

Program

Sunday, June 18, 2017	
16:00–18:00	Registration <i>Sky Hall (22F)</i>
18:00–20:00	Welcome Reception <i>Sky Hall (22F)</i>
Monday, June 19, 2017	
8:30-18:00	Registration
8:30-9:00	Opening Ceremony <i>Grand Ballroom A</i>
9:00-9:40	Plenary Lecture 1 : Dr. Christian Willert (DLR, Germany) <i>Grand Ballroom A</i> <i>Session Chair: Prof. Kyung Chun Kim</i> The role of particle image velocimetry in industrial R&D - the tricky balance between customers' wishes, cost and the limits of physics
9:40-10:00	Photo Time & Coffee Break
10:00-12:00	(M1) Time-Resolved PIV <i>Grand Ballroom A</i> <i>Session Chair: Prof. Christian Kähler</i>
10:00-10:30	Keynote Lecture 1: Prof. Christian Kähler (Bundeswehr University Munich, Germany) Time-resolved high-resolution 3D PTV investigations of near-wall turbulence
10:30-10:45	ISPIV-022 A time-resolved PIV investigation on the near-wake behaviour of wavy square cylinders <i>T. H. New, B. Zang, J. W. A. Toh</i>
10:45-11:00	ISPIV-135 Optimized PIV-PTV techniques for processing time-resolved in-vivo contrast ultrasound images <i>Kaushik Sampath, Thura T Harfi, Richard T George, Joseph Katz</i>
11:00-11:15	ISPIV-215 Instantaneous surface-subsurface flow interactions: time-resolved PIV measurements of flow over and within a packed bed using index matching <i>Taehoon Kim, Gianluca Blois, James Best, Kenneth Christensen</i>
11:15-11:30	ISPIV-298 Boundary condition assignment for evaluating instantaneous pressure field from Time-resolved PIV <i>Young Jin Jeon, Markus Müller, Dirk Michaelis, Karsten Pfeiffer, Bernhard Wieneke</i>
11:30-11:45	ISPIV-137 TR-PIV measurement of the wake induced by a flapping membrane in a narrow water channel <i>Yujia Chen, Yuelong Yu, Yingzheng Liu</i>
11:45-12:00	ISPIV-149 An algebraic approach for the integration of non-time resolved field measurements and time-resolved point measurements for dynamic estimation of flow fields <i>Stefano Discetti, Marco Raiola, Andrea Ianiro</i>

10:00-12:00	(M2) Multi-Phase Flow 1	Grand Ballroom C
	<i>Session Chair: Prof. Giampaolo Romano</i>	
10:00-10:30	Keynote Lecture 2: Prof. Giampaolo Romano (La Sapienza University in Roma, Italy)	
	Experimental techniques and phase-discrimination strategies for velocity and size measurements in two phase flows	
10:30-10:45	ISPIV-263	Phase separated PIV measurements using phase boundary detection <i>F. Gökhan Ergin, Jimmy Olofsson, Nicolai Fog Gade-Nielsen</i>
10:45-11:00	ISPIV-062	A PIV-based proper orthogonal decomposition study on the vortex structures of tubercled hydrofoils <i>Zhaoyu-Wei, TH-New, YD-Cui</i>
11:00-11:15	ISPIV-116	A PIV study of ejector-generated bubble swarms for bubble curtain applications <i>Aliyu M. Aliyu, Hyeon Deok Seo, Kyung Chun Kim</i>
11:15-11:30	ISPIV-134	Development of novel flow diagnostic techniques to characterize multiphase flows pertinent to aircraft icing phenomena <i>Hui Hu</i>
11:30-11:45	ISPIV-213	Two and three-dimensional characterization of particle-wall collision in solid-liquid turbulent channel flow <i>Masoud Ebrahimian, Farzad Ahmadi, Sean Sanders, Sina Ghaemi</i>
11:45-12:00	ISPIV-244	Dynamics of gas-liquid flow and mixing in a ladle: PIV and LIF measurements <i>Abhijeet H. Thaker, Abdul Quiyoom, Vivek V. Buwa</i>
10:00-12:00	(M3) Aerodynamics 1	Studio G
	<i>Session Chair: Prof. Hui Hu</i>	
10:00-10:30	Keynote Lecture 3: Prof. Hui Hu (Iowa State University, USA)	
	Experimental Investigations of Wind Turbine Aeromechanics and Wake Interferences in Onshore and Offshore Wind Farms	
10:30-10:45	ISPIV-019	Experimental investigation of the aerodynamic interactions of a helicopter in a square pit <i>Anne Gilliot, Jean-Claude Monnier, Jacques Pruvost, Jean-Paul Bourez, Jean-Bernard Paquet, Quentin Gallas</i>
10:45-11:00	ISPIV-058	Pressure fluctuations from PIV in trailing edge noise reduction by serrated devices <i>Ragni Daniele, Avallone Francesco, Van der Velden Wouter, Leon Carlos Arce</i>
11:00-11:15	ISPIV-146	Flow visualization around the bio-inspired cab-roof fairing on a heavy vehicle model <i>Jeong Jae Kim, Jiwoo Hong, Sang Joon Lee</i>
11:15-11:30	ISPIV-168	Low Reynolds number flow over multi-element airfoil <i>Jiangsheng Wang, Jinjun Wang, Tian Li, Akira Rinoshika, Yankui Wang</i>
11:30-11:45	ISPIV-247	PIV measurement of a free falling cylinder with non-uniform mass distribution <i>Fuwang Zhao, Xujian Lyu, Hui Tang</i>
11:45-12:00	ISPIV-186	The effects of the secondary iterations' bars of square fractal grids <i>Giusy Castrillo, Gioacchino Cafiero, Tommaso Astarita</i>

