

# General programme

The programme will be at [Faculty of Mechanical Engineering](#) (ME), Mekelweg 2, Delft.

Day 1 - April 16; Tuesday			
08.30 - 09.00	<b>Opening</b>	<b>Hall, ME</b>	
09.00 - 10.00	<b>Session A, Chair: Gabriel Weymouth</b>	<b>Lecture room A, ME</b>	
09.00 - 09.15	Trevor Dunt	<b>Biologically-inspired flows</b> Vortex shedding structures and shedding frequency on seal whiskers of varying wavelength Coverts-inspired flow control devices: 2D vs 3D Two degree-of-freedom vortex induced vibration of an undulatory seal whisker at different angles of attack Bio-Inspired Flight for Martian Exploration	
09.15 - 09.30	Ahmed K. Othman		
09.30 - 09.45	Xudong Zheng		
09.45 - 10.00	Nathan Widdup		
10.00 - 10.40	<b>Coffee break</b>	<b>Hall, ME</b>	
10.40 - 12.30	<b>Session B, Chair Keith Moored</b>	<b>Lecture room A, ME</b>	
10.40 - 11.00	<a href="#">Invited: Melissa Green</a>	<b>Swimming and flying animals</b> <i>Propulsive performance and flow field structure around a two degree-of-freedom fish-like platform</i> Hydrodynamic Performance and Scaling Laws of Wave-Induced Flapping Foil Propulsion Systems Wake-Body Interaction and Sustained Oscillation of Flexible Cantilevers without Vortex Shedding Effect of Phase Synchrony on the Self-Origination of Two Swimmers in a Side-by-Side Arrangement Comparative analysis of dimensionality reduction techniques for flapping wing dynamics Bird formation flight: vortex dynamics, flight control and energy savings Dynamics of self-propelling and thrust-generating pitching foils	
11.00 - 11.15	Rajat Mittal		
11.15 - 11.30	Shayan Heydari		
11.30 - 11.45	Amin Mivehchi		
11.45 - 12.00	Arvind Thirunavukkarasu		
12.00 - 12.15	Philippe Chatelain		
12.15 - 12.30	Ratnesh K. Shukla		
12.30 - 13.30	<b>Lunch</b>		<b>Hall, ME</b>
13.30 - 15.00	<b>Lab tour</b>		<b>TU Delft Campus</b>
15.30 - 16.30	<b>Delft walking tour to reception</b>		<b>Delft City Centre</b>
16.30 - 18.30	<b>Poster Session #1 and Reception</b>	<b>de Waag, Delft</b>	
	<b>Dinner (on your own)</b>		

Day 2 - April 17; Wednesday

<b>08.30 - 10.00</b>	<b>Session C, Chair Jerry Westerweel</b>	<b>Impulsive &amp; rotational motions</b>	<b>Lecture room A, ME</b>
08.30 - 08.45	Gauthier Bertrand	About the propulsive performance of a pitching airfoil	
08.45 - 09.00	Chandan Bose	Effect of combined leading- and trailing-edge morphing on the wake dynamics of a flapping aerofoil	
09.00 - 09.15	Vrishank Raghav	Scaling of aerodynamic loads on a rotating and pitching flat plate	
09.15 - 09.30	Dylan Caverly	Vortex development behind polygonal disks	
09.30 - 09.45	Jesse Reijtenbagh	Predicting drag force during non-constant accelerations	
09.45 - 10.00	Youri Marchal	Investigation on an impulsively or fast started NACA0010 airfoil at $Re = 5000$ and at various angles of attack	
<b>10.00 - 10.40</b>	<b>Coffee break</b>		<b>Hall, ME</b>
<b>10.40 - 12.30</b>	<b>Session D, Chair Rajat Mittal</b>	<b>Vortex structures</b>	<b>Lecture room A, ME</b>
10.40 - 11.00	<a href="#">Invited: Hao Liu</a>	<i>Vortices and Forces in Insect Flight: A Review</i>	
11.00 - 11.15	Mrudhula Baskaran	On vortex rings and Vogel exponents	
11.15 - 11.30	Sarah Morris	Influence of passive flexibility on vortex ring generation	
11.30 - 11.45	Pedro Hernandez Gelado	Topological feature identification of the leading edge vortex using machine learning	
11.45 - 12.00	Mr. Shivakumar Kandre	Evolution of Vortex Induced Thermal Plumes	
12.00 - 12.15	Luuk Hendriksen	3D vortex organization around a surface-mounted cube by 3D-LPT	
12.15 - 12.30	Moira Barnes	Persistence of large-scale vortex formation in shear-thinning pulsatile flows	
<b>12.30 - 13.30</b>	<b>Lunch</b>		<b>Hall, ME</b>
13.30 - 14.30	Bus to Keukenhof		
<b>14.30 - 17.00</b>	<b>Keukenhof</b>	<b>only for registered attendees</b>	<b>Keukenhof, Lisse</b>
17.00 - 18.00	Bus back to TU Delft campus		
	<b>Dinner (on your own)</b>		

