynamics Simulation of Silicon Nanoparticle Melting and Crystallization During Laser-Induced Forward Transfer Printing	Youwen	Liang
173065	G23	Physically Constrained Generative Artificial Intelligence for Feasible Space Transformation in Design Optimization	Sam	Sisk
173088	G24	Investigating Interface-Driven Electronic Phenomena in Endotaxial (Sb ₂ Te ₃) _m (Sb ₂) _n Heterostructures	Katharine	Moncrieffe
173097	G25	Physics-Informed Gen-Ai With Sindy for Real-Time Prediction of Tower-Top Motions During Offshore Wind Turbine Installation	Saravanan	Bhaskaran
173101	G26	Physical Modelling of Vetiver Grass Performance Under Extreme Rainfall Conditions for Evapotranspiration	Richa	Pokhrel
173113	G27	Video-Based Extraction of Operating Deflection Shapes for In-Process Monitoring of 3d Bio-Printed Structures	Md Asif Hasan	Khan
173136	G28	Experiment to Identify the Physics of Human Whistling	Prashanth	Tamilselvam
173151	G29	Toughening Polymer Derived Ceramics With Boron Nitride Nanotubes	Nasim	Anjum
173156	G30	Engineering Erwinia Sp. Ljll01 as a Next-Generation Microbial Cell Factory for Pet Upcycling to Enable a Circular Bioeconomy.	Dushmantha Madushanka	Haramakkara Gedara
173165	G31	Poster for Ultrasonic-Enhanced Dual-Mode Boiling for Next-Generation Cold Plates in Ai Chip Cooling	Hardik	Bhutka
173175	G32	Utilizing Mechanical Force to Reveal and Modulate Chemical Reaction Pathways	Robert	Davis
173183	G33	Data-Driven Modeling of Non-Linear Dynamics of Lithium-Ion Batteries With Dynamic Mode Decomposition	Khalid Mahmud	Labib
173186	G34	Conformal Additive Stamp Printing for Manufacturing Three-Dimensional Curvy Electronics	Zhoulyu	Rao
173187	G35	Probing Topography and Electronic States of (Sb ₂ te ₃) _m (sb ₂) _n Misfit Materials	Jakob	Hammond-Renfro
173215	G36	Agent-Based Model Enhanced With Machine Learning to Predict Entrepreneurial Success Through Network Analysis	Hadear	Hassan
173227	G37	Bayesian Inference on Multi-Scale Probabilistic Knowledge Graph Foundation Model to Support Flexible Biomanufacturing Process Mo	Wandi	Xu
173252	G38	Shear-Dominant Ductile Fracture Under Uniaxial Tension Loading in Additively Manufactured Stainless Steel 316l	Surajit	Dey
173253	G39	Electrical Tissue Adhesives for Strain-insensitive In-situ Biosensing	TSZ HUNG	WONG
173257	G40	Reimagining Braille: A Wearable Electrothermally Actuated Braille Display	Seol-Yee	Lee
173263	G41	Uncertainty-Aware Shared Autonomy: Learning From Minimal Human Guidance via Conformal Prediction	Yongshuai	Wu
173265	G42	Scalable Binder-Free Fabrication of Gold-Zinc Oxide Ph Sensors via Plasma-Assisted Printing for Wearable Applications	SANTHOSH	ADHINARAYANAN

173295	G43	A Blockchain Enabled Privacy-Preserving Framework for Cross-Industrial Data Collaboration in Smart Manufacturing	Md Irfan	Khan
173299	G44	Numerical Modeling of Immersion Cooling for Interior Permanent Magnet Synchronous Motors	Han	Hu
173304	G45	Strain Effect on Thermal Transport in 3d Nanostructures	Jungkyu	Park
173318	G46	High-Resolution Characterization of Machining-Induced Subsurface Strain in Single-Crystal Sapphire	RUI	LIANG
173335	G47	3-D Package Stack Thermal Control and Throttling for Federated Computation	Yi	Liu
173342	G48	Dynamic Optical Measurement of Evaporating Liquid Films	Amirhosein	Sarchami
173365	G49	Decoding the Mechanophysiology of Inhaled Smallpox Onset: Modeling Implications for Mpox Transmission	Mohammad	yeasin
173370	G50	From Foundation to Future: Revisiting Ai Integration in Mining Engineering Education Through Current Perspectives of Students, Educators and Industry	Rana	Alhaj Bedar
173383	G51	Continental-Scale, High-Order, High-Spatial-Resolution, Ice Flow Modeling Based on Graphics Processing Units (Gpus)	Ricardo	Espin
173389	G52	Upcycling Wind Turbine Blade Waste Into High-Performance Multilayered Composite Fibers	Ian	Doran
173392	G53	Microscale Strain Field Predictions From Grain Microstructure of Polycrystalline Metals Using Fully Convolutional Networks	William	Noh