12:00-13:00	Lunch	<i>Convention Hall</i>
13:00-13:40	Plenary Lecture 2 :Prof. Carl Meinhart (University of California Santa Barbara, USA)	<i>Grand Ballroom A</i>
	<i>Session Chair: Prof. Sang Joon Lee</i>	
	Micro-PIV: The First Twenty Years	
13:40-13:50	Short Break	
13:50-17:10	(M4) Advanced Measurements 1	<i>Grand Ballroom A</i>
	<i>Session Chair: Prof. Sang Joon Lee & Prof. Han Seo Ko</i>	
13:50-14:20	Keynote Lecture 4: Prof. Sang Joon Lee (POSTECH, Korea)	
	In vivo X-ray PIV Measurements of Circulatory Blood Flows	
14:20-14:35	ISPIV-136 Investigation of large-artery hemodynamics using an index-matched hydrogel suspension	
	<i>Kai Zhang, Giuseppe Rosi, David Rival</i>	
14:35-14:50	ISPIV-070 In-vitro characterization of pulsatile flow in pre- and post-operative carotid artery stenosis by using magnetic resonance velocimetry	
	<i>Seungbin Ko, Simon Song, Doosang Kim</i>	
14:50-15:05	ISPIV-206 Correction of camera registration error for planar N-pulse PIVA systems with multiple cameras	
	<i>Liuyang Ding, Ronald J. Adrian</i>	
15:05-15:20	ISPIV-294 Particle image velocimetry with adaptive-optical image correction	
	<i>Lars Büttner, Martin Teich, Nektarios Koukourakis, Jürgen Czarske</i>	
15:20-15:35	ISPIV-228 Cross-correlation analysis of synchronized PIV and microphone measurements of an oscillating wing	
	<i>Lars Siegel, Arne Henning, Klaus Ehrenfried, Gerrit Lauenroth, Tobias Berkefeld, Claus Wagner</i>	
15:35-15:50	ISPIV-295 Eighty eyes PTV	
	<i>Akiyoshi Maekawa, Jun Sakakibara</i>	
15:50-16:10	Coffee Break	
16:10-16:25	ISPIV-059 Resolving the flow fine structure generated downstream a permeable plate using single-pixel correlation in comparison to window correlation	
	<i>Andrea - Perrotta, Simone - Gnisci, Giampaolo - Romano</i>	
16:25-16:40	ISPIV-110 Evaluation and application of yomographic background oriented schlieren and PIV measurements to a heated jet	
	<i>Callum Atkinson, Abel-John Buchner, Shoaib Amjad, Julio Soria</i>	
16:40-16:55	ISPIV-274 A new technique to measure near-instantaneous velocity and density fields in a volume	
	<i>Jamie Partridge, Adrien Lefauve, Paul Linden, Stuart Dalziel</i>	
16:55-17:10	ISPIV-250 Development of porous pressure-sensitive particles for simultaneous PIV-PSP measurements	
	<i>Di Peng, Feng Gu, Lingrui Jiao, Yingzheng Liu</i>	

13:50-17:10	(M5) Boundary Layers		Grand Ballroom C
	<i>Session Chair: Prof. Jin-Jun Wang & Prof. Inwon Lee</i>		
13:50-14:20	Keynote Lecture 5: Prof. Jin-Jun Wang (Beijing University of Aeronautics and Astronautics, China)		
	A new kind of bypass transition: experimental exploration on the laminar boundary layer transition induced by vortex		
14:20-14:35	ISPIV-057	Turbulent boundary layer assessment via PTV using Helium-filled soap bubbles <i>David Engler Faleiros, Marthijn Tuinstra, Andrea Sciacchitano, Fulvio Scarano</i>	
14:35-14:50	ISPIV-081	Detection of rare back flow events in zero-pressure gradient turbulent boundary layers using micro-PTV/PIV <i>Wenfeng Li, Dorothee Roggenkamp, Wilhelm Jessen, Michael Klaas, Wolfgang Schröder</i>	
14:50-15:05	ISPIV-154	Cross-plane stereoscopic PIV measurements of a self-similar adverse pressure gradient boundary layer <i>Abel-John Buchner, Callum Atkinson, Gregor Duerre, Atsushi Sekimoto, Vassili Kitsios, Kilian Oberleithner, Julio Soria</i>	
15:05-15:20	ISPIV-210	Unsteady organization of separated turbulent boundary layer over a flat plate <i>Mohammad Elyasi, Sina Ghaemi</i>	
15:20-15:35	ISPIV-243	Simultaneous measurements of particle and gas velocity in turbulent boundary layer including particle <i>Kazumasa Omachi, Yusuke Kuwata, Yasuo Kawaguchi2</i>	
15:35-15:50	ISPIV-280	Towards fully-resolved PIV measurements in high Reynolds number turbulent boundary layers <i>C. M. de Silva, K. Grayson, S. Scharnowski, C. J. Kahler, N. Hutchins, I. Marusic</i>	
15:50-16:10	Coffee Break		
16:10-16:25	ISPIV-251	Turbulence modifications in a turbulent boundary layer over spanwise-alternating roughness lanes <i>H. L. Bai, Kevin, N. Hutchins, J. P. Monty</i>	
16:25-16:40	ISPIV-320	Flow visualization of boundary layer with roughness and Catalytic Combustion Using Microscopic PIV <i>Shumpei Funatani, Satoshi Nagao, Satoru Kato</i>	
16:40-16:55	ISPIV-233	Probing the flow around roughness elements in a turbulent boundary layer using single-view and tomographic digital holographic microscopy <i>Jian Gao, Karuna Agarwal, Joseph Katz</i>	
13:50-17:10	(M6) Scalar Transport/Jet Flows		Studio G
	<i>Session Chair: Prof. Steven Wereley & Prof. Simon Song</i>		
13:50-14:20	Keynote Lecture 6: Prof. Steven Wereley (Purdue University, USA)		
	Particle Diffusometry		
14:20-14:35	ISPIV-118	PIV/PLIF study of mixing in turbulent swirling jets <i>Vladimir Dulin, Zahar Kravtsov, Dmitriy Sharaborin, Dmitriy Markovich</i>	

14:35-14:50	ISPIV-282	PIV/PLIF simultaneous measurements of spatial structure of dye plume in turbulent wall shear flow <i>Yuji Sato, Yasuo Kawaguchi</i>
14:50-15:05	ISPIV-256	Unraveling tumble and swirl in a unique water-analogue engine model <i>Athanasia Kalpakli Vester, Yu Nishio, P. Henrik Alfredsson</i>
15:05-15:20	ISPIV-175	On the effects of a square fractal grid on a synthetic jet actuator flow field. <i>Giusy Castrillo, Gioacchino Cafiero, Carlo Salvatore Greco, Tommaso Astarita</i>
15:20-15:35	ISPIV-231	Phase locked 2-D and stereo PIV measurements in puffing rectangular buoyant plumes <i>Bharadwaj Kuchimanchi, Debopam Das</i>
15:50-16:10	Coffee Break	
16:10-16:25	ISPIV-026	Supersonic PIV measurements of over-expanded beveled jets <i>Haixiang Desmond Lim, Bin Zang, Yong Dong Cui, Tze How Daniel New</i>
16:25-16:40	ISPIV-051	Effects of breaking-up the coherent structures on the near and far-field state of an axisymmetric turbulent jet <i>Massimiliano Breda, Oliver R. H. Buxton</i>
16:40-16:55	ISPIV-071	Characterization of horizontal buoyant gas jet by particle image velocimetry <i>Wooyoung Lee, Simon Song, Young Su Na, Seong-Wan Hong</i>
17:10-18:10	(MP) Poster Session 1 Grand Ballroom B	
	<i>Session Chair: Prof. Gwang Hoon Rhee</i>	
	ISPIV-029	A novel multiplane scanning stereo PIV setup to investigate left ventricular flow <i>Hicham Saaid, Patrick Segers, Tom Classens, Pascal Verdonck</i>
	ISPIV-040	Influence of artificial sound waves on the pre-buffet flow field over a supercritical airfoil <i>Antje Feldhusen-Hoffmann, Michael Klaas, Wolfgang Schröder</i>
	ISPIV-046	Measurement of helical valvular flows behind the human venous valve using ultrasound speckle image velocimetry <i>Jun Hong Park, Eunseop Yeom, Jeong Ju Kim, Sang Joon Lee</i>
	ISPIV-048	PIV Accuracy improvement near stationary walls using interrogation window masking <i>F. Gökhan Ergin</i>
	ISPIV-052	X-ray PIV measurement of real blood flows in rodent disease models <i>Hanwook Park, Jun Hong Park, Sang Joon Lee</i>
	ISPIV-069	Magnetic resonance velocimetry with high spatial resolution using a custom-built RF coil <i>Byungkuen Yang, Jee-Hyun Cho, Simon Song</i>
	ISPIV-093	Aberration: a new indicator of PIV measurement quality <i>Alessandro Masullo, Raf Theunissen</i>
	ISPIV-096	Normalization parameters of the streamline segmentation model in heterogeneous non-isotropic flow <i>Alexander Rubbert, Michael Klaas, Wolfgang Schröder</i>

