

# 2025 Student Research Symposium



## 3-Minute Speech Competition

Wednesday, April 23, 1-3pm, Tripp Room, Skeen Library

SRS Number:	Project Title:	Presenter(s):
SRS2025-001	Enhancing Aqueous Organic Redox Flow Batteries: Degradation & Mechanism Study	Md Shahriar Hasan
SRS2025-005	Density-Driven Formation Control of a Multi-Agent System with an Application to Search-and-Rescue Missions	Mohammad Afrazi
SRS2025-010	Microfluidic-based detection of emerging cardiovascular bio-marker phospholipase A2	Dhanika Senavirathna
SRS2025-012	Economic Impact of Fossil Fuels to the United States	Emmanuel Acheampong
SRS2025-021	Geodesic Path Planning using Exponential Map with Injectivity Radius	Mahsa Soroori Khosroshahi
SRS2025-035	Analysis and Optimization of Low-Cost Diquat Herbicide for Large Scale Batteries	Victor Schiller
SRS2025-047	What is the environment within the boundaries of cloud systems?	Vidhi Shethia
SRS2025-062	Autonomous Drone-Robot Implementation for Mine Evacuation and Rescue	Narges Bagheri
SRS2025-069	Flow Cytometric Analysis of Cardiovascular Disease Biomarker, Lipo-protein Phospholipase A2	Mason Broten

SRS Number:	Project Title:	Presenter(s):
SRS2025-073	Role of Environmental Photocatalysts and Organic Matter on the Degradation and Toxicity of Metformin Hydrochloride	Rifat Khan
SRS2025-077	Sustainable, portable, solar-powered bio-inspired drone vertiport system for Orphaned well exploration	Fahad Mannan
SRS2025-078	Acoustofluidics for Separation and Purification of Heavy Metal Adsorbed Microplastics in the Aquatic Environment	Nipuni De Silva
SRS2025-080	The Possibilities for Atmospheric Water Generation in the Rio Grande Valley, and Greater American Southwest	Aarron Adoberavoski
SRS2025-090	Implementation of a Pretrained Convolutional Neural Network, MobileNetV2, to predict the Degree of fracturing in rocks masses	Alejandro Montiel
SRS2025-091	Lightweight Identity-Based Cryptographic Framework for Secure Wireless Sensor Networks	Preston Kite
SRS2025-099	Exploring Shock Wave Boundary Layer Interactions in Supersonic Autonomous Drones for Formation Flight	Darien Williams
SRS2025-101	Biomimetic Robotics of the Goliath Birdeater Tarantula: Developing a Taxidermy-Based Robotic System Mimicking Realistic Tarantula Biomechanics for Discreet Wildlife Surveillance	Audrey Wilkening
SRS2025-116	Feasibility of CO2 Storage in Shallow Fracture Granite Reservoirs: A Reactive Transport Assessment of the SJD Site	Alhassan Abdul-Malik
SRS2025-122	A Biogeochemical Survey of Arid Soils Impacted by Depleted Uranium Munitions	Ashley Bradshaw
SRS2025-125	Modeling the Mitochondrial Protein Involved in Cell Death: Structural Consequences of C-Subunit Ring Mutations	Sarah Crotzer