Monday 10th July — ISFV20 20th International Symposium on Flow Visualization Day 1

Start	End	Echo-A-1	Echo-A-2	Echo-A-3
08:30	09:00	Registration desk open; it stays open for the whole Monday		
09:00	09:30	Welcome session by ISFV20 Chair and Aerospace Engineering Dean		
09:30	10:30	**Christian Kähler (P1)** chaired by F. Scarano **The importance of turbulence in preventing airborne infections**		
Session		**Aerodynamics (T1)**	**PIV (T2)**	**Heat and Combustion (T3)**
Session Chair		**Markus Raffel**	**Christian Kähler**	**Satoshi Someya**
10:30	10:50	34 Evolution mechanisms of a suboff propeller wake - Gaetano Micci	33 Improvement of Tomo-PIV Analyses in the Nasal Cavities - Sandra Melina Tauwald	108 Flow Visualization of Heat Pipe with Annular Wick Structure - Hansol Kim
10:50	11:10	13 Near-wall investigation of laminar separation bubbles using the temperature sensitive single-shot lifetime method - Tudor V. VenencIuc	76 Experimental Validation of Scanning PIV system via Investigating flow past a circular cylinder - Mitanjali	66 Simultaneous visualization of the particle cloud and flame in dust explosions - Stefan Puttinger
11:10	11:40	Coffee break		
11:40	12:00	121 Flowfield measurements around an over-the-wing propeller at incidence - Hasse Dekker	97 Particle Image Based Simultaneous Velocity and Concentration Measurement - Abhilash Sankaran	90 Experimental Measurement of Boundary Conditions for Conjugate Heat Transfer in a Hemispherical Upper Plenum - Blake R. Maher
12:00	12:20	89 An experimental study of the 3D unsteady aerodynamics of a surging airfoil - Guanqun Xu	124 "Analysis of Sound Generation in the Human Voice based on PIV Measurements" - Stefan Becker	16 Optimization on nanoparticle injection strategy for magnetic hyperthermia treatment - Qian Jiang
12:20	12:40	45 Experimental study on drag coefficient of circular plate with holes - Kazuki Namba	125 "Spanwise stall-cell organisation of an aerofoil with leading-edge tubercles" - Morgan Li	110 Hydrogen enrichment effects on swirl stabilized CH4 flames - Sarah Link
12:40	13:00		32 Analysis of Corona Wind in Cross-cut Finned Channel Using PIV - Sunuk Kim	120 Identification and Classification of ignition kernels from chemiluminescence images - Rishikesh Sampat
13:00	14:30	**Lunch Break**		
14:30	14:50	Special Presentation: Asanuma Award		
14:50	15:30	**Gerrit Elsinga (K1)** Flow visualizations inspire new scaling laws for extreme events in turbulence		**Francisco Pereira (K2)** Flow visualization in complex hydrodynamic systems: the case of the counter-rotating propeller
Session		**Turbulent Boundary Layers (T4)**	**BOS (T5)**	**Multiphase Flows (T6)**
Session Chair		**Gerrit Elsinga**	**Chris Willert**	**Francisco Pereira**
15:30	15:50	78 Capturing Inner Layer Dynamics With Zero Mean Velocity - Sedat Tokgoz	116 Some exemplary optical flow measurement techniques - Markus Raffel	114 Concentration measurements of evaporating multiple-binary mixture droplets using surface plasmon resonance imaging - Seong Hyuk Lee
15:50	16:10	95 Estimation of coherent structures in wall-bounded turbulence through non-intrusive sensing of wall heat-transfer fluctuations - Firoozeh Foroozan	84 Wave field measurements of regular wave-monopile interaction using Free-Surface Synthetic Schlieren - Gosse Oldenziel	68 Characterization of air lubrication regimes using imaging and PIV - Lina Nikolaidou
16:10	16:40	Coffee break		
16:40	17:00	123 Boundary Layer Measurements of the Flow along a Streamwise Oriented Cylinder using PTV - Christoph Näger	113 Density Measurement around the Model Surface by Background Oriented Schlieren using Digital Projectors - Masanori Ota	75 Tomographic PIV Investigation on the Dynamics of Cavitating Tip Vortex - Qingqing Ye
17:00	17:20	117 Turbulent Boundary Layer over Acoustic Liners - Haris Shahzad	35 Jet Flow Visualization Using Smartphone BOS - Giray Oguzman	36 The Viscous Effect on the Droplet–Liquid Pool Impact - Guilherme M. Bessa
17:20	17:40		83 Response of optical flow based background oriented schlieren to random dot patterns - Bora Orcun Cakir	59 X-ray densitometry of ventilated cavities in the wake of a bluff body - Udhav U. Gawandalkar
		Walk to "Stadhuis Delft"		
18:00	19:00	**Cocktails at City Hall**		

Tuesday 11th July — ISFV20 20th International Symposium on Flow Visualization Day 2