**Day 3 - April 18; Thursday**

<b>08.30 - 10.00</b>	<b>Session E, Chair: Karen Mulleners</b>	<b>Wind turbines</b>	<b>Lecture room A, ME</b>
08.30 - 08.45	Mano Grunwald	Tip vortex evolution under sheared inflow conditions in the context of wind turbines	
08.45 - 09.00	Jonas Gutknecht	The vortex dynamics in the wake of a wind turbine controlled with the helix approach	
09.00 - 09.15	Benjamin Irwin	Effects of Trailing-Edge Camber on Cyclorotor Performance	
09.15 - 09.30	Eric Handy-Cardenas	Optimal kinematics and Vortex-foil interactions of an oscillating hydrofoil tandem turbine array	
09.30 - 09.45	Nathaniel Wei	Vortex dynamics in the wake of a periodically surging turbine	
09.45 - 10.00	Pere Valls Badia	Dynamic stall on airfoils with leading-edge tubercles	
<b>10.00 - 10.40</b>	<b>Coffee break</b>		<b>Hall, ME</b>
<b>10.40 - 12.30</b>	<b>Session F, Chair Jeff Eldredge</b>	<b>Wakes and turbulence</b>	<b>Lecture room A, ME</b>
10.40 - 11.00	<i>Invited: Wei Hou</i>	<i>Fast three-dimensional stability and resolvent analysis for external flows about spanwise geometries</i>	
11.00 - 11.15	Bharathram Ganapathisubramani	Estimation of rotor wake-wing interaction noise using Stereoscopic PIV	
11.15 - 11.30	Jason M. Dahl	Effects of small motion perturbations on the wake of a circular cylinder undergoing forced 2-DOF motions	
11.30 - 11.45	John Kurelek	Manipulating Vortex Development in a Laminar Separation Bubble using Spanwise Modulated Disturbances	
11.45 - 12.00	Tea Vojkovic	Model-Based Closed-Loop Control of Cylinder Wake	
12.00 - 12.15	Louis Cattafesta	On Low-Frequency Unsteadiness of Three-Dimensional Turbulent Separation Bubbles	
12.15 - 12.30	Connor Toppings	Interaction of Freestream Turbulence with a Lifting Surface at Low Reynolds Numbers	
<b>12.30 - 13.30</b>	<b>Lunch</b>		<b>Hall, ME</b>
15.00 - 15.30	Bus to Scheveningen Beach		
<b>15.30 - 17.00</b>	<b>Free time</b>		
<b>17.00 - 18.30</b>	<b>Poster Session #2</b>		<b>Restaurant Werelds, Scheveningen</b>
18.00 - 18.30	Bus to Scheveningen Beach from <a href="#">Phoenixstraat</a>		
<b>18.30 - 21.00</b>	<b>Workshop Dinner @ the beach</b>		<b>Restaurant Werelds, Scheveningen</b>
21.00	Bus to Delft		

