

### ISMTMF19 Session Overview

#### Sunday (November 3, 2019)

08:00 – 18:00	Registration	1FLobby
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#### Monday (November 4, 2019)

08:00 – 09:00	Registration	1F Lobby or 3F Yong He Ballroom
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09:00 - 09:10	Welcoming Remarks	3F Yong He Ballroom
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09:10 – 09:20	Opening Speech	
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09:20 – 10:00	Plenary Lecture 1: Cameron Tropea Chair: Xiaoshu Cai	
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10:00 – 10:30	Group Photo and Coffee Break	1F Staff Entrance & 3F Foyer
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10:30 – 11:10	Plenary Lecture 2: Hiroshige Kikura Chair: Huihe Qiu	3F Yong He Ballroom
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11:10 – 11:50	Plenary Lecture 3: Wuqiang Yang Chair: Shigeo Hosokawa	
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12:00 –13:30	Lunch	1F M-café
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Room No.	Room 1 2F Yuan He Ballroom 1	Room 2 2F Yuan He Ballroom 2	Room 3 2F Yuan He Ballroom 3	Room 4 2F Boardroom 1	Room 5 2F Boardroom 2	Room6 2F VIP Room 1
Topic	Micro/Nano technology and Micro/Nano flows (1)	Experimental methods for multiphase flow (1)	Tomography and visualization techniques (1)	Optical, non-intrusive techniques (1)	Fundamentals of measurement techniques (1)	Information technology for multiphase flow (1)
Chairs	Bin Chen (XJTU) Masahiro Takei (CHIBA-U)	Mao Ye (DICP) Chun Lou (HUST)	Feng Dong (TJU) Hideki Murakawa (KOBE-U)	Fei Wang (ZJU) Yoshihiko Oishi (MURORAN-IT)	Jianfu Zhao (IMECH) Jian Li (SEU)	Lihui Peng (TSINGHUA) Chao Tan (TJU)
13:30 – 13:45	ISMTMF-19-03-02-047	ISMTMF-19-01-02-003	ISMTMF-19-02-05-023	ISMTMF-19-04-01-004	ISMTMF-19-05-11-123	ISMTMF-19-09-01-029
13:45 – 14:00	ISMTMF-19-03-01-007	ISMTMF-19-01-17-132	ISMTMF-19-02-02-011	ISMTMF-19-04-02-005	ISMTMF-19-05-02-090	ISMTMF-19-09-02-069
14:00 – 14:15	ISMTMF-19-03-03-065	ISMTMF-19-01-03-017	ISMTMF-19-02-03-012	ISMTMF-19-04-03-010	ISMTMF-19-05-03-094	ISMTMF-19-09-03-071
14:15 – 14:30	ISMTMF-19-04-06-038	ISMTMF-19-01-05-035	ISMTMF-19-02-04-019	ISMTMF-19-04-04-018	ISMTMF-19-05-04-096	ISMTMF-19-09-05-089
14:30 – 14:45	ISMTMF-19-05-09-120	ISMTMF-19-01-07-042	ISMTMF-19-02-01-001	ISMTMF-19-04-05-020	ISMTMF-19-05-06-113	ISMTMF-19-09-06-099
14:45 – 15:00	ISMTMF-19-07-08-133	ISMTMF-19-01-08-051	ISMTMF-19-02-06-024	ISMTMF-19-04-18-146	ISMTMF-19-05-10-121	ISMTMF-19-09-08-140

15:00 – 15:20	Coffee Break	2F Foyer
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Room No.	Room 1 2F Yuan He Ballroom 1	Room 2 2F Yuan He Ballroom 2	Room 3 2F Yuan He Ballroom 3	Room 4 2F Boardroom 1	Room 5 2F Boardroom 2	Room6 2F VIP Room 1
Topic	Novel sensors and measurement methods (1)	Experimental methods for multiphase flow (2)	Tomography and visualization techniques (2)	Optical, non-intrusive techniques (2)	Fundamentals of measurement techniques (2)	Information technology for multiphase flow (2)
Chairs	Bin Li (ZTRI) DailiangXie (CJLU)	Bofeng Bai (XJTU) Shunchun Yao (SCUT)	Kei Ito (KYOTO-U) Qiang Cheng (HUST)	Ningde Jin (TJU) Haigang Wang (IET)	Guodong Liu (HIT) Hui Zhao (ECUST)	Haifeng Ji (ZJU) Yanlin Zhao (CUP, BEIJING)
15:20 – 15:35	ISMTMF-19-06-01-006	ISMTMF-19-01-09-052	ISMTMF-19-02-07-027	ISMTMF-19-04-07-041	ISMTMF-19-05-08-117	ISMTMF-19-09-09-150
15:35 – 15:50	ISMTMF-19-06-02-009	ISMTMF-19-01-12-085	ISMTMF-19-02-13-084	ISMTMF-19-04-08-044	ISMTMF-19-07-15-160	ISMTMF-19-09-20-152
15:50 – 16:05	ISMTMF-19-06-03-013	ISMTMF-19-01-18-135	ISMTMF-19-02-09-058	ISMTMF-19-04-10-050	ISMTMF-19-05-07-115	ISMTMF-19-09-10-155
16:05 – 16:20	ISMTMF-19-06-04-015	ISMTMF-19-01-14-097	ISMTMF-19-02-11-077	ISMTMF-19-04-12-074	ISMTMF-19-05-01-034	ISMTMF-19-08-16-153
16:20 – 16:35	ISMTMF-19-06-13-061	ISMTMF-19-01-15-102	ISMTMF-19-02-12-078	ISMTMF-19-04-13-081	ISMTMF-19-05-12-124	ISMTMF-19-10-09-072
16:35 – 16:50	ISMTMF-19-06-06-028	ISMTMF-19-01-16-112	ISMTMF-19-02-08-055	ISMTMF-19-04-15-095	ISMTMF-19-05-13-126	ISMTMF-19-09-07-101