173414	G54	Band Gap Closing and Emergence of Non-Dispersive Wave Behavior in Phononic Crystals With Harmonically-Graded Elastic Profiles	Mostafa	Nouh
173429	G55	Drone-Enhanced Last-Mile Medical Delivery in Rural Areas: A Weather-Aware Optimization Approach	Pardis	Bahmani
173479	G56	A Framework for Personalized Human-Robot Collaboration: Integrating Metahuman Guidance and Real-Time Biosensing	Ramisha	Baki
173481	G57	Considerations for Vulnerable User Safety in Autonomous Ride-Share Vehicles	Sydney	Vazquez
173493	G58	Rapid Thermoelectric Energy Harvesting Optimization via Additive Manufacturing With Numerical Methods	Aditi	Bhattamishra
173503	G59	Adaptive Vr-Based Mindfulness Intervention Using Ai-Powered Metahumans and Biosensing for Oral Nicotine Pouch Use in Young Adults	Jeff	Simpson
173505	G60	Multiscale Oscillations in Thin Liquid Films	Ayaaz	Yasin
173513	G61	Nonintrusive Identification of Flow Patterns in Parallel Microchannels via Statistical Analysis of Acoustic Emissions and Pressure Drop	Han	Hu
173575	G62	Broad Spectrum Rheology of Hydrogel-Based Contact Lenses for Drug Release	Jaime	Juarez
173603	G63	Collective Migration of Multicellular Clusters via Marangoni Surface Tension Gradients	Hailee	Patel
173609	G64	Mri-Based Estimation of the Hip Joint Center in Infants Using Two Sphere-Fitting Methods	Victoria	Melendez
173612	G65	Ionic Liquid and Hydrofluorocarbons Ternary Systems Equilibria	Kirshaun	McGhee
173647	G66	Towards the Next Generation of Soft Robotics Innovation Through Student-Led Learning Module Development and Implementation	Joseph	Midiri
173652	G67	Eco-Responsive Binder Jet 3d Printing of Raw-Earth Materials Using Local Sands and Tung Oil-Based Binders	Elsie	Lappin
173653	G68	Embedded Electrohydrodynamic (Ehd) Printing of Magnetic Spherical Particles	Prashant	Ghimire
173677	G69	Pulsating Turbulent Channel Flows Over Sand Grain Roughness	John	Cooper
173753	G70	Utilizing Computational Fluid Dynamics to Create Velocity Profiles for Fluid Flow in Pipes Within a Mixed Reality Environment	Rachel	Israel
173779	G71	The Impact of 2023 Lahaina Wildfire on Residents' Future Expectations of Risk Communication and Evacuation Behavior	Qianli	Qiu
173787	G72	Porosity Evaluation and Reduction in Laser Powder Bed Fusion via Deep Learning on In-Process Layer Surface Measurement Data From Powder Bed Fusion	Haolin	Zhang
173790	G73	Physicochemical Characterization of Choline–amino Acid Protic Ionic Liquids for Lubrication Applications	Davis	Kiboi
173833	G74	Characteristics of Carbon-Based Adsorbents and Their Prospects in Removing Microplastics From Wastewater.	Elizabeth	Alexander
173844	G75	Modular Fixed wing Uav Platform for Cost effective Scientific Field Tests	Matthew	Burnett
173854	G76	Toward Multiscale Reduced-Order Modeling of Lithium-Ion Batteries Under Mechanical Abuse Conditions	Mohammad	Hasaninia
173856	G77	Integrating Satellite and Ground Data to Extend the Local Spatiotemporal Resolution of Urban Air Phenomena	Navid	Goudarzi
173907	G78	Sensitivity Analysis and Bayesian Optimization of Soft Gripper Performance for Underwater Adhesives	Yuna	Yoo
173938	G79	How Do We Sled?	SHUBIN	XIE
173950	G80	Development of Embedded Sensors for Real-Time Monitoring of Concrete Properties in 3d Printing	Ted	Atera
173974	G81	Developing a Characterization Protocol for Composite Plates for Uav Wing Applications	Sydney	Morris
173998	G82	Efficacy of Xr Immersion Level on Behavioral Health for Opioid Use Disorder	Jeff	Simpson
174000	G83	Optimizing Energy Usage for Controlled Environment Agriculture Systems With Reinforcement Learning	Rona Lei	Duldulao
174011	G84	Extended X-Ray Ct Imaging and Tensile Test Studies of 3d-Printed Composites: Linking Process-Structure-Property Relationship	Roman	Linkugel
174034	G85	Surrogate-Based Optimization of Wind Turbine Airfoil Performance Using Xfoil and Openmdao	Navid	Goudarzi
174330	G86	Novel Biodegradable Poly-Lysine Crosslinked Multi-Carbonyl Polymers as High-Performance Cathode Materials for Sodium/potassium-Ion Batteries	Chengxiang	Chen