

2024 AIAA Region VI Conference



Full Event Agenda and Research Conference Presentation Schedule

Conference Agenda

Saturday, March 23

0800-0830 hrs: Check-In & Breakfast

0830-0930 hrs: Conference Welcome & Opening Speaker, Dr. Nhan Nguyen

0930-0935 hrs: BREAK

0940-1100 hrs: Job Hunting Workshop from Dr. Mahantesh Hiremath

1100-1200 hrs: Keynote Speaker, Dr. Jim Newman

1200-1300 hrs: Networking Lunch

1300-1500 hrs: Tour of SCU's Robotic Systems Laboratory

1500-1700 hrs: Fast Prototyping Demo and Workshop at SCU's Maker Lab

1700-1830 hrs: Guest Lecture, "The Art of Dynamics" from David Levinson

1830-1930 hrs: Networking Dinner

1930-2030 hrs: Dan Dumbacher Speaker Event

2030-2130 hrs: Student Event

Team and Undergraduate Category Presentations: 0940-1200 hrs, 1300-1830 hrs

Tour Offering: AMES Research Center, 1200-1700 hrs

Sunday, March 24

0800-0830 hrs: Check-In & Breakfast

0830-0930 hrs: Opening Speaker, Jeanette Quinlan

0930-0935 hrs: BREAK

0940-1100 hrs: Industry Presentation, Richard Brodhead

1200-1300 hrs: Networking Lunch

1300-1430 hrs: SCU Campus Tours

1500-1630 hrs: Industry Presentation, Dr. Jeff Puschell

1630-1730 hrs: Industry Presentation, Patrick Goulding

1730-1800 hrs: Closing Speaker, Dr. Elaine Scott

1800-1930 hrs: Awards Dinner

Master's and High School Category Presentations: 0940-1200 hrs, 1300-1500 hrs

Tour Offering: Hiller Aviation Museum, 0900-1230 hrs

NOTE: Please see the following pages for the Research Conference Presentation Schedules.

Saturday, March 23 – Team Category

Team Category, **Sobrato Campus for Discovery and Innovation (SCDI) 1302**

0940-1000 hrs: Presentation 1, “Project Albatross: Medevac UAV eVTOL Emergency Response Modular Aircraft”

1000-1015 hrs: Questions and Transition

1015-1035 hrs: Presentation 2, “Extendable Roll-Out Solar Array for Cube Satellites”

1035-1050 hrs: Questions and Transition

1050-1110 hrs: Presentation 3, “Active Suspension Utilizing Shape Memory Alloys for Lunar and Martian Vehicle Explorers”

1110-1125 hrs: Questions and Transition

1125-1145 hrs: Presentation 4, “VALOR: Venus Atmospheric and Geological Observation Rover”

1145-1200 hrs: Questions and Transition

1200-1300 hrs: Networking Lunch (Locatelli Student Center)

1300-1320 hrs: Presentation 5, “Designing and Testing a Test Stand to Evaluate the Performance of a Custom-Built Drone”

1320-1335 hrs: Questions and Transition

1335-1355 hrs: Presentation 6, “Ablative Pulsed Plasma Thruster”

1355-1410 hrs: Questions and Transition

1410-1425 hrs: Presentation 7, “Design of a non-flapping seagull-inspired composite morphing drone”

1425-1440 hrs: Questions and Transition

1440-1500 hrs: Presentation 8, “Investigation of Actuated Whiffing-Inspired Gapped Wing for Roll Control”

1500-1515 hrs: Questions and Transition

1515-1530 hrs: 15-Minute Break

1530-1550 hrs: Presentation 9, “Automated Starlight Tracking Mechanism Shifted by SMA Springs”

1550-1605 hrs: Questions and Transition

1605-1625 hrs: Presentation 10, “Optimization of Wing Aileron Design using Shape Memory Alloys for Enhanced Airplane Efficiency and Integration”

1625-1640 hrs: Questions and Transition

1640-1700 hrs: Presentation 11, “Fixed-Wing Fire Surveillance Unmanned Aircraft System and Wildfire Trajectory Software”

1700-1715 hrs: Questions and Transition

1715-1735 hrs: Presentation 12, “Autonomous, Nitinol-Actuated, Three-Way Splitter Valve for Spacecraft Thermal Management Systems”

1735-1750 hrs: Questions and Transition

1750-1805 hrs: Presentation 13, “FROGO: Jumping Exoskeleton For Space Locomotion”

1805-1820 hrs: Questions and Transition

Saturday, March 23 – Undergraduate Category

Undergraduate Category, **Sobrato Campus for Discovery and Innovation (SCDI) 1308**