18:00 – 20:30	Welcome Reception Dinner	1F M-café
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**Tuesday (November 5, 2019)**

09:00 - 09:40	Plenary Lecture 5: Manuchehr Soleimani Chair: Yuichi Murai						3F Yong He Ballroom
09:40 - 10:20	Plenary Lecture 6: Mingdong Dong Chair: Yingxiang Wu						
10:20 - 10:40	Coffee Break						3F Foyer
10:40 - 11:20	Plenary Lecture 7: Jun Chen Chair: Manuchehr Soleimani						3F Yong He Ballroom
10:20 - 12:00	Plenary Lecture 8: Junfeng Wang Chair: Cameron Tropea						
12:00 - 13:30	Lunch						1F M-café
Room No.	Room 1 2F Yuan He Ballroom 1	Room 2 2F Yuan He Ballroom 2	Room 3 2F Yuan He Ballroom 3	Room 4 2F Boardroom 1	Room 5 2F Boardroom 2	Room6 2F VIP Room 1	
Topic	Novel sensors and measurement methods (2)	Experimental methods for multiphase flow (3)	Tomography and visualization techniques (3)	Optical, non-intrusive techniques (3)	Fundamentals of measurement techniques (3)	Computational methods for multiphase flow (1)	
Chairs	Hisashi Umekawa (KANSAI-U) Xiangchen Qian (NCEPU)	Yuyin Zhang (SJTU) Hyoung-Bum Kim (GNU)	Shihong Yue (TJU) Xuecheng Wu (ZJU)	Kuanfang Ren (NORMANDIE) Hongwei Li (NEEPU)	Zhiqiang Sun (CSU) Huan Lian (IMCAS)	Jun Yao (UPC) Xuesong Li (SJTU)	
13:30 – 13:45	ISMTMF-19-06-07-030	ISMTMF-19-01-13-086	ISMTMF-19-02-19-125	ISMTMF-19-04-19-154	ISMTMF-19-05-14-128	ISMTMF-19-08-02-026	
13:45 – 14:00	ISMTMF-19-06-08-036	ISMTMF-19-01-01-002	ISMTMF-19-02-16-104	ISMTMF-19-04-17-131	ISMTMF-19-08-17-156	ISMTMF-19-08-15-151	
14:00 – 14:15	ISMTMF-19-06-09-037	ISMTMF-19-01-19-158	ISMTMF-19-02-24-145	ISMTMF-19-06-10-046	ISMTMF-19-05-17-139	ISMTMF-19-08-04-039	
14:15 – 14:30	ISMTMF-19-06-11-048	ISMTMF-19-10-07-054	ISMTMF-19-02-15-098	ISMTMF-19-04-20-159	ISMTMF-19-05-05-105	ISMTMF-19-08-05-043	
14:30 – 14:45	ISMTMF-19-06-12-056	ISMTMF-19-10-08-059	ISMTMF-19-02-20-134	ISMTMF-19-10-06-049	ISMTMF-19-05-15-129	ISMTMF-19-08-06-057	
14:45 – 15:00	ISMTMF-19-06-05-016	ISMTMF-19-10-10-092	ISMTMF-19-02-18-122	ISMTMF-19-04-21-161	ISMTMF-19-06-16-066	ISMTMF-19-08-10-103	
15:00 – 15:20	Coffee Break						2F Foyer
Room No.	Room 1 2F Yuan He Ballroom 1	Room 2 2F Yuan He Ballroom 2	Room 3 2F Yuan He Ballroom 3	Room 4 2F Boardroom 1	Room 5 2F Boardroom 2	Room6 2F VIP Room 1	
Topic	Novel sensors and measurement methods (3)	Ultrasound/Acoustic techniques (1)	Tomography and visualization techniques (4)	Other advanced measurement techniques (1)	Other advanced measurement techniques (2)	Computational methods for multiphase flow (2)	
Chairs	Marie-Jean Thoraval (XJTU) Shunchun Yao (SCUT)	Tomonori Ihara (TUMSAT) Lijun Xu (BUAA)	Haigang Wang (IET) Xingbin Liu (DQYT-CNPC)	Tatsuya Hazuku (TUMSAT) Hongbing Ding (TJU)	Jidong Lu (SCUT) Tomio Okawa (UEC)	Daoyin Liu (SEU) Ryo Kurimoto (USP)	
15:20 – 15:35	ISMTMF-19-06-14-062	ISMTMF-19-10-03-025	ISMTMF-19-02-22-137	ISMTMF-19-07-10-144	ISMTMF-19-07-09-142	ISMTMF-19-08-08-091	
15:35 – 15:50	ISMTMF-19-06-21-107	ISMTMF-19-10-02-022	ISMTMF-19-02-23-143	ISMTMF-19-07-03-064	ISMTMF-19-07-02-060	ISMTMF-19-08-07-080	
15:50 – 16:05	ISMTMF-19-06-17-075	ISMTMF-19-10-01-014	ISMTMF-19-02-21-136	ISMTMF-19-07-04-106	ISMTMF-19-07-11-147	ISMTMF-19-08-11-108	
16:05 – 16:20	ISMTMF-19-06-19-082	ISMTMF-19-10-04-031	ISMTMF-19-04-16-110	ISMTMF-19-07-05-111	ISMTMF-19-07-07-127	ISMTMF-19-08-13-130	
16:20 – 16:35	ISMTMF-19-06-20-088	ISMTMF-19-10-11-119	ISMTMF-19-02-17-109	ISMTMF-19-07-06-116	ISMTMF-19-07-13-149	ISMTMF-19-08-14-141	
16:35 – 16:50	ISMTMF-19-06-15-063	ISMTMF-19-10-05-033	ISMTMF-19-02-25-162	ISMTMF-19-07-12-148	ISMTMF-19-07-14-157	ISMTMF-19-08-03-032	
18:00 – 20:30	Symposium Banquet						3F Yong He Ballroom

