

Start	End	Friday, August 8th, 2025	
8:00am	8:45am	Registration and Breakfast: Offered in AERO 120	
8:45am	9:00am	Welcome	
		Room A: AERO 111	Room B: AERO 114
9:00am	10:00am	Session 1A: High-Speed Flows and Modeling I (Room A) Chair: Marc Henry de Frahan	Session 1B: Geophysical and Environmental Flows I (Room B) Chair: Sarah Morris
9:00am	9:15am	1A.1 Kalvin Monroe: Trajectory Optimization of Hypersonic Vehicles with Electron Transpiration Cooling Systems	1B.1 Laura Shannon: Influence of Ground Slope on Fire Spread in a Heading Crossflow
9:15am	9:30am	1A.2 Nick Rovito: FLATiron: A Hierarchical, Modular, Finite Element Library for Flow Physics and Transport Phenomena	1B.2 Kari Perry: Flow separation affects local melt rates of ice cylinders in a cross-flow
9:30am	9:45am	1A.3 Sarah Kinney: Exploring RANS Turbulence Modeling Deficiencies in Hypersonic Flows	1B.3 Sandip Gautam: Free-Surface Response to Counter-Rotating Vortex Pairs
9:45am	10:00am	1A.4 Niyati Shah: High-Order Simulations of Supersonic Cylinder Wake Dynamics	1B.4 Ruby Gans: Characteristic Spacing in Granular Fingering Instabilities
10:00am	10:30am	Morning Break: Coffee & Food in AERO 120	
10:30am	12:00pm	Session 2A: Aerodynamic Flows (Room A) Chair: Jonathan Naughton	Session 2B: Micro, Porous, and Multiphase Flows (Room B) Chair: Nils Tilton
10:30am	10:45am	2A.1 Mostafa Ojaghloo: Experimental Investigation of the Swirling Wake	2B.1 Ward Cereck: Passive Phase Separations in Microgravity: The ISS Capillary Channel Flow Experiments as a Benchmark for OpenFOAM Simulations
10:45am	11:00am	2A.2 Jonathan Crider: Comparing Hot-Wire Calibration Approaches in a Free Stream Jet to Support a Comprehensive Swirling-Jet Measurement Campaign	2B.2 Garrett Mackey: CFD simulations of unsteady flow through porous media
11:00am	11:15am	2A.3 David Nelson: Modification of Secondary Vortex Structures arising from Vortex-Ground Interactions by Axial Velocity	2B.3 Brandon Hayes: Ultra-Fast Micro-Actuation using Thermal Bubble-Driven Micro-Pumps
11:15am	11:30am	2A.4 Cade Pugh: Measuring Viscous Drag on Airfoil Geometry	2B.4 Henry Lutz: Gravitational Capture of a Drop in a Channel Cavity with Stokes Flow
11:30am	11:45am	2A.5 Jaylon McGhee: Experimental Investigation of Surging Motion Effects on the Unsteady Load Response of an FFA-W3-301 Airfoil	2B.5 Madison Lytle: A New Approach to Simulating Colloidal Suspensions Driven by AC Electric Fields
11:45am	12:00pm	2A.6 Benjamin Savino: Improving separation prediction by an IDDES turbulence model with a pressure-gradient sensor	2B.6 David Montgomery: Development and application of high-fidelity models for heterogeneous CO2 frost formation
12:00pm	12:30pm	Lunch: Offered in AERO 120	
12:30pm	1:30pm	Keynote Presentation (AERO 120): "Unveiling Aeroacoustic Source Mechanisms with High-Fidelity CFD", Dr. Jacob Turner, Colorado State University	
1:30pm	2:00pm	Afternoon Break: Coffee & Food in AERO 120	
2:00pm	3:00pm	Session 3A: High-Speed Flows and Modeling II (Room A) Chair: John Evans	Session 3B: Geophysical and Environmental Flows II (Room B) Chair: Denis Aslangil
2:00pm	2:15pm	3A.1 Ahmet Kula: Compressibility effects in viscous subsonic to supersonic flow past an adiabatic sphere at a Reynolds number of 100	3B.1 Colin Beyers: Where Do Things Go When the Stokes Drift is Patchy?
2:15pm	2:30pm	3A.2 Mitchell Wall: Hybrid Particle-Continuum Chemistry Modeling for Transitional Knudsen Number Flow	3B.2 Mija Jovchevska: Biodegradable tracer particles for underwater particle image velocimetry
2:30pm	2:45pm	3A.3 Tomoki Koike: Streaming Operator Inference: Data-Driven Nonlinear Operator Learning for Large-Scale Dynamical Systems	3B.3 Samantha Preuss: Planning for the Hydrogen Highway: A Case Study of Enabling Hydrogen Refueling Infrastructure Along Colorado's I-25 Corridor
2:45pm	3:00pm	3A.4 Jacob McCallum: Numerical Analysis of Supersonic Shock Control Using NRP-Induced Plasmas	3B.4 Tina Geller: Circulation in Arctic Coastal Lagoons: A Numerical Modeling Study with Lagrangian Particle Tracking
3:00pm	3:30pm	Afternoon Break: Coffee & Food in AERO 120	
3:30pm	5:00pm	Session 4A: Biological Flows (Room A) Chair: Aaron True	Session 4B: Chemical and Reacting Flows (Room B) Chair: Colin Towery
3:30pm	3:45pm	4A.1 Federico Mucicchi: Modeling Bioreactors for Lunar and microgravity applications	4B.1 Zachary Kinzler: Experimental Characterization of a Natural Gas Burner for Nanosecond Pulsed Discharge Integration
3:45pm	4:00pm	4A.2 Adiba Ashrafee: Benchtop Modeling Of Cerebrovascular Flow Networks and Cerebral Collateral Circulation Pathways	4B.2 Liad Habet: A Multi-Physics Simulation Tool to Predict Melting Times in Electric Arc Furnaces
4:00pm	4:15pm	4A.3 J. Scott Malloy: Non-linear dynamics of emboli transport in arterial flows with applications to Left Ventricular Assist Devices	4B.3 Aaron Phillips: Resolving Flow Abnormalities to Improve Stability in CO2 Flow Electrolyzer using Pulse Dampening: An experimental and numerical study
4:15pm	4:30pm	4A.4 Evan Williams: Vortex interactions in Tiny Insect Flight	4B.4 Jack Bickler: An Experimental and Numerical Study on the Combustion of Ammonia/Hydrogen Fuel Mixtures in a Rapid Compression Machine
4:30pm	4:45pm	4A.5 Elle Stark: Synchronous stereo PIV and PLIF for quantifying low-Re, low-Sc, chaotic odor plumes	4B.5 Mozhddeh Hooshyar: State-to-state Modeling of Femtosecond Filaments at Atmospheric Conditions in Air
4:45pm	5:00pm		4B.6 Maryam Ahmadi: Understanding Potential Losses in Electrochemical Nitrate Reduction Reaction to Ammonia Using Multi-Phase Fluid Modeling
5:00pm	5:15pm	Concluding Remarks: AERO 120	