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/s/93439516683	*Zoom Link: https://cuboulder.zoom.us/s/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: Matthew Munson**	**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 Puhr:** *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 Liquified 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: Ryan King**
3:15pm	*3:30pm*	**3A.1 Ashish Srivastava:** *Experimental and Computational Analyses of Drop Motion in Straight Microchannels*		**3C.1 Diederik Beckers:** *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		