	<p>ISPIV-101 Wall-particle-injection Method for PIV Measurements in the near-wall flow <i>Chuanhong Zhang, Cunbiao Lee, Guoping Zhang, Lianghao Xu</i></p> <p>ISPIV-124 Uncertainty quantification of particle tracking velocimetry interpolations <i>Jan Schneiders, Andrea Sciacchitano</i></p> <p>ISPIV-174 SPIV Internal Drag Measurement of Hypersonic Flowthrough Model <i>Zhan Huang, Jiang Zhang, Hongwei Wang, Jian Zhou</i></p> <p>ISPIV-178 PIV Analysis of flow characteristics of a dual blade fan <i>Youngwoo Kim, Hyun Dong Kim, Kyung Chun Kim</i></p> <p>ISPIV-182 Measurement-integrated simulations of sphere wakes at high Reynolds numbers <i>Nathan J. Neeteson, Clinton Bond, David E. Rival</i></p> <p>ISPIV-223 Particle image velocimetry and infrared thermography measurements in a turbulent jet impinging onto an oscillating target surface <i>Vishal Chaugule, Ramesh Narayanaswamy, Anthony D Lucey, Vinod Narayanan, James Jewkes</i></p> <p>ISPIV-255 Measurement of flows behind finite rigid and flexible cylinders <i>Sung Yong Jung, Jeong Jae Kim, Han Wook Park, Sang Joon Lee</i></p> <p>ISPIV-259 PIV Measurements of 3D curved wall jets on a cylinder <i>Mirae Kim, Hyun Dong Kim, Kyung Chun Kim</i></p> <p>ISPIV-266 Characterization of single phase and gas-liquid flows in milli-channels using μ-PIV and μ-LIF <i>Sayantani Saha, Vivek V. Buwa</i></p> <p>ISPIV-275 Propulsion of the water flea, <i>Daphnia magna</i> <i>Anna Skipper, David Murphy, Don Webster</i></p> <p>ISPIV-292 PIV Measurements of an upright plain fin with frost condition <i>Dong Kim, Sang Youl Yoon, Kyung Chun Kim</i></p> <p>ISPIV-297 Effect of fluid prism on stereo PIV 3D calibration through windows with high refractive indices difference: a comparison of pinhole and 3rd order polynomial mapping function <i>SANAL K MOHANAN</i></p> <p>ISPIV-299 EF-driven cellular morphogenesis <i>Hyuntae Jeong, Youngbin Cho, Jennifer H. Shin</i></p> <p>ISPIV-302 The calibration system of 3D laser induced fluorescence <i>Jiaying Ren, Haixin Peng, Luhai Wang, Zhenli Huang, Haiying Li</i></p> <p>ISPIV-305 Wide field-of-view particle tracking for long-term measurement of insect dynamics <i>Mohiuddin Khan Shourav, Jung Kyung Kim</i></p> <p>ISPIV-318 Visualization of physical force alteration within the epithelial cell monolayer induced by external dCEF <i>Youngbin Cho, Minjeong Son, Eunyoung Park, Unghyun Ko, Hyuntae Jeoung, Jennifer H. Shin</i></p> <p>ISPIV-319 An investigation into fish locomotion and wake flow by PIV <i>Hongliang Wang, Ye Li, Hao Xu</i></p> <p>ISPIV-325 Micro-bubbles seeding for flow characterization in cavitation tunnel <i>Vivien AUMELAS, Guillaume MAJ, Yves LECOFFRE and Jean-Pierre FRANC</i></p>
<p>18:10-20:10</p>	<p>SC & ISC Meeting</p>

Tuesday, June 20, 2017	
8:30-18:00	Registration
9:00-9:40	Plenary Lecture 3 : Prof. Fulvio Scarano (Delft University of Technology, Netherlands) <i>Grand Ballroom A</i> <i>Session Chair: Prof. Hyung Jin Sung</i> Particle Image Velocimetry reinvented
9:40-10:00	Coffee Break
10:00-12:00	(T1) 3D PIV/PTV 1 <i>Grand Ballroom A</i> <i>Session Chair: Dr. Andreas Schröder</i>
10:00-10:30	Keynote Lecture 7: Dr. Andreas Schröder (DLR, Germany) Dense 3D Lagrangian Particle Tracking using Shake-The-Box – A new key for experimental fluid mechanics
10:30-10:45	ISPIV-089 Modeling and design of a hybrid “plenoptic+classic” 3D PIV system <i>Frederic Champagnat, Pauline Trouvé-Peloux, Philippe Cornic, Benjamin Leclaire, Guy Le Besnerais, Guillaume Druart, Yves. Le Sant</i>
10:45-11:00	ISPIV-113 3D flow measurements of circular air jet at Re=30,000 using light field particle image velocimetry <i>Sheng-Ming Xu, Jun-Fei Ding, Zhou Zhao, Callum Atkinson, Julio Soria, Sheng-Xian Shi</i>
11:00-11:15	ISPIV-115 High resolution volumetric particle image velocimetry with dual-light field camera <i>Di Mei, Junfei Ding, Julio Soria, Shengxian Shi</i>
11:15-11:30	ISPIV-147 Parametric analysis on light field microscopy based volumetric particle image velocimetry <i>Zhou Zhao, Junfei Ding, Shengxian Shi</i>
11:30-11:45	ISPIV-176 Investigation of 3D flow behavior inside a 3×3 rod bundle using Light Field-PIV and the matched refractive index techniques <i>Haotian Li, Junfei Ding, Wenhai Qu, Jinbiao Xiong, Shengxian Shi</i>
11:45-12:00	ISPIV-264 Velocity field measurements in 3D wave on a falling film using methods of laser induced fluorescence and light field imaging <i>Alexandr Kvon, Sergey Kharlamov, Aleksey Bobylev, Vladimir Guzanov, Mikhail Tokarev, Alexandr Seredkin, Dmitry Markovich</i>
10:00-12:00	(T2) Bio/Micro Flows <i>Grand Ballroom C</i> <i>Session Chair: Prof. Jun Sakakibara</i>
10:00-10:30	Keynote Lecture 8: Prof. Jun Sakakibara (Meiji University, Japan) PIV study on flow in eye
10:30-10:45	ISPIV-317 3D model and PIV analysis of patient’s aortic dissection with stanford type A <i>Min Young Kim, Yun Seok Heo</i>
10:45-11:00	ISPIV-054 Hemodynamic characteristics around deformable stenoses <i>Woorak CHoi, Sang Joon Lee</i>