**Wednesday (November 6, 2019)**

09:00 – 12:00	City Tour						
12:00 – 14:00	Lunch						1F M-café
14:00 – 18:00	Optional Campus & lab Tour (Booking required at registration desk)						
18:00 – 20:30	Invited Dinner (By invitation only)						

# ISMTMF'19 PROGRAM

**Date: Monday, 04/Nov/2019**

08:00 – 09:00	Registration	<b>Venue:</b> 1F Lobby or 3F Yong He Ballroom
09:00 – 09:10	Welcoming Remarks	<b>Venue:</b> 3F Yong He Ballroom
09:10 – 09:20	Opening Speech	
09:20 – 10:00	<b>Plenary Lecture 1</b> Chair: Xiaoshu Cai <i>From drop impact physics to spray cooling models</i> Prof. Cameron Tropea	
10:00 – 10:30	Group Photo and Coffee Break	<b>Venue:</b> 1F Staff Entrance & 3F Foyer
10:30 – 11:10	<b>Plenary Lecture 2</b> Chair: Huihe Qiu <i>Practical Science of “Revitalizics ” for Decommission of Fukushima Dai-ichi Nuclear Power Plant ~ Innovation with ultrasonic multiphase flow measurement technique and robotic system ~</i> Prof. Hiroshige Kikura	<b>Venue:</b> 3F Yong He Ballroom
11:10 – 11:50	<b>Plenary Lecture 3</b> Chair: Shigeo Hosokawa <i>Electrical capacitance tomography and multiphase flow measurement</i> Prof. Wuqiang Yang	
12:00 – 13:30	<b>Lunch</b>	<b>Venue:</b> 1F M-café
13:30 – 15:00	@ Room 1	<b>Venue:</b> 2F Yuan He Ballroom 1
<b>Session 1: Micro / Nano Technology and Micro/Nano Flows (1)</b>		
Chairs: Bin Chen (XJTU) / Masahiro Takei (CHIBA-U)		
13:30 – 13:45	Paper: 19-03-02-047 <i>Droplet Dynamics on A Nanostructured Superomniphobic Surface</i> Dong Liao, <b>Huihe Qiu</b> (The Hong Kong University of Science & Technology, Hongkong)	
13:45 – 14:00	Paper: 19-03-01-007 <i>Micro Bubble Generation with Droplet of Ultra Fine Bubble Water</i> Yoshikatsu Ueda, <b>Zhenghao Liao</b> (Kyoto University, Japan)	
14:00 – 14:15	Paper: 19-03-03-065 <i>Generation of Micro-Bubbles from A Heated Thin Wire</i> <b>Yuegui Li</b> , Naoya Iwamoto, Shigeo Hosokawa, Akio Tomiyama, Tomohiro Akita, Yasunari Maeda (Kobe University, Japan)	
14:15 – 14:30	Paper: 19-04-06-038 <i>On-Line Measurement Method of Particulate Concentration of Cooking Fume Based on Side-Sattering</i> Jinwei Qin, <b>Wu Zhou</b> , Xiaoshu Cai, Wentao Wang (University of Shanghai for Science and Technology, China)	

14:30 – 14:45	Paper: 19-05-09-120 <i>The Rheology of PVP-Coated Silica Nanoparticles Positioned At An Air-Aqueous Interface</i> <b>Kai Yu</b> , David Harbottle, Bin Li, Wei Zhang, Dongbao Wang, HaoJie Xu, Zhentao Wang, <b>Junfeng Wang</b> (Jiangsu University, China)
14:45 – 15:00	Paper: 19-07-08-133 <i>In-Situ Diagnostic of Nanoparticle Formation and Transport in Complex Flames Using Phase-Selective Laser-Induced Breakdown Spectroscopy</i> <b>Yiyang Zhang</b> , Yihua Ren, Shuiqing Li (Tsinghua University, China)

13:30 – 15:00 @ Room 2	<b>Venue:</b> 2F Yuan He Ballroom 2
<b>Session 2: Experimental methods for multiphase flow (1)</b>	
Chairs: Mao Ye (DICP) / Chun Lou (HUST)	

13:30 – 13:45	Paper: 19-01-02-003 <i>Experimental Study on Heat Transfer and Bubble Characteristics in The Dense Phase of a Pressurized Fluidized Bed</i> Jinyong Zhu, <b>Cai Liang</b> (Southeast University, China)
13:45 – 14:00	Paper: 19-01-17-132 <i>Mixing Enhancement under External Electric Fields with the Flow Field Visualization by PLIF Technique</i> Zhiwei Liu, Yu Cao, Junfeng Wang, <b>Hailong Liu</b> (Jiangsu University)
14:00 – 14:15	Paper: 19-01-03-017 <i>A Review of Experimental Measurement to Study Cluster Dynamics in Circulating Fluidized Bed</i> Naval V.Koralkar, <b>Qiang Zhou</b> (Xi'an Jiaotong University, China)
14:15 – 14:30	Paper: 19-01-05-035 <i>Detection of The Gas-Liquid Dispersion States in A Jet Bubbling Reactor</i> Yun Shuai, Peng Zhang, Xiaoyun Guo, <b>Zhengliang Huang</b> , Yao Yang, Jingyuan Sun, Jingdai Wang, Yongrong Yang (Zhejiang University, China)
14:30 – 14:45	Paper: 19-01-07-042 <i>A Study on Frictional Drag of Rotating Disk with Different Surface Properties Due to Micro-Bubbles</i> <b>Masaaki Ishikawa</b> , Kazusa Uehara (University of The Ryukyus, Japan)
14:45 – 15:00	Paper: 19-01-08-051 <i>Study on Ignition Characteristics of Single Solid Fuel Particles</i> Meirong Dong, Shishi Li, Fasheng Luo, <b>Jidong Lu</b> (South China University of Technology, China)

