

DisCoVor2023- Preliminary Program (Draft March 8, 2023)

Day 1 - May 16; Tuesday			Day 2 - May 17; Wednesday		
8:00-8:25	Opening				
Session 1	Aero-Hydrodynamics - 1	Author	Session 3	Bio-Flight	Author
8:25-8:45	Invited - Dissecting 3D Vortex Dynamics of Pitching Wings Using the Force and Moment Partitioning Method	Kenny Breuer	8:25-8:45	Invited - Passive pitching and aperiodicity in the wake of flapping flights	Sunetra Sarkar
8:45-9:00	Force and velocity field fluctuations over static foils with surface roughness	Melike Kurt	8:45-9:00	Unsteady pitching moment of heaving membrane wings	Sonya Tiomkin
9:00-9:15	A computationally-augmented wind tunnel with irrotational gust generation for low-speed aerodynamics	Diederik Beekers	9:00-9:15	Surfing on Vortices: Bird flight and engineered wing responses to an unsteady vortex wake	Siyang Hao
9:15-9:30	Prediction of transverse gust effects on airfoil vortex shedding and loads	Yi-Tsung (Joe) Lee	9:15-9:30	The influence of trailing edge shape on the time-averaged wakes of bio-inspired pitching panels	Justin King
9:30-9:45	Laminar separated wakes around tapered wings: direct numerical simulations and triglobal resolvent analysis	Jean Helder Marques Ribeiro	9:30-9:45	Aerodynamics and inertial steering mechanisms in hummingbird's escape maneuver	Haoxiang Luo
9:45-10:00	LPT measurements around a hydrofoil close to the free surface	Laurent David	9:45-10:00	Discovering optimal flapping wing kinematics using active deep learning	Baptiste Corban
10:00-10:40	Coffee Break		10:00-10:40	Coffee Break	
Session 2	Flow Control & Energy Harvesting	Author	Session 4	Bio-Hydrodynamics	Author
10:40-11:00	Invited - Data-driven optimisation and control of pitching kinematics for vertical-axis wind turbine blades	Karen Mulleners	10:40-11:00	Invited - Kinematics, vortex dynamics and thrust estimation in swimming snakes	Ramiro Godoy-Diana
11:00-11:15	Feather-inspired High-lift Flow Control Device for Stall Mitigation	Ahmed K. Othman	11:00-11:15	Parameterizing tail-first swimming in mosquito larvae	Karthick Dhileep
11:15-11:30	Interactions of a Synthetic Jet with a Turbulent Boundary Layer	John Farnsworth	11:15-11:30	Swimming in Interactions: Hydrodynamic Analysis of Fish Schools in Low-speed Flows	Alec Menzer
11:30-11:45	Fluid-structure interaction between aerodynamic flows and phononic materials	Andres Goza	11:30-11:45	Optimizing propulsive efficiency at stable positions of in-line schooling by unmatched kinematics	Tianjun Han
11:45-12:00	Energy Extraction Potential in a Dual Oscillating-Foil System	Bernardo L. R. Ribeiro	11:45-12:00	Tip vortex dynamics in metachronal paddling: effects of varying number of paddles	Mitchell Ford
12:00-12:15	Cycle-to-cycle variations in cross-flow turbine performance and flow fields	Abigale Snortland	12:00-12:15	Establishing upstream obstacle-wake-signal correlation in seal whisker array sensing using interpretable neural network	Xudong Zheng
12:15-12:30	Flow-energy harvesting by two fully passive flapping foils in tandem	Dr. Hui Tang	12:15-12:30	Propulsive performance of oscillating plates with time-periodic flexibility	Daniel Floryan
Lunch	On your own		Lunch	On your own	
2:30-3:30 PM	Short Hike		3-6 PM	Long Hike	
4:30 - 6 PM	Poster Session #1 & Reception	TBD			
Dinner	On your own		Dinner	On your own	
Day 3 - May 18; Thursday			Day 4 - May 19; Friday		
Session 5	Vortex Dynamics - 1	Author	Session 7	Vortex Dynamics - 2	Author
8:25-8:45	Invited - Turbulence Interaction with Re-configurable Fractal Tree Canopies	Kourosh Shoele	8:25-8:45	Invited - A weak coupling between near-wall Eulerian solvers and a Vortex Particle-Mesh method for efficient simulation of 2D external flows	Grégoire Winckelmans
8:45-9:00	Clarifying the timescales of starting vortex pinch-off and formation	Abel-John Buchner	8:45-9:00	Schlieren Visualization of Flow around Square Cylinders in Tandem Arrangement at a Reynolds Number 2.0×10^3 in Compressible Flows	Miku Kasai
9:00-9:15	Cluster-based predictive model for nonlinear dynamics	Nitish Arya	9:00-9:15	Bursting on helical vortices with small radius-to-pitch ratios	Lingbo Ji
9:15-9:30	Dynamics of a flexible sheet interacting with the vortices in the wake of a cylinder forced to rotate	Yahya Modarres-Sadeghi	9:15-9:30	Vortex Dynamics of Planar Flows at Extreme Reynolds numbers	Michail Chatzimanolakis
9:30-9:45	Vortex formation in an instantaneous rotating cylinder with barrier	Lyke van Dalen	9:30-9:45	Vortex Dynamics of Free-Falling Porous Plates and Discs in Discrete Transverse Gust	Chandan Bose
9:45-10:00	Geometrical influence on decay rates of low-order azimuthal modes in axisymmetric wakes	Dylan Caverly	9:45-10:00	Leading-edge vortex dynamics of high-amplitude pitching swept wings	Alex Cavanagh
10:00-10:40	Coffee Break		10:00-10:15	Third Generation of Vortex Definition and Identification	Chaoqun Liu
Session 6	Aero-Hydrodynamics - 2		10:15-10:30	Conclude	
10:40-11:00	Invited - Effect of wing transients on the leading-edge vortex dynamics over a rotating wing	Vrshank Raghav	10:30 - 10:55	Coffee & Refreshments	
11:00-11:15	Effect of frequency on the hydrodynamic interactions between two pitching propulsors	Yuanhang Zhu			
11:15-11:30	Leading Edge Vortex Interactions on Generic Multi-Swept Wing Configurations	Casey Fagley			
11:30-11:45	Slow Your Roll (Up): Studying Dynamic Stall Development with Variable Density Experiments	Nick Conlin			
11:45-12:00	Wake Interference Effect on Large Amplitude Flapping of an Inverted Flexible Foil	Aarshana Parekh			
12:00-12:15	A systematic investigation into the effect of roughness on self-propelled swimming plates	Jonathan Massey			
12:15-12:30	Volumetric PTV/PIV measurements of a Turbulent Separation Bubble	Ross Richardson			
Lunch	On your own				
2:30-3:30 PM	Short Hike				
4:30 - 6:00 PM	Poster Session #2 & Best Poster Award	TBD			
6:00-8:00 PM	Buffet Dinner				

Placement within the two poster sessions will be decided at a later date.