11:00-11:15	ISPIV-177	Visualization of spatial vortex structures of pulsatile flow in 3D curved channel with stenosis using time-resolved PIV measurement <i>Hyeonji Hong, Ho Seong Ji, Kyung Chun Kim, Eunseop Yeom</i>
11:15-11:30	ISPIV-304	Analysis of fluid microjet for development of air-powered needle-free skin treatment system <i>Abdul Mohizin A M, Bibin Prasad, K E Reby Roy, Jung Kyung Kim</i>
11:30-11:45	ISPIV-315	PIV Analysis of wake induced by real-scale seal whiskers <i>Joseph Bunjevac, Jodi Turk, Wei Zhang</i>
11:45-12:00	ISPIV-300	Microbead alignment in spinning helical minichannel for high-precision absolute particle counting <i>Subin Kim, Bibin Prasad, Jung Kyung Kim</i>
10:00-12:00	(T3) Hydrodynamics <i>Studio G</i>	
	<i>Session Chair: Prof. Yingzheng Liu</i>	
10:00-10:30	Keynote Lecture 9: Prof. Yingzheng Liu (Shanghai Jiao Tong University, China)	
	PIV measurements of vortex dynamics in wakes and separated flows: Proper orthogonal decomposition and dynamic mode decomposition analysis	
10:30-10:45	ISPIV-254	Stereo PIV measurement around a free-surface vortex <i>Gosse Oldenzien, Alex Duinmeijer, Francois Clemens</i>
10:45-11:00	ISPIV-193	High Reynolds number measurements of vorticity generation and annihilation with rapidly changing boundary conditions <i>Frieder Kaiser, Malte von der Burg, Samuel Viboud, Joel Sommeria, David E. Rival, Jochen Kriegseis</i>
11:00-11:15	ISPIV-080	Investigation of the effect of superhydrophobic surface on the propeller wake using stereo particle image velocimetry <i>Hongseok Choi, Jungjin Lee, Hyungmin Park</i>
11:15-11:30	ISPIV-103	The effect of aspect ratio in the water entry of slender bodies <i>Nayoung Kim, Hyungmin Park</i>
11:30-11:45	ISPIV-107	Analysis of electrolysis using PIV for water purification <i>Jae Won Lee, Dong Ho Shin, Han Seo Ko</i>
11:45-12:00	ISPIV-310	PIV Measurement of a Solitary Wave passes over a Thin Plate with Different Angles <i>Mohammad R. Tavakoli, Reza Zaghian, Mehran Karbasipour, Mahdi Nili</i>
12:00-13:00	Lunch (SC Meeting) <i>Convention Hall</i>	
13:00-13:40	Plenary Lecture 4: Prof. Koichi Nishino and Taishi Yano (Yokohama National University, Japan) <i>Grand Ballroom A</i>	
	<i>Session Chair: Deog Hee Doh</i>	
	Space experiments and application of PIV techniques for the study of instability mechanisms of thermocapillary convection	
13:40-13:50	Short Break	

13:50-17:10	(T4) 3D PIV/PTV 2		Grand Ballroom A
	<i>Session Chair: Prof. Dana Dabiri, Prof. Christian Willert</i>		
13:50-14:20	Keynote Lecture 10: Prof. Dana Dabiri (University of Washington, in Seattle, USA)		
	Design & Implementation of a 3D-PTV System		
14:20-14:35	ISPIV-126	Pulse separation strategies for multi-pulse systems: 3D Lagrangian particle tracking with Shake-The-Box in turbulent boundary layers <i>Matteo Novara, Daniel Schanz, Reinhard Geisler, Christina Voss, Andreas Schroeder</i>	
14:35-14:50	ISPIV-169	2-Pulse STB: 3D particle tracking at high particle image densities <i>Tobias Jahn, Daniel Schanz, Sebastian Gesemann, Andreas Schröder</i>	
14:50-15:05	ISPIV-238	Digital holographic micro-PTV based on phase images <i>Yoshiyuki Morita, Masamichi Oishi, Tsukasa Matsuo, Marie Oshima</i>	
15:05-15:20	ISPIV-032	3D tracking of ellipsoidal particles in a microtube using digital holographic microscopy <i>Hyeokjun Byeon, Sang Joon Lee</i>	
15:20-15:35	ISPIV-130	3D Lagrangian particle tracking of a transonic jet using four-pulse Shake-The-Box <i>Peter Manovski, Matteo Novara, Daniel Schanz, Reinhard Geisler, Nagendra Karthik Depuru Mohan, Andreas Schröder</i>	
15:35-15:50	ISPIV-212	Simultaneous 2D/3D turbulence measurement of liquid and solid phases in channel flow <i>Farzad Ahmadi, Masoud Ebrahimiyan, Sean Sanders, Sina Ghaemi</i>	
15:50-16:10	Coffee Break		
16:10-16:25	ISPIV-222	Double-frame 3D particle tracking – towards higher effective particle image densities <i>Thomas Fuchs, Rainer Hain, Christian J. Kähler</i>	
16:25-16:40	ISPIV-109	Variational 3D-PIV for incompressible fluid flow estimation <i>Katrin Lasinger, Christoph Vogel, Konrad Schindler</i>	
16:40-16:55	ISPIV-166	High Speed 3D flow analysis on a low swirl burner using tomographic reconstruction and 3D LSM <i>Per Petersson, David Hess, Marcus Alden</i>	
16:55-17:10	ISPIV-167	Volumetric characterization of the flow around a cubical obstacle <i>Daniel Schanz, Reinhard Geisler, Tobias Jahn, Andreas Schröder, Philippe Cornic, Benjamin Leclaire, Quentin Gallas</i>	
13:50-17:10	(T5) Algorithm		Grand Ballroom C
	<i>Session Chair: Prof. Hyung Jin Sung & Prof. Carl Meinhart</i>		
13:50-14:20	Keynote Lecture 11: Prof. Hyung Jin Sung (KAIST, Korea)		
	Tomographic PIV measurements for flow-structure interaction		