13:30 – 15:00 @ Room 3	<b>Venue:</b> 2F Yuan He Ballroom 3
<b>Session 3: Tomography and visualization techniques (1)</b>	
Chairs: Feng Dong (TJU) / Hideki Murakawa (KOBE-U)	

13:30 – 13:45	Paper: 19-02-05-023 <i>V Dence Deep Net for Electrical Tomography</i> Feng. Li, Chao Tan, <b>Feng Dong</b> (Tianjin University, China)
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13:45 – 14:00	Paper: 19-02-02-011 <i>Development of An Ultrasonic Tomography for Measuring Void Distribution in Liquid-Metal Bubble Column</i> <b>Hideki Murakawa</b> , Sven Eckert (Kobe University, Japan)
14:00 – 14:15	Paper: 19-02-03-012 Optimal Design of Sensors of 3D Electrical Capacitance Tomography Jingjing Shen, Shuanghe Meng, Wuqiang Yang, <b>Mao Ye</b> , Zhongmin Liu (Dalian Institute of Chemical Physics, China)
14:15 – 14:30	Paper: 19-02-04-019 <i>X-Ray Radiography and Numerical Simulation of Gas Bubble Behavior in Centrifugal Pump</i> Rendong Xiong, <b>Kei Ito</b> , Daisuke Ito, Yasushi Saito, Hiroyuki Ushifusa, Masaru Shinozaki, Yugo Asai, Minoru Sato (Kyoto University, Japan)
14:30 – 14:45	Paper: 19-02-01-001 <i>Research on Measurement Technique of Phase Distribution and Void Fraction for Cryogenic Two Phase Flow Based on Capacitance</i> Huangjun Xie, Hong Chen, Xu Gao, Xudong Zhen, Rui Zhou, <b>Xiaobin Zhang</b> (Zhejiang University, China)
14:45 – 15:00	Paper: 19-02-06-024 <i>Gas/Oil/Water Three-Phase Medium Differentiation Using ERT/UTT Dual-Modality Tomography</i> Guanghui Liang, <b>Shangjie Ren</b> , Feng Dong (Tianjin University, China)

13:30 – 15:00 @ Room 4	<b>Venue: 2F Boardroom 1</b>
<b>Session 4: Optical, non-intrusive techniques (1)</b>	
Chairs: Fei Wang (ZJU) / Yoshihiko Oishi (MURORAN-IT)	

13:30 – 13:45	Paper: 19-04-01-004 <i>Mixing of Two-Layer Density-Stratified Fluid Induced by Interaction Between The Density Interface and Two Vortex Rings</i> Lile Cao, <b>Kotaro Takamure</b> , Tomohiro Degawa, Tomomi Uchiyama (Nagoya University, Japan)
13:45 – 14:00	Paper: 19-04-02-005 <i>Noncontact Measurement of Three-Dimensional Flame Temperature by Focused Light-Field Imaging with Wave Optics Theory</i> Jingwen Shi, <b>Hong Qi</b> , Xiangyang An, Liming Ruan, Heping Tan (Harbin Institute of Technology, China)
14:00 – 14:15	Paper: 19-04-03-010 <i>Multiparameter Measurements in A Laminar Axisymmetric Coflow Ethylene/Air Diffusion Flame</i> Haibin Cui, <b>Fei Wang</b> , Yunchu Zhai (Zhejiang University, China)
14:15 – 14:30	Paper: 19-04-04-018 <i>Molecular Tagging Velocimetry on Channel Turbulence Using Biacetyl As the Tracer</i> Fangbo Li, Haibin Zhang, <b>Bofeng Bai</b> (Xi'an Jiaotong University, China)

14:30 – 14:45	Paper: 19-04-05-020 <i>A New Laser Diagnostic Technique Based on Absorption and Schlieren for Detecting Preferential Evaporation in A Binary-Component Fuel Spray</i> Wenyuan Qi, Yifan Zhou, <b>Yuyin Zhang</b> (Shanghai Jiao Tong University, China)
14:45 – 15:00	Paper: 19-04-18-146 <i>A New Contactless Conductance Sensor Based on Capacitive Reactance Elimination and Its Application to Gas-Liquid Two-Phase Flow</i> Xiaoyu Tang, Junchao Huang, Haifeng Ji, Baoliang Wang, <b>Zhiyao Huang</b> (Zhejiang University, China)

13:30 – 15:00 @ Room 5 **Venue: 2F Boardroom 2**

**Session 5: Fundamentals of measurement techniques (1)**

Chairs: Jianfu Zhao (IMECH) / Jian Li (SEU)