**Day 4 - April 19; Friday****08.30 - 10.00 Session G, Chair Barath**

08.30 - 08.45 Jeff Eldredge

08.45 - 09.00 Kunihiro Taira

09.00 - 09.15 Oksan Cetiner

09.15 - 09.30 Samik Bhattacharya

09.30 - 09.45 Paras Vadher

09.45 - 10.00 Antonios Gementzopoulos

**10.00 - 10.40 Coffee break****10.40 - 12.30 Session H, Chair: Abel-John Buchner**

10.40 - 11.00 Gabriel Weymouth

11.00 - 11.15 Yahya Modarres-Sadeghi

11.15 - 11.30 Antoine Myskiw

11.30 - 11.45 Chiranjeevi Sadana

11.45 - 12.00 Doudou Huang

12.00 - 12.15 Wim M. van Rees

**12.15 - 12.30 Conclude****Gusts**

Deep reinforcement learning of pitch control in low Reynolds number gust interactions

Discrete gust encounters through the lens of persistent homology

Separation Control Using Plasma Actuation in Vortex Gust Encounters

Mitigating the Effect of Gust with Dynamic Morphing

Unsteady aerodynamics of vortex gust generation and interaction with wing

Unsteady lift estimation using distributed pressure sensing in the presence of uncertainty

**Fluid Structure Interactions**

Fast Fluid-Structure Interaction in Minimal Domains with Far-Field Boundary Conditions

The influence of fluid elasticity on the vortices shed in the wake of an oscillating cylinder

Fluid-structure interactions on a 3D bluff body pendulum at high Reynolds number

Elastically-mounted cylinder with flexible splitter plate: Wake vortices and structural response

On the flow around porous disks at an incidence

Numerical analysis of the free-stream flow through a porous barrier

**Lecture room A, ME****Hall, ME****Lecture room A, ME****Lecture room A, ME**

**Poster Session 1: Tuesday 16 April**

Florian Bouard	Do bending rules in nature favor propulsion efficiency ?
Leo Micklem	Energy-efficient soft robotic fish thrust enhancement using time varying stiffness modulation
Ramiro Godoy-Diana	Measuring how elastic deformation determines the aerodynamic force production of a flapping wing
Rajanya Chatterjee	Effect of spatio-temporal loading on the harvested energy from a flexible flapper under VIV
Jennifer Franck	The Normalisation Conundrum for Unsteady Loads on Cross-Flow Turbines
Alexander Cavanagh	Insights from force partitioning on vortex dynamics around plunging swept wings
Tye J. Dougherty	Searching for the textbook of unsteady aerodynamic events using a random gust generator
Claudia Brunner	The time scales of dynamic stall at high Reynolds numbers
Sahar Rezapour	Effect of non-linear angle of attack variation on dynamic stall onset
Victoria Malarczyk	Effect of Inflow Turbulence on Stall Behavior of Moderately Thick Airfoils at High Reynolds number
Bingnan Zhou	A light-controlled vortex
Pierre Balty	A multiresolution Vortex Particle-Mesh method
Marin Lauber	Falling flexible bodies simulated with splines in minimal domains

## Poster Session 2: Thursday 18 April

Mariana Costa	Cavitation onset in counter-rotating vortices from diverging disks
Nicola Savelli	Force reconstruction from PIV for an accelerating plate
Diane Komaroff	Jet creation at the tip of a submerged plate forced by waves
Lyke van Dalen	Vortex behaviour in an instationary rotating flow
Dirk de Boer	Data driven experimental investigation into wing-wake interaction
Tea Vojkovic	Model-Based Closed-Loop Control of Cylinder Wake
Marion Coquelet	Wind farm flow control: on the impact of the Helix control using a Vortex Particle-Mesh method
Jovan Nedić	Wake structure of optimally controlled vertical axis turbines
Alexander Gehrke	Drag forces and unsteady wakes behind a poro-elastic membrane disk
Rajeev Jaiman	Wake interference effects on flapping dynamics of an elastic inverted foil
Elizabeth Torres De Jesús	Cylinder wake behavior based on conditional analyses based on large-scale coherent structures
Akhileshwar Borra	Intrinsic phased-based POD
Octavian Soare	The tip vortex behaviour of a pitching wing with leading edge tubercles
Abel-John Buchner	Measuring the wing beat kinematics of free-flying <i>Aedes aegypti</i>