14:20-14:35	ISPIV-288	An efficient non-iterative double-frame particle tracking algorithm <i>Thomas Fuchs, Rainer Hain, Christian J. Kähler</i>
14:35-14:50	ISPIV-289	A robust anisotropic local-global optical flow algorithm for PIV <i>Qianglong-Zhong, Hua-Yang, Zhouping-Yin</i>
14:50-15:05	ISPIV-313	Performances of non-interpolation PTV <i>Deog-Hee Doh, Gyeong-Rae Cho, Iksoo Kim, Sang-Hoon Cho, Youngjin Park</i>
15:05-15:20	ISPIV-158	Elimination of PIV light reflection by anisotropic diffusion <i>Andrea Sciacchitano</i>
15:20-15:35	ISPIV-188	Framework for instantaneous PIV/PTV-based pressure gradient error correction and estimation <i>Jeffrey McClure, Serhiy Yarusevych</i>
15:35-15:50	ISPIV-094	On the ability to improve spatial resolution of PIV for high amplitude oscillations <i>Alessandro Masullo, Raf Theunissen</i>
15:50-16:10	Coffee Break	
16:10-16:25	ISPIV-050	Speed-up technique for 2D Particle Image Velocimetry <i>Dinar Zaripov, Renfu Li</i>
16:25-16:40	ISPIV-063	Image pre-processing method for near-wall PIV measurements over moving curved interfaces <i>Lichao Jia, Yiding Zhu, Yongxia Jia, Huijing Yuan, Cunbiao Lee</i>
16:40-16:55	ISPIV-207	Direct estimates of dissipation and fluctuating velocity gradients using single pixel cross-correlation PIV <i>John Charonko, Kathy Prestridge</i>
16:55-17:10	ISPIV-042	Volume self-calibration for large disparities using image correlation <i>Bernhard Wieneke</i>
13:50-17:10	(T6) Pressure Field/ Post-Processing <i>Studio G</i>	
	<i>Session Chair: Prof. Stefano Discetti & Prof. Fulvio Scarano</i>	
	Keynote Lecture 12: Prof. Stefano Discetti (Universidad Carlos III de Madrid, Spain)	
13:50-14:20	Adverse-pressure-gradient turbulent boundary layers: flow organization and high-resolution statistics	
14:20-14:35	ISPIV-205	Unsteady force estimation using a lagrangian drift-volume approach <i>Cameron McPhaden, David Rival</i>
14:35-14:50	ISPIV-189	Volumetric pressure estimation in a turbulent channel flow <i>Jeffrey McClure, Sadek Shaban, Sina Gaemi, Serhiy Yarusevych</i>
14:50-15:05	ISPIV-296	Spatial/temporal correlations of velocity and pressure fluctuations to resolve the dynamics of coherent structures in transonic flows <i>Istvan Bolgar, Sven Scharnowski, Christian J. Kähler</i>

15:05-15:20	ISPIV-122	Pressure spectra from single-snapshot tomographic PIV <i>Jan Schneiders, Francesco Avallone, Stefan Probsting, Daniele Ragni, Fulvio Scarano</i>
15:20-15:35	ISPIV-268	Pressure field estimation from particle tracking velocimetry for vortex ring impinging on a solid wall <i>Yoshihiko Oishi, Momo Takeuchi, Hideki Kawai, Yuichi Murai</i>
15:50-16:10	Coffee Break	
16:10-16:25	ISPIV-106	Comparison of recent unsteady-pressure-estimation methods using time-resolved PIV data <i>Takao Suzuki, Ludovic Chatellier, Young J. Jeon, Laurent David</i>
16:25-16:40	ISPIV-150	High resolution full Reynolds stress tensor with ensemble stereoscopic PTV <i>Stefano Discetti, Andrea Ianiro, Tommaso Astarita</i>
16:40-16:55	ISPIV-172	Coupling temporal and spatial gradient information in high-density unstructured lagrangian measurements <i>Jaime Wong, Giuseppe Rosi, Amirreza Rouhi, David Rival</i>
16:55-17:10	ISPIV-020	New insights on the effect of light sheet mismatch on PIV correlations <i>Sven Scharnowski, Kristian Grayson, Charitha M. de Silva, Nicholas Hutchins, Ivan Marusic, Christian J. Kähler</i>
17:10-18:10	(TP) Poster Session 2 Grand Ballroom B	
	<i>Session Chair: Prof. Yun Seok Heo</i>	
	ISPIV-033	Improvement of light field camera based particle tracking velocimetry <i>Kazuo Ohmi, Sudat Tuladhar, Yongkai Wu</i>
	ISPIV-039	Applicability of wall similarity hypothesis on the discrete roughness near wake region <i>Jianjie Wang, Chong Pan, Jinjun Wang, Tian Li</i>
	ISPIV-053	Time-resolved measurements of the free surface motion due to spinning micro-rafts using Stereo MicroPIV <i>F. Gökhan Ergin, A. Fatih Tabak, Wendong Wang, Metin Sitti</i>
	ISPIV-067	Evasion characteristics of PLECOGLOSSUS ALTIVELIS ALTIVELIS in fish school against air bubbles in open-channel flows <i>Kouki Onitsuka, Juichiro Akiyama, Kento Joji</i>
	ISPIV-076	Effects of boulder interval over pool bed in pool-and-weir fishway on migration rate of oikawa, zacco platypus <i>Kouki Onitsuka, Juichiro Akiyama, Ryo Ogata</i>
	ISPIV-086	Tip vortex flow measurement on elliptical hydrofoil using stereo PIV <i>Lianghao XU, Yuwen LIU, Guoping ZHANG, Xiaoxing PENG</i>
	ISPIV-108	Development of optical correction method for distorted inner flow field of droplet on tilted plate <i>Yeonghyeon Gim, Han Seo Ko</i>
	ISPIV-114	The research of high resolution optical flow velocimetry based on particle image <i>Hong Wei Wang, Ming Liu, Lian Feng Wei, Zhan Huang</i>
	ISPIV-125	The application of flow visualization technique in the research of micro riblets drag reduction mechanism <i>Handong Ma, Zhan Huang, Hongwei Wang, Miao Zhang, Pan Cheng</i>

	ISPIV-148	PIV measurement of feeding phenomena of <i>Aedes albopictus</i> as a vector of Zika virus <i>Jun Ho Kim, Young Ran Ha, Sang Joon Lee</i>
	ISPIV-151	Effects of down slope of bottom in pool-and-Oweir fishway on migration rate of <i>nipponocypris temminckii</i> <i>Kouki Onitsuka, Juichiro Akiyama, Tomohide Takeda</i>
	ISPIV-157	Effects of spanwise width of expansion area in open-channel flow on resting characteristics of oikawa, zacco platypus <i>Kouki Onitsuka, Juichiro Akiyama, Kousuke Izumi</i>
	ISPIV-163	Three-dimensional flow patterns of acoustic streaming induced by triangular obstructions <i>Yu-Sing Liou, Wei-Hsin Tien</i>
	ISPIV-185	Evidence of mode-S' instabilities in the wake of an elongated D-shaped airfoil <i>Bradley Gibeau, Charles Robert Koch, Sina Ghaemi</i>
	ISPIV-192	Characterization of main rotor effect on fuselage wake of a helicopter using planar and stereoscopic particle image velocimetry <i>Drew Gingras, Bryan Godbolt, Sina Ghaemi</i>
	ISPIV-194	Three-dimensional flow characterization in the wake of vortex generators with different geometries <i>Sen Wang, Sina Ghaemi</i>
	ISPIV-240	Particle separation imaging in a microchannel using dielectrophoretic activity <i>Jae Heon Lee, Haider Ali, Kyung Won Kim, Cheol Woo Park</i>
	ISPIV-246	Pressure and flow characteristics of flue gas recycling system with several geometrical shapes <i>Chanhee Moon, Hyun Dong Kim, Kyung Chun Kim</i>
	ISPIV-265	PIV and HT-PIV measurements of turbulent parameters in high pressure high temperature fan stirred spherical combustion vessel <i>Ossama Mannaa, Suk Ho Chung, Issam Alkhesho, William Roberts</i>
	ISPIV-271	A flow-visualization study of a multiple hydrofoils duct with particle image velocimetry equipment in KIOST <i>Jihoon Kim, Patar Ebenezer Sitorus, Boreum Won, Tuyen Quang Le, Jin Hwan Ko, Do Young Kim, In Sung Jang</i>
	ISPIV-272	Fluorescent anisotropy-based thermometry as a microfluidic temperature imaging technique <i>Yuta Shugyo, Ken Yamamoto, Masahiro Motosuke</i>
	ISPIV-291	Investigation of hydrogen and electrolytic oxy-hydrogen addition to propane flames using planar laser-induced fluorescence <i>Seok Hwan Lee</i>
	ISPIV-279	Flow structure and heat transfer of sweeping jet impingement <i>Tongil Park, Kursat Kara, Daegyoun Kim</i>
	ISPIV-323	Influence of inclined Lorentz force on micropolar fluids with heated thin plate <i>M. Muthamilselvan, Deog-Hee Doh</i>
18:10-18:30	Ronald J. Adrian Prize Award Ceremony and Speech <i>Convention Hall</i>	
18:30-20:30	Banquet <i>Convention Hall</i>	