13:30 – 13:45	Paper: 19-05-11-123 <i>An Experimental Study on Cone-Jet Mode in Electrostatic Atomization</i> Qisi Wang, <b>Zhentao Wang</b> , Yaosheng Zhang (Jiangsu University, China)
13:45 – 14:00	Paper: 19-05-02-090 <i>Motion Characteristics of Particles in Gasification Nozzle</i> Yejun Hao, Zhoufeng Zhang, <b>Hui Zhao</b> , Haifeng Liu (East China University of Science and Technology, China)
14:00 – 14:15	Paper: 19-05-03-094 <i>Mixing Performance of Density Stratification by Gas-Liquid Two-Phase Jet</i> <b>Jiarong Lu</b> , Ryutaro Seo, Akihiro Futsuta, Akiko Kaneko, Yutaka Abe (University of Tsukuba, Japan)
14:15 – 14:30	Paper: 19-05-04-096 <i>An Experimental Study on Micro-Sized Particle-Wall Normal Collision</i> <b>Yiyang Zhang</b> , Zhu Fang, Shumiao Zhao, Mingzhe Wei, Xinxin Wu, Shuiqing Li (Tsinghua University, China)
14:30 – 14:45	Paper: 19-05-06-113 <i>Impact of A Drop Containing A Bubble onto A Liquid Surface</i> Siqi Zhu, <b>Marie Jean Thoraval</b> (Xi'an jiaotong University, China)
14:45 – 15:00	Paper: 19-05-10-121 <i>Electrocoalescence of Water Droplets in Sunflower Oil under Non-Uniform Electric Fields</i> <b>Bin Li</b> , Kai Yu, Yujie Huang, Wei Zhang, Zhentao Wang, Junfeng Wang (Jiangsu University, China)

13:30 – 15:00 @ Room 6 **Venue: 2F VIP Room 1**

**Session 6: Information technology for multiphase flow (1)**

Chairs: Lihui Peng (TSINGHUA) / Chao Tan (TJU)

13:30 – 13:45	Paper: 19-09-01-029 <i>Comparison of Three Deep Learning Neural Networks for Prediction of Mass Flowrate for Oil-Gas-Water Three-Phase Flow</i> Jinku Li, Delin Hu, Wei Chen, Yi Li, <b>Lihui Peng</b> (Tsinghua University, China)
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13:45 – 14:00	Paper: 19-09-02-069 <i>Image Analysis Method for Flow Parameters Based on Deep-Learning in Gas-Liquid-Solid Three-Phase Reactors</i> Chao Wang, Shaoshuo Li, Jingxing Yao, <b>Yao Yang</b> , Zhengliang Huang, Jingyuan Sun, Jingdai Wang, Yongrong Yang (Zhejiang University, China)
14:00 – 14:15	Paper: 19-09-03-071 <i>Prediction of Bubble Behavior Based on Image Machine Learning Method</i> <b>Hongyi Wang</b> , Hongyu Wang, Feng Dong, Qinghua Guo (Tianjin Polytechnic University, China)
14:15 – 14:30	Paper: 19-09-05-089 <i>Prediction of Biomass Moisture Content in The Fluidized Bed Dryer Using LSTM Neural Network</i> Huangfeng Fang, Yaoyao Liu, <b>Wenbiao Zhang</b> (North China Electric Power University, China)
14:30 – 14:45	Paper: 19-09-06-099 <i>Characterization of The Combustion Behaviors of Individual Coal Particles in An Air Suspension Using Image Processing Techniques</i> Fengjie Li, Yong Yan, <b>Xiangchen Qian</b> , Gang Lu (North China Electric Power University/University of Kent, China/UK)
14:45 – 15:00	Paper: 19-09-08-140 <i>Deep Learning-Based Hybrid Prediction Model for Combustion Condition Monitoring</i> Zhezhe Han, Md. Moinul Hossain, <b>Chuanlong Xu</b> , Biao Zhang (Southeast University, China)
15:00 – 15:20	Coffee Break <span style="float: right;"><b>Venue:</b> 2F Foyer</span>
15:20 – 16:50 @ Room 1	<b>Venue:</b> 2F Yuan He Ballroom 1
<b>Session 1: Novel sensors and measurement methods (1)</b> Chairs: Bin Li (ZTRI) / DailiangXie (CJLU)	
15:20 – 15:35	Paper: 19-06-01-006 <i>On-Line Measurement of Carbon Content in Fly Ash Based on Plasma Spectrum sensor</i> <b>Shunchun Yao</b> , Lifeng Zhang, Xiayang Yao, Jidong Lu (South China University of Technology, China)
15:35 – 15:50	Paper: 19-06-02-009 <i>Direct Measurement of The Internal Pressure of Ultrafine Bubble Using Radioactive Nuclei</i> Minoru Tanigaki, <b>Takuya Yamakura</b> , Yoshikatsu Ueda, Akihiro Taniguchi, Yomei Tokuda, Yoshitaka Ohkubo (Kyoto University, Japan)
15:50 – 16:05	Paper: 19-06-03-013 <i>Particle Tracking Rheometry for Evaluating Momentum Transfer Mechanism of Interfacial Particulate Flows</i> Shunta Yamagishi, <b>Peter Fischer</b> , Hyun Jin Park, Yuji Tasaka, Yuichi Murai (Hokkaido University, Japan)

16:05 – 16:20	<p>Paper: 19-06-04-015</p> <p><i>Flowrate Measurement of Wet Gas with Low LVF Through V-Cone Throttle Device</i></p> <p>Fan Zhao, Shanshan Li, Xuebo Zheng, Denghui He, <b>Bofeng Bai</b> (Xi'an Jiaotong University, China)</p>
16:20 – 16:35	<p>Paper: 19-06-13-061</p> <p><i>Salinity Independent Flow Measurement of Vertical Upward Gas-Liquid Flows in A Small Pipe Using Conductance Method</i></p> <p>Dayang Wang, <b>Ningde Jin</b>, Lusheng Zhai, Yingyu Ren (Tianjin University, China)</p>
16:35 – 16:50	<p>Paper: 19-06-06-028</p> <p><i>Quantitative Measurement of Reflooding Process by Using Neutron Radiography</i></p> <p><b>Hisashi Umekawa</b>, Kei Saito, Hiroki Fujiwara, Hiroyuki Sakai, Takeyuki Ami, Yasushi Saito, Daisuke Ito (Kansai University, Japan)</p>