0940-1000 hrs: Presentation 1, “Apogee Altitude Control of Sounding Rockets with an Analytic Guidance Algorithm”

1000-1015 hrs: Questions and Transition

1015-1035 hrs: Presentation 2, “Development of a Modular Open Jet Wind Wall for Generating Dynamic Wind Profiles”

1035-1050 hrs: Questions and Transition

1050-1110 hrs: Presentation 3, “Porosity Measurements on Quenched Solid Ramjet Fuels”

1110-1125 hrs: Questions and Transition

1125-1145 hrs: Presentation 4, “Wirelessly Powered Wildfire Tracking via Perpetually Flying UAV”

1145-1200 hrs: Questions and Transition

1200-1300 hrs: Networking Lunch (Locatelli Student Center)

1300-1320 hrs: Presentation 5, “Adaptive Variational Integrators for Nonconservative Problems in Astrodynamics”

1320-1335 hrs: Questions and Transition

1335-1355 hrs: Presentation 6, “Comparison of CFD Visualization Methods for Separated Flows”

1355-1410 hrs: Questions and Transition

1410-1425 hrs: Presentation 7, “Venus Atmosphere Droplet Sample Collection System”

1425-1440 hrs: Questions and Transition

1440-1500 hrs: Presentation 8, “Ram Accelerator Interstage Valve Design”

1500-1515 hrs: Questions and Transition

1515-1530 hrs: 15-Minute Break

1530-1550 hrs: Presentation 9, “Characterization of an Adamantane Thruster by a Langmuir Probe”

1550-1605 hrs: Questions and Transition

1605-1625 hrs: Presentation 10, “Design and Fabrication of a Customizable Multi-Axis Load Cell with Commercial Off-The-Shelf Components”

1625-1640 hrs: Questions and Transition

1640-1655 hrs: Presentation 11, “Statistical Surface Heat Flux Analysis in Simulated Solid Rocket Propellants Flames”

1655-1710 hrs: Questions and Transition

1710-1730 hrs: Presentation 12, “Implementation of Rotating Test Stand for Supersonic Wind Tunnel”

1730-1745 hrs: Questions and Transition

Sunday, March 24 – Master’s Category

Master’s Category, **Sobrato Campus for Discovery and Innovation (SCDI) 1302**

0940-1000 hrs: Presentation 1, “Performance Characteristics of a Low-Cost Self-Contained Pressure Data Acquisition System”

1000-1015 hrs: Questions and Transition

1015-1035 hrs: Presentation 2, “Establishing a Class 3B Laser Particle Imaging Velocimetry System at the Cal Poly Water Tunnel and Verifying Results with a Class 4 Laser System”

1035-1050 hrs: Questions and Transition

1050-1110 hrs: Presentation 3, “Variable-Density Gyroid Infill for Increased Strength and Stiffness of 3D Printed Components”

1110-1125 hrs: Questions and Transition

1125-1145 hrs: Presentation 4, “AI/Machine Learning: Exploring IBM Watson Platform for Aircraft Design Concept Assessment”

1145-1200 hrs: Questions and Transition

1200-1300 hrs: Networking Lunch (Locatelli Student Center)

1300-1320 hrs: Presentation 5, “Organizational Culture and Leadership: Prerequisites to Loss Prevention in the Design, Production, Operation and Support of Complex Systems”

1320-1335 hrs: Questions and Transition

Sunday, March 24 – High School Category

High School Category, **Sobrato Campus for Discovery and Innovation (SCDI) 1308**

0940-1000 hrs: Presentation 1, “Eco-Adaptive UAV for Sustainable Agriculture: Utilizing Deep Learning and Floral Thermography for Artificial Pollination”

1000-1015 hrs: Questions and Transition

1015-1035 hrs: Presentation 2, “Printing a Simple Circuit in Space using Graphene”

1035-1050 hrs: Questions and Transition

1050-1110 hrs: Presentation 3, “A Computational Analysis of Toroid Propellers”

1110-1125 hrs: Questions and Transition

1125-1145 hrs: Presentation 4, “A Practical Review on Developing Autonomy for Aerospace: A Research Agenda for Safety-Critical Autonomous Aerospace Systems”

1145-1200 hrs: Questions and Transition

1200-1300 hrs: Networking Lunch (Locatelli Student Center)

1300-1320 hrs: Presentation 5, “Using Machine Learning to Expedite Production of Aircraft Propellers”

1320-1335 hrs: Questions and Break

1335-1355 hrs: Presentation 6, “Enhancing Microdrone State Estimation: A Multi-Sensor Fusion Approach for Improved State Estimation in GPS Denied Environments”

1355-1410 hrs: Questions and Break