Wednesday, June 21, 2017	
8:30-15:15	Registration
9:00-10:30	(W1) Advanced Measurements 2 Grand Ballroom A
	<i>Session Chair: Prof. Nao Ninomiya</i>
9:00-9:30	Keynote Lecture 13: Prof. Nao Ninomiya (Utsunomiya University, Japan)
	3-D velocity measurement of particles by a single camera using doppler phase-shifting holography
9:30-9:45	ISPIV-201 Volumetric flow diagnosis in water applications using compact 4-camera head and LED illumination <i>Dirk Michaelis, Bernhard Wieneke</i>
9:45-10:00	ISPIV-216 Postage-stamp PIV: small velocity fields at 400 kHz for turbulence spectra measurements <i>Steven Beresh, John Henfling, Russell Spillers</i>
10:00-10:15	ISPIV-128 Convolutional neural networks to measure the velocity gradients of particle image pairs <i>Yong Lee, Hua Yang, Zhouping Yin</i>
10:15-10:30	ISPIV-030 Effect of characteristic mark size on the accuracy of centroid detection for calibration in flow diagnostics <i>Sagar Adatrao, Mayank Mittal</i>
9:00-10:30	(W2) Industrial Applications 1 Grand Ballroom C
	<i>Session Chair: Prof. David Rival</i>
9:00-9:30	Keynote Lecture 14: Prof. David Rival (Queen's University, Canada)
	A discussion on force estimation using Eulerian and Lagrangian frameworks
9:30-9:45	ISPIV-273 RoboPIV: How robotics enable PIV on industrial scale <i>Frank Michaux, Philipp Mattern, Stephan Kallweit</i>
9:45-10:00	ISPIV-117 Experimental study of the near-field dynamic interaction between a single inclined jet and a crossflow <i>Xin Wen, Chuangxin He, Yujia Chen, Yingzheng Liu</i>
10:00-10:15	ISPIV-127 A PIV study on the shock-accelerated elliptic gas cylinders <i>Shenfei Liao, Liyong Zou, Xilong Huang, Jinhong Liu</i>
10:15-10:30	ISPIV-162 Development of a millimeter-scale microalgae harvesting device using acoustic standing wave <i>Hsun-Chieh Kang, Wei-Hsin Tien</i>
9:00-10:30	(W3) LIF Studio G
	<i>Session Chair: Prof. Bertrand Lecordier</i>
9:00-9:30	Keynote Lecture 15: Prof. Bertrand Lecordier (UMR CNRS 6614 CORIA, University of Rouen, France)
	Combined planar velocity and scalar measurements for reacting flow investigations.
9:30-9:45	ISPIV-301 PIV and PLIF measurements of particle-scale flow in packed beds <i>Hassam Mazhar, Vivek V. Buwa</i>

9:45-10:00	ISPIV-133	Investigation of turbulent combustion in a high-swirl jet by stereo PIV, OH PLIF and HCHO PLIF <i>Aleksei Lobasov, Leonid Chikishev, Vladimir Dulin, Dmitriy Markovich</i>
10:00-10:15	ISPIV-087	PIV and PLIF measurements in a buoyancy-driven flow across a horizontal vent <i>Sunil Bharadwaj, Meheboob Alam</i>
10:30-10:45	Coffee Break	
10:45-12:30	(W4) Aerodynamics 2	Grand Ballroom A
	<i>Session Chair: Prof. Hyungmin Park</i>	
10:45-11:00	ISPIV-100	Quantitative visualization of supersonic jet flows <i>Jae Hyeok Lee, Guang Zhang, Heuy Dong Kim</i>
11:00-11:15	ISPIV-225	Multipulse particle tracking accelerometry in estimating unsteady motion of shock accelerated micro-particles <i>Ankur Bordoloi, Adam Martinez, Liuyang Ding, Katherine Prestridge, Ronald Adrian</i>
11:15-11:30	ISPIV-234	Flow structure of a bristled wing at a wide range of Reynolds number <i>Seung Hun Lee, Daegyoum Kim</i>
11:30-11:45	ISPIV-248	Near-wake characteristics of a flapping wing in forward flight <i>Jong-Seob Han, Jae-Hung Han</i>
11:45-12:00	ISPIV-267	Flow separation on a helicopter fuselage equipped with active flow control actuators for drag reduction <i>Giuseppe Ceglia, Fabrizio De Gregorio</i>
12:00-12:15	ISPIV-079	Flow control around a hydrofoil with superhydrophobic surface at low Reynolds number <i>Jungjin Lee, Hyungmin Park</i>
10:45-12:30	(W5) Industrial Applications 2	Grand Ballroom C
	<i>Session Chair: Prof. Jong-Hwan Yoon</i>	
10:45-11:00	ISPIV-181	Heat and mass transport in large aspect ratio Rayleigh-Bénard convection <i>Sebastian Moller, Christian Resagk, Christian Kästner, Dominik Baczyzmalski, Julian Massing, Christian Kähler, Christian Cierpka</i>
11:00-11:15	ISPIV-171	Three dimensional flow structures in a planar offset attaching jet <i>Nan Gao, Yu Xia, Dan Ewing</i>
11:15-11:30	ISPIV-287	PIV measurements and high-speed visualizations of cavitating flows in the wake of a two-dimensional wedge-shaped submerged body <i>Byoung-Kwon Ahn, So-Won Jeong, Sang-Tae Park</i>
11:30-11:45	ISPIV-262	Study on flow field around energy saving devices by PIV and CFD <i>Satoshi Matsuda, Takehiro Ikeda, Takashi Kishimoto, Koyu Kimura, Koutaku Yamamoto</i>
11:45-12:00	ISPIV-324	Imaging the interaction between turbulence, spark discharge and early flame kernel in a gasoline optical engine using high speed PIV <i>MinhKhoi Le, Takashi Furui, Atsushi Nishiyama, Yuji Ikeda</i>