15:20 – 16:50 @ Room 2	<b>Venue: 2F Yuan He Ballroom 2</b>
<b>Session 2: Experimental methods for multiphase flow (2)</b>	
Chairs: Bofeng Bai (XJTU) / Shunchun Yao (SCUT)	

15:20 – 15:35	<p>Paper: 19-01-09-052</p> <p><i>Distribution of Particle Thickness Deposition in Industrial Centrifuge by Wireless Electrical Resistance Detector (WERD) under Different Relative Centrifugal Force</i></p> <p><b>Yosephus Ardean Kurnianto Prayitno</b>, Zhao Tong, Yoshiyuki Iso, Masahiro Takei (Chiba University, Japan)</p>
15:35 – 15:50	<p>Paper: 19-01-12-085</p> <p><i>Experimental Investigation of Collector Concentration on Attachment of Particle to A Stationary Bubble in Aqueous Solution</i></p> <p>Luyang Chen, Jie Wu, <b>Zhiqiang Sun</b> (Central South University, China)</p>
15:50 – 16:05	<p>Paper: 19-01-18-135</p> <p><i>Effects of Coaxial Electrode Design for Creating Electric Field to Acceleration in Biodiesel Preparation from Cottonseed Oil</i></p> <p>Piyaphong Yongphet, <b>Junfeng Wang</b>, Dongbao Wang, Wei Zhang, Haojie Xu, Shuaiquan Lu (Jiangsu University, China)</p>
16:05 – 16:20	<p>Paper: 19-01-14-097</p> <p><i>Study on Measurement of Liquid Holdup of Two-Phase Flow Based on Double-Sided Two Way</i></p> <p>Zihui Wei, Yuexin Lang, Ning Zhao, Jixun Zhao, <b>Lide Fang</b> (Hebei University, China)</p>
16:20 – 16:35	<p>Paper: 19-01-15-102</p> <p><i>Effect of Elevated Pressure on Solids Circulation Rate in A Circulating Fluidized Bed</i></p> <p>Jinding Hu, <b>Daoyin Liu</b>, Cai Liang, Xiaoping Chen, Chuanlong Xu, Lunbo Duan (Southeast University, China)</p>



16:35 – 16:50	Paper: 19-01-16-112 <i>Experimental Investigation of Elect Rostatics of Coal Granules</i> Yanlin Zhao, Jia Fang, <b>Jun Yao</b> , Chi-Hwa Wang (China University of Petroleum (Beijing), China)
15:20 – 16:50 @ Room 3 <span style="float: right;">Venue: 2F Yuan He Ballroom 3</span>	
<b>Session 3: Tomography and visualization techniques (2)</b> Chairs: Kei Ito (KYOTO-U) / Qiang Cheng (HUST)	
15:20 – 15:35	Paper: 19-02-07-027 <i>Homotopy Algorithm for ERT Sparse Reconstruction</i> Wei Zhang, Chao Tan, <b>Feng Dong</b> (Tianjin University, China)
15:35 – 15:50	Paper: 19-02-13-084 <i>Volumetric Particle Image Velocimetry Using A Single Light Field Camera in Combination with The Deconvolution Algorithm</i> Xiaoyu Zhu, Feifan Lu, Biao Zhang, <b>Chuanlong Xu</b> (Southeast University, China)
15:50 – 16:05	Paper: 19-02-09-058 <i>Investigation of The Gravity-Driven Settling of A Porous Particle Using PTV and PIV</i> Likun Ma, Shuliang Xu, <b>Mao Ye</b> , Zhongmin Liu (Dalian Institute of Chemical Physics, Academy of Sciences, China)
16:05 – 16:20	Paper: 19-02-11-077 <i>Visualized Characterization of The Cloudy Zone in A Gas Solid Fluidized Bed with Liquid Spray</i> Sihang Tian, <b>Jingyuan Sun</b> , Yao Yang, Zhengliang Huang, Jingdai Wang, Yongrong Yang (Zhejiang University, China)
16:20 – 16:35	Paper: 19-02-12-078 <i>The Effect of Electrode Length of Electrical Capacitance Tomography Sensor on Gas Solids Fluidised Bed Measurements</i> Kai Huang, Shuanghe Meng, Qiang Guo, <b>Mao Ye</b> (Dalian Institute of Chemical Physics, Chinese Academy of Sciences, China)
16:35 – 16:50	Paper: 19-02-08-055 <i>Weight and Relaxation Strategies of The Landweber Method for Image Reconstruction of EMT System Based on TMR Sensors</i> <b>Chao Wang</b> , Qi Guo (Tianjin University, China)
15:20 – 16:50 @ Room 4 <span style="float: right;">Venue: 2F Boardroom 1</span>	
<b>Session 4: Optical, non-intrusive techniques (2)</b> Chairs: Ningde Jin (TJU) / Haigang Wang (IET)	
15:20 – 15:35	Paper: 19-04-07-041 <i>Piv Experimental Study on Turbulence Characteristics of Two-Phase Flow in 180 Degree Elbow</i> Wuguang Chen, <b>Junlian Yin</b> , Dezhong Wang, Kangbei Cai, Yalan Qian (Shanghai Jiangtong University, China)