Start	End	Echo-A-1	Echo-A-2	Echo-A-3
08:30	09:00	Registration desk open		
09:00	10:00	**Yassin Hassan (P2)** chaired by A. Sciacchitano **Flow Visualization in Complex Experiments for Nuclear Applications**		
Session		**Unsteady Flows (T7)**	**Data Driven Techniques (T8)**	**Industrial Flows (T9)**
Session Chair		**Chuangxin He**	**Miguel Mendez**	**Yassin Hassan**
10:00	10:20	99 Enhancement of Vortex Ring Circulation via Leaptrogging - Rigoberto Ortega Chavez	61 Semi-Supervised Machine Learning in Data-Driven Flow Measurement - Junwei Chen	109 Turbulent Flow Visualization in a 61-pin Wire-Wrapped Hexagonal Rod Bundle with a Porous Blockage - Craig Menezes
10:20	10:40	60 How similar is the starting vortex in a repeated experiment - Jesse Reijtenbagh	98 Two-phase Flow Regime Identification using Machine Learning Techniques - Shuichiro Miwa	25 Experimental analysis of dynamic menisci in dip coating - Damien Rigutto
10:40	11:10	Coffee break		
11:10	11:30	12 Visualization of Aerodynamic Performance of FIV-based Energy Harvesting System - Aref Afsharfard	24 Physics-constrained and meshless data assimilation of three-dimensional particle tracking velocimetry - Manuel Ratz	102 Flow Visualization Around a Cavitating Tip Vortex - Ozge Baskan Percin
11:30	11:50	29 Simultaneous Fluorescent and Mie-scattering PIV in Gas Flow - Agastya Parikh	64 Experimental dataset investigation of deep recurrent optical flow learning for particle image velocimetry - Yuvarajendra Anjaneya Reddy	21 Schlieren and x-ray imaging of laser-particle interactions in metal additive manufacturing - Ioannis Bitharas
11:50	12:10	11 Visualization Study on the Effect of Dynamic Vibration Absorber in Rotating Radar Antenna - Amirreza Shahsavari	37 Fusing Tomo-PIV with Numerical Simulation: Data Assimilation for Multi-Physics Field Reconstruction - Chuangxin He	69 Flow field investigation of a diffuser blade using endoscopic PIV - Muhsin Can Akkurt
12:10	12:30	91 Coherent Structures and Dynamics of Turbulent High-Speed Jets Investigated via Dual-PIV Coupled with Dynamic Mode Decomposition - Vishal Chougule	87 A combination of KNN-PTV and physics-constrained RBFs for super-resolution in image velocimetry - Iacopo Tirelli	
12:30	14:00	**Lunch Break**		
14:00	14:20	Special Presentation: Da Vinci Award		
14:20	15:00	**Andreas Schröder (K3)** Lagrangian Flow Visualization by 3D Particle Tracking		**Friedrich Leopold (K4)** Optical Measurements Techniques for Hypersonic Flows
Session		**PTV/LPT (T10)**	**Micro-Nano Fluidics I (T11)**	**High -Speed Jets (T12)**
Session Chair		**Andreas Schröder**	**KC Kim**	**Friedrich Leopold**
15:00	15:20	88 Near-wall Lagrangian particle tracking velocimetry using event-based imaging - Christian Willert	67 Marangoni driven generation of micro-droplets from water-alcohol mixtures on a substrate liquid - Stefan Puttinger	26 High-speed Background Oriented Schlieren imaging of a supersonic reactive jet - Olivier Léon
15:20	15:40	51 Meshless Track Assimilation (MTA) of 3D PTV data - Pietro Sperotto	38 Experimental Investigation of the Flow Structure Manipulation in a Micro-hydrocyclones by Applying Particle Image Velocimetry - Yeganeh Sattar	111 Particle Image Velocimetry in High Speed Organic Fluid Flows - Theo Michelis
15:40	16:10	Coffee break		
16:10	16:30	14 Volumetric Lagrangian particle velocity and temperature measurements with Thermochromic Liquid Crystals - Theo Käufer	81 Visualization of polymer solution-flow behavior around triangle-shaped pillar array in microchannel - Yoshiyasu Ichikawa	55 Experimental Study of Mixing in a Light Jet - Leo Walter
16:30	16:50	63 New Strategies of Overcoming Refractive Interfaces in Lagrangian Particle Tracking - Zeng Xin	46 Evaluation of liquid thickness distribution in micropores on moving elastic surfaces - Rikuto Shinozuka	118 Shock-wave/turbulent boundary-layer interaction with a flexible panel - Luis Laguarda

Wednesday 12th July — ISFV20 20th International Symposium on Flow Visualization Day 3

