Announcement for Undergraduate Research and Innovation (URI)

Student Seed Grant Winners

Fall 2023

We are pleased to announce the recipients of the Fall 2023 URI Seed Grants. Eleven phase one and ten phase two grants have been awarded for Fall 2023.

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| **Phase -1 Seed Grant Winners** | |  |  |  |  |
| **Lead Student Name** | **Lead Student Major** | | **Title of Your Proposal** | **Faculty Advisor's Name** | **Faculty Advisor's Department** |
| Abdul-Rehman Asif | Biology | | Field of Vision: Investigating Differences in Peripheral Vision Capabilities Between Gamers and Non-Gamers | Yelda Semizer | Humanities & Social Sciences |
| Addison Montemayor | Biomedical Engineering | | Development of a portable force gauge sensor to measure muscle-tendon tissue stiffness | Jongsang Son | Biomedical Engineering |
| Artim Reci | Mechanical Engineering | | Real-time Process Monitoring of Internet of Additive Manufacturing | Bo Shen | Department of Mechanical and Industrial Engineering |
| Bryan Aguilar | Biochemistry | | Directed Enzyme Evolution for Bioremediation of PET Plastic | Edgardo Farinas | Chemistry and Environmental Science |
| Danna Sanchez Hernandez | Biomedical Engineering | | Bioinspired underwater attachment | Brooke Flammang | Biological Sciences |
| Emily Kryvorutsky | Forensic Biology | | Use Light-induced pH regulators to Disrupt Cancer Cell Function | Yuanwei Zhang | Chemistry and Environmental Science |
| Harichandana Kothamasu | Biomedical Engineering | | Revitalizing Mobility: Innovative Solutions for Motor Weakness | Jongsang Son | Biomedical Engineering |
| Irma Melo | Industrial Engineer | | Optimizing the Operations of UPS Parcel Sorting System | SangWoo Park | Mechanical and Industrial Engineering |
| Nafisa Ahmed | Computer Science | | Enhancing Imbalanced Data Learning in Additive Manufacturing Processes using Generative Adversarial Networks | Bo Shen | Mechanical and Industrial Engineering, |
| **Phase - 1 Seed Grant Winners (cont.)** | |  |  |  |  |
| **Lead Student Name** | **Lead Student Major** | | **Title of Your Proposal** | **Faculty Advisor's Name** | **Faculty Advisor's Department** |
| Nyssa Nixon | Biology | | The Effects of NSAIDs on Axonal Growth and Neuronal Function from DRG Explants | Jonathan Grasman | Biomedical Engineering |
| Oluwaseun Adedeji | Biomedical Engineering | | "Cranial Trauma Simulation Device" | Bryan Pfister | Biomedical Engineering |
| Sabrina Gerace | Environmental Science | | Magno-responsive hydrophilic hydrogel as a drawing agent in the electro-responsive forward osmosis process | Lijie Zhang | Chemistry and Environmental Science |
| Samir Ahmed | Digital Design | | Augmented Reality - Interactive Art Pieces | Hyejin Hannah Kum-Biocca | Hiller College of Architecture and Design (HCAD) |
| Suraj Bhardwaj | Computer Science | | Optimal Sensing and Feature Selection for Artificial Intelligence/Machine Learning in Wearable Robots | Bo Shen | Mechanical Engineering |
| **Phase - 2 Seed Grant Winners** | |  |  |  |  |
| **Lead Student Name** | **Lead Student Major** | | **Title of Your Proposal** | **Faculty Advisor's Name** | **Faculty Advisor's Department** |
| Anthony D'Alessio | Mechanical Engineering | | Quantify Sloshing Hydrodynamics for Cryogenic ECVT Use | Angelo Tafuni | School of Applied Engineering and Technology |
| Dhruvi Prajapati | Biochemistry | | Substrate-mediated Biodefluorination of PFAS | Mengyan Li | Chemistry and Environmental Science |
| Kevin Navarro | Mechanical Engineering | | Interface mechanisms and firmware for a wall-mounted, light-sensing robotic platform | Petras Swissler | Mechanical and Industrial Engineering |
| Krish Poudel | Biomedical Engineering | | Characterizing and evaluating biocompatibility of a peptide-based hydrogel in CLI rodent models to promote angiogenesis and myogenesis in PAD patients | Vivek Kumar | Biomedical Engineering |
| Kushagra Verma | Computer Science | | Bioenergy Optimization: Enhancing Anaerobic Digestion for Maximum Biogas Output | Sangwoo Park | Mechanical and Industrial Engineering |

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| **Phase - 2 Seed Grant Winners (cont.)** | |  |  |  |  |
| **Lead Student Name** | **Lead Student Major** | | **Title of Your Proposal** | **Faculty Advisor's Name** | **Faculty Advisor's Department** |
| Manuel Yunes | Chemical Engineering | | Omniphobic Membrane Development for Induction Interfacial Heating Membrane Distillation | Wen Zhang | Civil and Environmental Engineering |
| Marlin Abdelmasih | Biology | | Bio-Strain Effect on Muscle | Jonathan Grasman | BME |
| Maryom Rahman | Chemical Engineering | | Novel 3D Fabricated Benchtop Platform for Electrochemical Analysis in Microfluidic Devices | Sagnik Basuray | Chemical and Materials Engineering |
| Matthew Fernandes | Biomedical Engineering | | Exploring Innovative Paired-Pulse Transcranial Magnetic Stimulation Protocol to Address Reduced Cortical Excitability in Motor Impairments | Elisa Kallioniemi | Biomedical Engineering |
| Michael Murphy | Biomedical Engineering | | Detection of antibody responses to design peptide materials. | Vivek Kumar | Biomedical Engineering |
| Oliwia Gorska | Biology | | Establishing an assay for visual desensitization in larval zebrafish for understanding synaptic plasticity | Kristen Severi | Biological Sciences |
| Siya Patel | Biology B.S | | Self-Assembling Peptides as novel therapeutics to suppress autoimmunity in Multiple Sclerosis patients | Vivek Kumar | Biomedical Engineering |
| Sophia Starzynski | Biomedical Engineer | | Investigating Carotid Blood flow as a Biomarker for Concussions | Chang Yaramothu | SAET |
| Valenni Passaro | Chemical Engineering | | Zirconium-modified mica coupled with nanobubbles for enhanced phosphorus removal and reuse as a slow-release fertilizer | Lijie Zhang | Chemistry and Environmental Science |
| Victoria Almeyda | Mechanical Engineering | | Pipe Inspection Monorail Robot | Petras Swissler | Department of Mechanical and Industrial Engineering |