12:00-12:15	ISPIV-099	Vortex ring impingement measured by scanning PIV <i>Zhengzhong Sun, Christoph Bruecker</i>
12:15-12:30	ISPIV-303	In-cylinder air flow characterisation of a DI CI engine using particle image velocimetry and proper orthogonal Decomposition analysis <i>T. Knight, R. Yuan, E. J. Long, V. Page, G. K. Hargrave</i>
10:45-12:30	(W6) Tomographic PIV 1 Studio G	
	<i>Session Chair: Prof. Daegyoum Kim</i>	
10:45-11:00	ISPIV-119	Co-axial volumetric velocimetry <i>Jan Schneiders, Constantin Jux, Andrea Sciacchitano, Fulvio Scarano</i>
11:00-11:15	ISPIV-138	GPU-based, parallel-line, omni-directional integration of the acceleration field to obtain the 3D pressure distribution <i>Jin Wang, Cao Zhang, Joseph Katz</i>
11:15-11:30	ISPIV-095	An evaluation of the impact of aero-optical effects on tomographic PIV <i>Carlos López Hernández, Pauline Trouvé-Peloux, Philippe Cornic, Benjamin Leclaire, Frédéric Champagnat</i>
11:30-11:45	ISPIV-196	Full-scale cyclist aerodynamics by co-axial volumetric velocimetry <i>Andrea Sciacchitano, Constantin Jux, Jan Schneiders, Fulvio Scarano</i>
11:45-12:00	ISPIV-311	Novel ex-situ calibration procedure for tomographic PIV in a confined environment: application to a single-cylinder optical engine <i>Petra Daher, Corine Lacour, Franck Lefebvre, Armelle Cessou, Benoit Tremblais, Lionel Thomas, Laurent David, Bertrand Lecordier</i>
12:00-12:15	ISPIV-112	Analysis of turbulent flow around a 3D NACA0015 wing using stereoPIV and TomoPIV <i>Gwenaël Acher, Lionel Thomas, Benoit Tremblais, Laurent David</i>
12:15-12:30	ISPIV-170	Tomographic stereo PIV measurements of the turbulent flow around a pitched-blade turbine <i>Noboru Yamamoto, Koichi Nishino</i>
12:30-13:30	Lunch Convention Hall	
13:30-15:00	(W7) Advanced Measurements 3 Grand Ballroom A	
	<i>Session Chair: Prof. Koichi Nishino</i>	
13:30-13:45	ISPIV-227	Time resolved, near wall PIV measurements in a high Reynolds number turbulent pipe flow <i>Christian Willert, Joachim Klinner, Julio Soria, Michael Eisfelder, Omid Amili, Michel Stanislas, Christophe Cuvier, Gabriele Bellani, Tommaso Fiorini, Alessandro Talamelli</i>
13:45-14:00	ISPIV-088	Elbow flow multi-section characterization using planar and Stereo-PIV <i>André Baramili, Ludovic Chatellier, Laurent David, Loïc Ancian</i>
14:00-14:15	ISPIV-165	Dense Lagrangian particle tracking in homogeneous turbulence <i>F. Huhn, D. Schanz, A. Schröder, D. Garaboa Paz, V. Pérez-Muñuzuri, J. Lawson, E. Bodenschatz</i>

14:15-14:30	ISPIV-092	Statistic detection of mask for PIV images <i>Alessandro Masullo, Raf Theunissen, Frank Michaux</i>
14:30-14:45	ISPIV-183	Characterization of PIV random errors in measurements of turbulence <i>Roberto Jiménez, José Nogueira, Mathieu Legrand</i>
13:30-15:00	(W8) Multi-Phase Flow 2 Grand Ballroom C	
	<i>Session Chair: Prof. Hyoung-Bum Kim</i>	
13:30-13:45	ISPIV-179	Light scattering behaviour of Helium filled soap bubbles <i>Giuseppe Caridi, Andrea Sciacchitano</i>
13:45-14:00	ISPIV-237	Measurements of droplets dispersion of hollow-cone spray in confined crossflow <i>Haibin Zhang, Ganghao Sheng, Bofeng Bai</i>
14:00-14:15	ISPIV-060	Treatment of dynamic interfaces in PIV: application to lateral harmonic sloshing <i>Alessia Simonini, Raf Theunissen, Alessandro Masullo, Maria Rosaria Vetrano</i>
14:15-14:30	ISPIV-278	Simultaneous gas and spray PIV measurements in an optical engine <i>Julien Lemetayer, Corine Lacour, Franck Lefebvre, Carole Gobin, Armelle Cessou, Bertrand Lecordier.</i>
14:30-14:45	ISPIV-284	Quantitative Visualization of Slug Flow by using PIV and numerical method <i>Yuting Wu, Jinho Yu, Hyoung-Bum Kim</i>
14:45-15:00	ISPIV-314	Recent developments of two-phases fluorescence PIV: Application on the dynamic of high pressure gasoline sprays <i>Julien Lemetayer, Corine Lacour, Franck Lefebvre, Carole Gobin, Armelle Cessou, Bertrand Lecordier</i>
13:30-15:00	(W9) Tomographic PIV 2 Studio G	
	<i>Session Chair: Prof. Kazou Ohmi</i>	
13:30-13:45	ISPIV-131	Tomo-PIV of turbulent water flow in a square duct employing external calibration <i>Fabio J W A Martins, Jean-Marc Foucaut, Michel Stanislas, Luis F A Azevedo</i>
13:45-14:00	ISPIV-160	Cross-streamline migration of RBCs in a viscoelastic fluid <i>Taesik Go, Hyeokjun Byeon, Sang Joon Lee</i>
14:00-14:15	ISPIV-161	Tomographic PIV measurement of thermocapillary convection in liquid bridges formed in space experiment <i>Taishi Yano, Takuma Katakura, Koichi Nishino</i>
14:15-14:30	ISPIV-197	Tomographic reconstruction of a particle cloud for tomo-PIV using a marked point process framework. <i>Lionel Thomas, Benoit Tremblais, Laurent David, R. Ben Salah, O. Alata</i>
14:30-14:45	ISPIV-308	Spatial topological analysis for coherent structure in turbulent boundary layer over smooth and riblet surface by tomo-TRPIV <i>Nan Jiang, Zhan-qi Tang, Shao-qiong Yang</i>
15:00-15:15	Coffee Break	