15:35 – 15:50	Paper: 19-04-08-044 <i>Measurement of Mass Transfer and Marangoni Effect of A Stationary Droplet by PLIF Method</i> Zhenzhen Wang, <b>Jie Chen</b> , Xin Feng, Weipeng Zhang, Chao Yang (Chinese Academy of Sciences, Beijing, China)
15:50 – 16:05	Paper: 19-04-10-050 <i>Optimization of Flame Radiation Sampling Through Dual-Plenoptic Camera for Temperature Measurement</i> Qi Qi, Md. Moinul Hossain, <b>Chuanlong Xu</b> , Biao Zhang, Yizhi Huang (Southeast University, China)
16:05 – 16:20	Paper: 19-04-12-074 <i>Scattering of A Laser Beam by A Real Liquid Jet</i> Qingwei Duan, Kuan Fang Ren, <b>Xiang'e Han</b> (Xidian University, China)
16:20 – 16:35	Paper: 19-04-13-081 <i>Laser Doppler Shear Stress Sensor Developed for Bubbly Drag Reduction Ships</i> <b>Yoshihiko Oishi</b> , Satoshi Ogami, Hyun Jin Park, Yuich Murai, Hideki Kawai (Muroran Institute of Technology, Japan)
16:35 – 16:50	Paper: 19-04-15-095 <i>A Non Intrusive Optical System for The Measurement and Characterisation of Gas Liquid Two Phase Flow in a High Pressure Pipeline</i> Ding Shao, Wenbiao Zhang, <b>Yong Yan</b> (North China Electric Power University/University of Kent, China/UK)

15:20 – 16:50 @ Room 5	<b>Venue: 2F Boardroom 2</b>
<b>Session 5: Fundamentals of measurement techniques (2)</b>	
Chairs: Guodong Liu (HIT) / Hui Zhao (ECUST)	

15:20 – 15:35	Paper: 19-05-08-117 <i>Experimental Investigation of The Attachment Angle Between Air Bubble and Coal Fly Ash in Aqueous Solution</i> Jie Wu, <b>Zhiqiang Sun</b> (Central South University, China)
15:35 – 15:50	Paper: 19-07-15-160 <i>Effect of Gas Disturbance on Drop Formation of Heterogeneous Condensation by Environmental Scanning Electron Microscopy</i> <b>Li Lv</b> , Jun Zhang, Junchao Xu (Southeast University)
15:50 – 16:05	Paper: 19-05-07-115 <i>Measurement on Velocity Distribution of Flexible Filamentous Particles in A Fluidized Bed of Gas-Solid Phase</i> Ran Chen, Xiaomeng Gao, Chaoxian Liu, Ziyi Zhang, Guodong Deng, Le Wang, Duanfeng Lu, <b>Bin Li</b> (Guangdong China Tobacco Industry Co. Ltd, China)
16:05 – 16:20	Paper: 19-05-01-034 <i>Bubble Growth of Binary Mixture During Flow Boiling in A Rectangular Microchannel</i> <b>Huajun Li</b> , Guangyu Liu (Hangzhou Dianzi University, China)

16:20 – 16:35	Paper: 19-05-12-124 <i>Experimental Study on Bubbles Coalescence in Low Conductivity Medium of Ethanol under Electric Field</i> Wei Zhang, <b>Junfeng Wang</b> , Shijie Yang, Bin Li, Kai Yu (Jiangsu University, China)
16:35 – 16:50	Paper: 19-05-13-126 <i>Real-Time Measurement Method of Single-Point Liquid Velocity in Gas-Liquid Two-Phase Flow Based on Differential Tungsten Oxide Streaming Potential</i> Yuanfang Mao, <b>Yizhang Wen</b> (Hunan University, China)
15:20 – 16:50 @ Room 6 <span style="float: right;"><b>Venue:</b> 2F VIP Room 1</span>	
<b>Session 6: Information technology for multiphase flow (2)</b> Chairs: Haifeng Ji (ZJU) / Yanlin Zhao (CUP, BEIJING)	
15:20 – 15:35	Paper: 19-09-09-150 <i>High Resolution Laser Speckle Contrast Imaging by Edge-Processing Algorithm</i> Hanwen Fan, <b>Bin Chen</b> , Dong Li (Xi'an Jiaotong University, China)
15:35 – 15:50	Paper: 19-09-20-152 <i>New Image Reconstruction Algorithm of CCEIT Based on Unsupervised Clustering</i> <b>Yuxin Wang</b> , Zhiyao Huang, Baoliang Wang, Haifeng Ji and Xiao-Yu Tang (Zhejiang University, China)
15:50 – 16:05	Paper: 19-09-10-155 <i>Effect Using Local and Global Conditions on Critical Heat Flux Correlations in Upward and Downward Flow in Research Reactors using Plate-Type Fuel</i> Abdullah Adnan Rawashdeh, <b>Tenglong Cong</b> , Nassir Yassin (Harbin Engineering University, China)
16:05 – 16:20	Paper: 19-08-16-153 <i>Wind Field Reconstruction for Micro-Scale Wind Resource Assessment in Complex Terrain Based on CFD Coupled On-Site Measurement</i> <b>Xiaoyu Tang</b> , Shumian Zhao, Bernhard Stoevesandt (Zhejiang University, China)
16:20 – 16:35	Paper: 19-10-09-072 <i>Deep Learning in Particle Size Distribution of Suspended Particles</i> Qifan Ying, <b>Dailiang Xie</b> , Zhipeng Xu, Ya Xu, Tiejun Liu, Yuebing Wang (China Jiliang University, China)
16:35 – 16:50	Paper: 19-09-07-101 <i>Identification of Two-Phase Flow Patterns Along Upward Inclined Pipe - Using Artificial Neural Network</i> Zi Lin, <b>Xiaolei Liu</b> (University of Strathclyde/University of Glasgow, UK)
18:00 – 20:30	<b>Welcome Reception Dinner</b> <span style="float: right;"><b>Venue:</b> 1F M-café</span>