Start	End	Echo-A-1	Echo-A-2	Echo-A-3
08:30	09:00	Registration desk open		
09:00	10:00	**James T. Heineck (P3)** chaired by F. Schrijer **Airborne Schlieren: Developments for Imaging X-59 QueSST**		
Session		**Flow Control (T13)**	**Schlieren (T14)**	**Measurement Accuracy and Uncertainty (T15)**
Session Chair		**Fabio di Felice**	**James Heineck**	**Stefano Discetti**
10:00	10:20	105 Effects of the mixing chamber length and of the nozzle-to-plate distance on the external flow field of impinging sweeping jets - Gennaro Cardone	115 Effect of cryogenic temperature on the flow structure of off-axis under expanded jet impinging on spherical geometry - Kyung Chun Kim	70 Comparison of digital-in-line holography and PIV for the study of turbulent flow - Paul Bresson
10:20	10:40	18 Wake control by a cylinder with oscillatory morphing surface - Lingwei Zeng	27 Recent Development Work with Self-Aligned Focusing Schlieren - Brett Bathel	80 Volumetric (Self-)Calibration in the Presence of Obstructing Objects - Bernhard Wieneke
10:40	11:10	Coffee break		
11:10	11:30	96 Near wake of the X-Rotor vertical-axis wind turbine with fixed pitch offsets - David Bensason	58 Art and Experiments how to get closer to the flow physics ? - Olivier Chazot	22 On the scalability of helium-filled soap bubbles - Adrian Grille Guerra
11:30	11:50	122 Visualization of the flow around two Generic Cyclist Models - Wouter Terra	112 Mach Number Estimation and Pressure Profile Measurements of Expanding Dense Organic Vapors - Fabio Beltrame	52 Experimental Investigation on Flow Characteristics of 3-Dimensional Pitot tubes by PIV Measurements - Woong Kang
11:50	12:10	100 3D Large Scale Quantitative Flow Visualization around a Thrust Reverser Model - Hysa Ilda	104 Schlieren analysis of the retro-propulsion jet of a reusable launcher's first stage - David Donjat	79 High Spatial Resolution Turbulent Channel Flow Measurement Using 2C-2D PIV with 103 MPx Cameras - Bihai Sun
12:10	12:30	**Announcement - ISFV21**		
12:30	14:00	**Lunch Break**		
14:00	14:40	**Special presentation: 1st edition of Masters of Flow Visualization and MFV Awards**		
14:40	15:20	**Di Peng (K5)** Fast PSP & TSP for understanding complex high-speed flows		**Filippo Coletti (K6)** Particles and snowflakes falling through turbulence
Session		**Scalar Measurement (T16)**	**Compressible Flows (T17)**	**Bio-Medical Flows (T18)**
Session Chair		**Di Peng**	**Qingqing Ye**	**Filippo Coletti**
15:20	15:40	10 Post Processing of Fast Response PSP for Blast Wave Testing - Mark Quinn	72 Three-Dimensional Density Measurement around A Hayabusa-type Re-entry Capsule Model - Masato Yamagishi	23 Stenosis influence on the flow patterns across a 180-degree curved artery model: A Defocusing PTV study - Gonçalo Coutinho
15:40	16:00	77 Velocity and Concentration measurements of a jet submitted to Atmospheric Boundary Layer - Carlo Sanapo	119 Advanced visualizations for transonic buffet understanding - Alessandro D'Aguanno	20 Advantages of a Topological Anomaly on Blood Flow in a Fly's Wing Vein Network - Kazuki Sugiyama
16:00	16:30	Coffee break		
16:30	16:50	65 Evaluation of a temperature response time of a heat resisting TSP film - Satoshi Someya	73 Visualization of Transonic Flow around Flapped Busemann Biplane Airfoil by Point Diffraction Interferometer - Masato Taguchi	48 Video Analysis of the Glimmer Synchronization of Luciola Parvula Fireflies - Nao Ninomiya
16:50	17:10	54 Investigation of simultaneous measurement of air temperature and velocity using cold-wire and hot-wire - Hao Wang	74 Investigation of large-scale unsteadiness in a supersonic sidewalls-confined compression ramp flow using fast PSP - Xu Liu	
17:10		Bus to Banquet Location		
18:00	21:00	**Banquet on the boat in Rotterdam**		
21:00		Bus back to Delft		

Thursday 13th July — ISFV20 20th International Symposium on Flow Visualization Day 4

Start	End	Echo-A-1	Echo-A-2
Session chair		**Convection (T19)**	**Micro-Nano Fluidics II (T21)**
Session Chair		**Bas van Oudheusden**	**Morgan Li**
10:00	10:20	86 Three-dimensional visualization of Rayleigh-Bénard convection using Contactless Inductive Flow Tomography - Rahul Mitra	92 Photoelastic Measurement of Finger Growth in Saffman-Taylor Instability - Misa Kawaguchi
10:20	10:40	15 Application of 3D LIF and PIV in studying Poiseuille-Rayleigh-Bénard convection - Sina Kashanj	106 Study on quantum dots' diffusion inside silica monolith - Yusaku Abe
10:40	11:10	Coffee break	
11:10	11:30	82 Particle Transportation by Convective Flow around a Photothermal Bubble under CW and Frequency-Modulated Laser Irradiation - Koki Okada	71 Microbubble size measurements in impure water from Interferometric Particle Imaging - Rens Stigter
11:30	11:50	28 PIV measurements of tornado like ventilation flows - Jong Hoon Kang	31 Numerical Study on Ionic Wind from Pin to Mesh with Hole Configuration - Tae Sung Ahn
11:50	12:10		30 Experimental analysis of the capillary rise in divergent tubes in microgravity - Domenico Fiorini
12:10	12:30	**Closure**	