

Start	End	Monday, July 29, 2019	
8:00am	8:30am	Registration and Breakfast	
8:30am	8:45am	Welcome	
8:45am	10:15am	Session 1A: Wings (Room A); Chair: John Farnsworth	Session 1B: Model Development (Room B); Chair: Brad Smith
8:45am	9:00am	1A.1 Pointer: <i>Fine-Wire Sensor Calibration System for Low Velocity Flows at Stratospheric Conditions</i>	1B.1 Glusman: <i>Initial Verification of a Reduced Combustion Model of Douglas Fir</i>
9:00am	9:15am	1A.2 Gloutak: <i>Influence of Surging Flow Frequency on Lift Coefficient for Finite Wings</i>	1B.2 Collado: <i>Fast Agglomeration with Permeable Drops</i>
9:15am	9:30am	1A.3 Ringenberg: <i>Sparse Identification of Non-linear Dynamics for an Unsteady Pitching Wing Section</i>	1B.3 Sharifi: <i>Mechanics and Efficiency of Zebrafish 30HPF Heart</i>
9:30am	9:45am	1A.4 Costantino: <i>Influence of Aspect Ratio on Lift Coefficient for Finite Wings in Surging Flow</i>	1B.4 Kern: <i>Towards a Reduced Biogeochemical Flux Model for Large Eddy Simulations of the Upper Ocean</i>
9:45am	10:00am	1A.5 Quick: <i>Capturing a Blade Tip Vortex</i>	1B.5 Yearout: <i>Membrane Distillation Experiments with 3D Printed Spacers</i>
10:00am	10:15am	1A.6 Balin: <i>Scale Resolving Simulations of Separated Flow over a Bump</i>	
10:15am	10:30am	Morning Break	
10:30am	11:45am	Session 2A: Combustion (Room A); Chair: Bret Windom	Session 2B: Making CFD Work (Room B); Chair: Karin Leiderman
10:30am	10:45am	2A.1 Yun: <i>Updating High Temperature Methane Absorption Models Using Dual Comb Spectroscopy Data</i>	2B.1 Patterson: <i>Inflow Boundary Conditions for Scale Resolving Simulations</i>
10:45am	11:00am	2A.2 Schulthess: <i>Transient, High Pressure Oil-gas Dilution Study</i>	2B.2 Meehan: <i>Synthetic Turbulence Generation Method to Simulate Turbulence Generating Plates</i>
11:00am	11:15am	2A.3 Whitman: <i>Simulation of Bluff-Body-Stabilized Flames Using PeleC, a Combustion Code for Exascale Computing</i>	2B.3 Valles Castro: <i>Computational Fluid Dynamics of a Heavy Hydrocarbon Direct Injected Unmanned Aerial Vehicle</i>
11:15am	11:30am	2A.4 Lucas: <i>Combustion and Droplet Behavior of JP-8 Surrogates in a Two-Phase Reacting Flow</i>	2B.4 Ream: <i>Numerical Simulations of the Supercritical Carbon Dioxide Round Turbulent Jet</i>
11:30am	11:45am	2A.5 Meyer: <i>Azeotrope Formation During the Evaporation Process of Fuel Blends</i>	2B.5 Karam: <i>Efficient Multi-Stage Time Integrators For Incompressible Flow Using Pressure Projection Methods</i>
11:45pm	1:00pm	Lunch	
1:00pm	2:00pm	Keynote: "The Role of Fluid Mechanic Instability in Gas Turbine Combustor Operability", Prof. Jacqueline O'Connor, Penn State	
2:00pm	2:15pm	Afternoon Break I	
2:15pm	3:30pm	Session 3A: Machine Learning (Room A); Chair: Ryan King	Session 3B: Engineering Applications (Room B); Chair: Erica Belmont
2:15pm	2:30pm	3A.1 Doronina: <i>On Approximate Bayesian Computation Approach for Turbulence Model Development</i>	3B.1 Lapointe: <i>Efficient Simulation of Complex Fire Phenomena</i>
2:30pm	2:45pm	3A.2 Michelen-Strofer: <i>New Fluid Flow Data Assimilation Formulations Using Perceptual Loss Networks</i>	3B.2 Allen: <i>Accounting for Complex Terrain to Optimize Wind Farm Layouts Using WindSE</i>
2:45pm	3:00pm	3A.3 Glaws: <i>Deep Learning for In-Situ Data Compression of Large CFD Simulations</i>	3B.3 Appleby: <i>Rheological Analysis of Conditioned Soil Material for Soft Ground Tunneling</i>
3:00pm	3:15pm	3A.4 Stengel: <i>Physics-Informed Super-Resolution of Climatological Wind Data</i>	3B.4 Towery: <i>Detonation Initiation by Compressible Turbulence Thermodynamic Fluctuations</i>
3:15pm	3:30pm	3A.5 Sorrells: <i>A Microfluidic Model of Bleeding to Probe the Fluid Mechanics and Biochemistry of Bleeding Disorders</i>	3B.5 Mattson: <i>Fluid Dynamic Forces Affect the Spatial Distribution of Cellular Injury During the Progression of Ventilator-Induced Lung Injury</i>
3:30pm	3:45pm	Afternoon Break II	
3:45pm	5:00pm	Session 4A: Heat Transport (Room A); Chair: Nils Tilton	Session 4B: Advanced Fluids (Room B); Chair: Michael Calvisi
3:45pm	4:00pm	4A.1 Dudley: <i>Numerical Study of Membrane Heating in a Vacuum Membrane Distillation System</i>	4B.1 Coughenour: <i>Modes of Droplet Breakup in Confined Shearing Flow</i>
4:00pm	4:15pm	4A.2 Isaacs: <i>Development and Application of a Thin Flat Heat Pipe Design Optimization Tool for Small Satellite Systems</i>	4B.2 Darragh: <i>Particle Pair Dispersion in a High-Speed Premixed Flame</i>
4:15pm	4:30pm	4A.3 Yahia: <i>Simulation of High Rayleigh Number Natural Convection Flows using a Central Moment Lattice Boltzmann Method on a Rectangular Grid</i>	4B.3 Simons-Wellin: <i>An Efficient Proper Orthogonal Decomposition Algorithm for Adaptively Refined Meshes</i>
4:30pm	4:45pm	4A.4 Johnston: <i>Direct Numerical Simulation of Unsteady Mixing in Direct Contact Membrane Distillation Systems with Membrane Spacers</i>	4B.4 Wallbank: <i>Fluid Mechanical Forces in a Sepsis Mediated Model of Ventilator-Induced Lung Injury</i>
4:45am	5:00pm	4A.5 Shin: <i>Simulation of Low-Temperature Helium Flow in a Heated Microchannel</i>	4B.5 Mannan: <i>Modeling the Synchronization of Flagella on the Exterior of a Sphere</i>
6:00pm	8:00pm	Dinner at Backcountry Pizza	