15:15-17:00	(W10) Large Scale PIV		Grand Ballroom A
	<i>Session Chair: Prof. Jung Kyung Kim</i>		
15:15-15:30	ISPIV-261	Large scale time resolved TOMO-PIV in a wind tunnel for full scale automotive testing <i>Marcus Casper, Uwe Dierksheide, Christian Lemke</i>	
15:30-15:45	ISPIV-105	An experimental study on kinetic energy transport in the flow around a model wind turbine sited in atmospheric boundary layer winds <i>Wei Tian, Hui Hu</i>	
15:45-16:00	ISPIV-203	Stereo PIV system designed for long term coastal ocean deployment <i>Callum Gray, Joseph Calantoni, Sean Griffin, Edward F. Braithwaite III, Bradley Lingsch</i>	
16:00-16:15	ISPIV-208	An Inside look of Mars Craters: PIV measurements within index-matched models <i>Gianluca Blois, Daniel Troolin, Taehoon Kim, Wing Lai, Ken Christensen</i>	
16:15-16:30	ISPIV-235	Modulation of energetic coherent motions by large-scale topography <i>Wing Lai, Dan Troolin, Ali M. Hamed, Leonardo P. Chamorro</i>	
16:30-16:45	ISPIV-285	The application of large scale tomographic PIV in a quarter scale automotive wind tunnel <i>Mathew Almond, Martin Passmore, Robert Littlewood.</i>	
16:45-17:00	ISPIV-085	Temperature triggered large-scale stereoscopic PIV using HFSB and LED illumination for the investigation of mixed convection in multiple planes <i>Michael Mommert, Daniel Schiepel, Daniel Schmeling, Claus Wagner</i>	
15:15-17:00	(W11) Industrial Applications 3		Grand Ballroom C
	<i>Session Chair: Prof. Jaeyong Sung</i>		
15:15-15:30	ISPIV-309	Analysis of in-cylinder engine flows and their constituents by proper orthogonal decomposition <i>Daniel Butcher, Adrian Spencer</i>	
15:30-15:45	ISPIV-111	Control of convective heat transfer on local hot spot with ionic wind <i>Dong Ho Shin, Dong Gyu Jang, Han Seo Ko</i>	
15:45-16:00	ISPIV-312	Study of viscosity effects on free convection flow around a hot circular cylinder using PIV technique <i>A. Minaeian and M. Nili-AhmadAbadi</i>	
16:00-16:15	ISPIV-321	PIV measurements of swirl flows inside a CI engine cylinder according to the port shape of intake valve <i>In Yong Ohm, Hai Bin Liu, Jaeyong Sung</i>	
16:15-16:30	ISPIV-219	Index-matched simultaneous laser induced-fluorescence and particle image velocimetry measurement of oil jet fragmentation <i>Xinzhi Xue, Joseph Katz</i>	
16:30-16:45	ISPIV-190	An experimental study of transient ice accretion process over a rotating UAS propeller by using high-speed thermal imaging and PIV techniques <i>Yang Liu, Linkai Li, Wenli Chen, Hui Hu, Wei Tian</i>	
16:45-17:00	ISPIV-191	Flow in axisymmetric expansion in a catalytic converter <i>Erik Gotfredsen, Knud Erik Meyer</i>	

15:15-17:00	(W12) Microfluidics		Studio G
	<i>Session Chair: Prof. Doyoung Byun</i>		
15:15-15:30	ISPIV-027	Flow visualization on solutal-Marangoni flow by miscible liquids <i>Hyoungsoo Kim, Koen Muller, Howard A. Stone</i>	
15:30-15:45	ISPIV-083	Three-dimensional inertia-based focusing quantification of a stepped microchannel via digital holographic microscopy <i>Andrea Winzen, Masamichi Oishi, Marie Oshima</i>	
15:45-16:00	ISPIV-102	Visualization of internal flow and crystalline process in hydrogel droplet <i>Giho Kang, Baekhoon Seong, Yeonghyeon Gim, Han Seo Ko, Doyoung Byun</i>	
16:00-16:15	ISPIV-253	Particle sizing based on light scattering detected via ellipsoidal polyhedral mirror <i>Akitada Sakurai, Akiyoshi Maekawa, June Sakakibara</i>	
16:15-16:30	ISPIV-252	Microfluidic droplet manipulation using acoustothermal heating <i>Jinsoo Park, Jin Ho Jung, Ghulam Destgeer, Kwangseok Park, Husnain Ahmed, Raheel Ahmad, Hyung Jin Sung</i>	
16:30-16:45	ISPIV-293	Opto-electrokinetic flow measurement with dark field microscope <i>Choongbae Park, Avanish Mishra, Steven T. Wereley</i>	
16:45-17:00	ISPIV-306	Ultra-small force sensing with Rapid Electrokinetic Patterning <i>Kshitiz Gupta, Avanish Mishra, Steve Wereley</i>	
17:00	Best Student Paper Award & Closing Ceremony		Grand Ballroom A

Thursday, June 22, 2017 Short Course on 3D PIV		Grand Ballroom A
8:30-17:00	Registration	
9:00-10:30	<p>1) Introduction on 3D- and 4D-Particle Imaging and Velocimetry (<i>Fulvio Scarano, TU Delft</i>)</p> <p>2) Volume illumination (<i>Chris Willert, DLR Cologne</i>) Sources (Lasers and LED), modes of operation (CW, double pulses, high-rep), illumination setup, collimation, multi-pass, reflection management, polarization</p> <p>3) Seeding particles and conditions (<i>Fulvio Scarano, TU Delft</i>) Seeding air flows, water flows, combustion and other fluids, fluorescence. Rules for seeding concentration and particle image density</p>	
10:30-10:50	Coffee Break	
10:50-12:00	<p>4) Imaging (<i>Chris Willert, DLR Cologne</i>) Mie scattering and reflection, geometrical and diffraction imaging, cameras types (CCD, CMOS, sCMOS), pixel-locking, SNR, 3D imaging aperture, system synchronization</p> <p>5) Brief survey of existing 3D PIV techniques (<i>Stefano Discetti, UC3M</i>) 3D-PTV, Holographic PIV, Digital Defocusing 3D PTV, Scanning light sheet, photogrammetry, Tomographic PIV, Astigmatism 3D PTV, Plenoptic 3D PIV, Synthetic Aperture 3D PIV etc.</p> <p>6) Working principles of Tomographic PIV (<i>Stefano Discetti, UC3M</i>) Image/object space calibration 3D, image preprocessing methods, calibration correction (Volume-Self-Calibration), Optical Transfer Function detection and calibration (OTF)</p>	
12:00-13:00	Lunch	<i>Grand Ballroom B</i>
12:30-14:00	<p>7) Demonstrations of 3D PIV systems from exhibitors <i>LaVision, TSI, DanTec, Beamtech</i></p> <p>8) Based object reconstruction and motion analysis (<i>Matteo Novara, DLR Göttingen</i>) 3D reconstruction (MART), 3D cross-correlation and validation, advanced motion estimation algorithms (sliding average correlation, FTC, FTEE), Motion Tracking Enhancement (MTE) for double-frame and time-resolved recordings (SMTE), hybrid tomographic and tracking methods (pseudo-tracking, Tomo-3D-PTV)</p> <p>9) Particle based object reconstruction and motion analysis (<i>Daniel Schanz, DLR Göttingen</i>) Iterative Particle Reconstruction (IPR), multi-pulse and time-resolved reconstruction with Shake-The-Box (STB), particle trajectories estimation techniques (temporal filtering along tracks, velocity-acceleration estimation, outliers detection (validation)</p>	
14:50-15:10	Coffee Break	
15:10-17:00	<p>10) 3D data post-processing (<i>Andreas Schröder, DLR Göttingen</i>) One- and multi-point statistics, vector field operators for 3D PIV (spatial derivatives, vortex detection), data assimilation techniques on 3D PIV and Lagrangian Particle Tracking (LPT) (solenoidal filtering, NavierStokes-Regularization (e.g. FlowFit, VIC +), pressure from PIV and LPT</p> <p>11) Panel of applications to aerodynamics and turbulent flows, perspectives and closure remarks (<i>Andreas Schröder, DLR Göttingen</i>)</p>	
17:00	Closing	