

Start	End	Tuesday, August 9th, 2022		
8:00am	8:30am	Registration and Breakfast: Offered in AERO 120		
8:30am	8:45am	Welcome		
		Room A: AERO 111	Room B: AERO 120	Room C: AERO 114
		Zoom Link: https://cuboulder.zoom.us/j/93439516683	Zoom Link: https://cuboulder.zoom.us/j/94417171841	Zoom Link: https://cuboulder.zoom.us/j/96586772476
		Password for all Zoom Rooms: RMFM2022		
8:45am	10:15am	Session 1A: Atmospheric and Aerodynamic Flows (Room A) Chair: Ryan King	Session 1B: Biological Flows (Room B) Chair: Bradford Smith	Session 1C: Reacting Flows (Room C) Chair: Ciprian Dumitrache
8:45am	9:00am	1A.1 Dasha Gloutak: Unsteady Loading of a Wing in Global Streamwise Gusts	1B.1 Chayut Teeraratkul: Flow and flow mediated transport in dynamic blood clot neighborhoods	1C.1 Iris Kessler: Development of Advanced Hydrogen Fueled Gas Turbine Combustion Systems
9:00am	9:15am	1A.2 Jaylon McGhee: Impact of Canonical Perturbations in the Inflow on Wind Turbine Loads	1B.2 Kelly Cao: Computational Hemodynamics Using 3D Rotational Angiography Imaging	1C.2 Adam Binswanger: Validation of exascale combustion code for the simulation of an internal combustion engine
9:15am	9:30am	1A.3 Lukas Spies: Comparison of some RANS solvers	1B.3 Sebastian Laudenschlager: Estimation of Pulmonary Vascular Impedance for Children with Single Ventricle	1C.3 Michael Meehan: The role of diffusion and viscosity on laminar unsteady plumes
9:30am	9:45am	1A.4 Robert Sasse: Development and Application for UAS	1B.4 Sreeparna Majee: Distance Field Based Approach for Resolving Particle-Wall Interactions for Biomedical Flows	1C.4 Samuel Whitman: Pressure gradient tailoring effects on vorticity dynamics in the near-wake of bluff-body stabilized flames
9:45am	10:00am	1A.5 Aaron True: Distortion of passive scalar structure during suction-based plume sampling	1B.5 Summer Andrews: Image Based In Silico Modeling of Transarterial Radioembolization for Liver Cancer	1C.5 Tyler Souders: Pressure Gradient Tailoring Effects for Bluff-Body Stabilized Flames subjected to Freestream Turbulence
10:00am	10:15am	1A.6 Lars Larson: Experimental and numerical characterization of odor plume structure in the wake of a commercial odor-delivery device	1B.6 Thomas Puhf: Designing a Benchtop Flow Loop for Investigating Particle Transport in Human Arterial Flows	1C.6 Parneeth Lokini: Laser Ignition and Laser-Induced Breakdown Spectroscopy of a Hydrocarbon Flame in an Annular Spray Burner
10:15am	10:30am	Morning Break		
10:30am	12:00pm	Session 2A: Geophysical Flows (Room A) Chair: Melissa Moulton	Session 2B: Nonequilibrium Flows and Energy Systems (Room B) Chair: Brennan Sprinkle	Session 2C: CFD Techniques and Modeling (Room C) Chair: Debanjan Mukherjee
10:30am	10:45am	2A.1 Jaime Herriott: Small-Scale Variations in Ocean Acidity using a Large Eddy Simulation	2B.1 Filipe Henrique: Applying the Principles of Flow in Porous Media to Energy Storage Applications	2C.1 Alberto Olmo : Physics-Conforming Turbulent Flow Simulations Compression Approach
10:45am	11:00am	2A.2 Laura Clark: Dispersion of non-spherical particles by waves and currents	2B.2 Eman Yahia: Lattice Boltzmann Simulations of Magnetohydrodynamic Flows Bounded by Electrically Conducting Walls	2C.2 Graham Pash: Towards Uncertainty Propagation for Data-Driven Turbulence Closure Models
11:00am	11:15am	2A.3 Malik Jordan: Tools For Analyzing And Reducing Ocean Biogeochemical And Transport Models	2B.3 Nathan Jarvey: Application of Boundary Layer Theory from Fluid Mechanics to Multicomponent Energy Storage Problems	2C.3 Kiran Eiden: Using Machine-Learned Manifolds to Simplify the State Spaces of Combustion Simulations
11:15am	11:30am	2A.4 Mary McGuinn: Interactions Between Physical Processes and Carbonate Chemistry in the Oceanic Mixed Layer	2B.4 Thomas Kava: Numerical Simulation of Plasma Fueled Engines	2C.4 Riccardo Balin: Online learning of turbulence closure model at scale
11:30am	11:45am	2A.5 Skyler Kern: Automatic Parameter Estimation Study for a Coupled Biophysical Ocean Model	2B.5 Amin Taziny: A multi-scale framework to model the fluid dynamics of electrospray thrusters	2C.5 Tahani Alsadik: multiphase pseudopotential Lattice Boltzmann Model using multiple relaxation times for phase change problem
11:45am	12:00pm	2A.6 Federico Municchi: Harnessing buoyancy-driven instability to enhance thermal membrane desalination	2B.6 Reece Churchill: The Research and Motor Octane Numbers of Liquefied Petroleum Gas (LPG) and Dimethyl Ether (rDME) blends	
12:00am	12:15pm	Morning Break II		
12:15pm	1:15pm	Keynote Presentation (AERO 120): "The Force Partitioning Method: A Data-Enabled Method for Dissecting Vortex Dominated Flows", Dr. Rajat Mittal, Johns Hopkins University		
1:15pm	2:00pm	Lunch: Offered in AERO 120		
2:00pm	3:00pm	Diversity Panel (AERO 120): Hosted by The Committee for Equity in Mechanical Engineering		
3:00pm	3:15pm	Afternoon Break		
3:15pm	4:45pm	Session 3A: Multiphase Flows (Room A) Chair: Michael Calvisi		Session 3C: Turbulent Flows (Room C) Chair: Matthew Munson
3:15pm	3:30pm	3A.1 Ashish Srivastava: Experimental and Computational Analyses of Drop Motion in Straight Microchannels		3C.1 Diederik Beekers: Discretization error analysis of convective schemes for large eddy simulations with adaptive mesh refinement
3:30pm	3:45pm	3A.2 Gesse Roure: Numerical Investigation of Deformable Droplets in Complex Microchannels		3C.2 Da Yang: Performance characterization of a laminar aircraft gas-inlet
3:45pm	4:00pm	3A.3 Morteza Garousi: Numerical Modeling of Encapsulated Microbubbles Using the Lattice Boltzmann Method		3C.3 Nils Wunsch: Simulation of turbulent incompressible flows using immersogeometric analysis
4:00pm	4:15pm	3A.4 William Schupbach: Central moment lattice Boltzmann methods for multiphase flows driven by variable surface tension effects using high		3C.4 Samantha Sheppard: Experimental exploration of 3D attached eddy structures in the surface layer.
4:15pm	4:30pm	3A.5 Arkava Ganguly: A theoretical framework to understand diffusiophoretic self-propulsion of slender bent rods		3C.5 Thomas Calascione: Swirl Generation in Turbulent Jets: A Literature Review
4:30pm	4:45pm	3A.6 Ritu Raj: Colloidal Banding of Diffusiophoretic Particles in Two-Dimensional Solute Gradients		
5:00pm	8:00pm	Dinner: BBQ behind Aerospace Building		