**Date: Tuesday, 05/Nov/2019**

09:00 – 09:40	<b>Plenary Lecture 4</b> Chair: Yuichi Murai <b>Venue:</b> 3F Yong He Ballroom <i>Intelligent multi-modality super-sensing for process monitoring</i> Prof. Manuchehr Soleimani
09:40 – 10:20	<b>Plenary Lecture 5</b> Chair: Yingxiang Wu <i>Scanning Probe Microscopy Reveal Interfacial Water at Nanoscale</i> Prof. Mingdong Dong
10:20 – 10:40	Coffee Break <b>Venue:</b> 3F Foyer
10:40 – 11:20	<b>Plenary Lecture 6</b> Chair: Manuchehr Soleimani <b>Venue:</b> 3F Yong He Ballroom <i>Application of Digital Holography on Multiphase Flow Diagnostics</i> Prof. Jun Chen
11:20 – 12:00	<b>Plenary Lecture 7</b> Chair: Cameron Tropea <i>Investigation on Charged Multiphase Flow by Visual Measurement</i> Prof. Junfeng Wang
12:00 – 13:30	Lunch <b>Venue:</b> 1F M-café

13:30 – 15:00 @ Room 1 **Venue:** 2F Yuan He Ballroom 1  
**Session 1: Novel sensors and measurement methods (2)**  
Chairs: Hisashi Umekawa (KANSAI-U) / Xiangchen Qian (NCEPU)

13:30 – 13:45	Paper: 19-06-07-030 <i>Flowrate Estimation of Horizontal Gas-Liquid Slug Flow by Analyzing Interfacial Wave Statistics from Conductance Sensor</i> Wei Chen, Jinku Li, Lihui Peng, <b>Yi Li</b> (Tsinghua University, China)
13:45 – 14:00	Paper: 19-06-08-036 <i>Application of An Ultrasonic Liquid Film Sensor to Steam-Water Two-Phase Flow under High-pressure and High-temperature Conditions</i> Hajime Furuichi, <b>Kenichi Katono</b> (Hitachi, Ltd, Japan)
14:00 – 14:15	Paper: 19-06-09-037 <i>Remote Measurement Method for Fugitive Dust Emission of Particulate Concentration Based on Backward Light Scattering</i> <b>Wentao Wang, Wu Zhou, Xiaoshu Cai, Jinwei Qin</b> (University of Shanghai for Science and Technology, China)
14:15 – 14:30	Paper: 19-06-11-048 <i>Improvement of Wet Type Gravity Separator by Using Electrical Impedance Spectroscopy to Evaluate Difference Metal Components</i> Zengfeng Gao, Xiaotian Yan, Marlin R. Baidillah, <b>Masahiro Takei</b> (Chiba University, Japan)
14:30 – 14:45	Paper: 19-06-12-056 <i>Wet Gas Flow Measurement by A Cross-Correlation Vortex Flowmeter</i> Jinxia Li, <b>Chao Wang</b> , Hongbing Ding (Tianjin University, China)
14:45 – 15:00	Paper: 19-06-05-016 <i>A Solution to Measure Wet Gas Two Phase Flow Rate with Extremely-Low Liquid Loading</i> Shanshan Li, <b>Bofeng Bai</b> (Xi'an Jiaotong University, China)

13:30 – 15:00 @ Room 2 Venue: 2F Yuan He Ballroom 2

**Session 2: Experimental methods for multiphase flow (3)**

Chairs: Yuyin Zhang (SJTU) / Hyoung-Bum Kim (GNU)

13:30 – 13:45	Paper: 19-01-13-086 <i>Piezoelectric Energy Harvesting from The Vortex-Induced Vibration Inside HVAC Ducts</i> Zhibiao Tang, Kun Lei, <b>Zhiqiang Sun</b> (Central South University, China)
13:45 – 14:00	Paper: 19-01-01-002 <i>Thermal Radiation Characteristics in Dilute Phase Region of Oxy-Fuel Combustion Pressurized Fluidized Bed</i> Xin Zeng, <b>Cai Liang</b> (Southeast University, China)
14:00 – 14:15	Paper: 19-01-19-158 <i>Characteristics of Capillary Effect on Moving Rough Surface</i> Lin Wang, <b>Ziwen Zuo</b> , Junfeng Wang (Jiangsu University, China)
14:15 – 14:30	Paper: 19-10-07-054 <i>Experimental and Numerical Studies on Condensation and Separation Characteristics of Two Phase Flow in The Supersonic Separator</i> Peijuan Cao, Chao Wang, <b>Hongbing Ding</b> , Yuhe Tian (Tianjin University, China)
14:30 – 14:45	Paper: 19-10-08-059 <i>Measurement of Suspension Particle Size Distribution Based on Machine Learning</i> Yeming Li, <b>Dailiang Xie</b> , Zhipeng Xu, Ya Xu, Tiejun Liu, Yuebing Wang (China Jiliang University, China)
14:45 – 15:00	Paper: 19-10-10-092 <i>Slug Flow Identification Using The Liquid Velocity Information</i> Songqing Wang, <b>Hyoungbum Kim</b> (Gyeongsang National University, Korea)

13:30 – 15:00 @ Room 3 Venue: 2F Yuan He Ballroom 3

**Session 3: Tomography and visualization techniques (3)**

Chairs: Shihong Yue (TJU) / Xuecheng Wu (ZJU)

13:30 – 13:45	Paper: 19-02-19-125 <i>Experimental Study on Electric-Field-Induced Droplet Motion and Breakup in A Dielectric Liquid</i> Dongbao Wang, <b>Junfeng Wang</b> , Piyaphong Yongphet, Zhiheng Fan, Wei Zhang, Haojie Xu (Jiangsu University, China)
13:45 – 14:00	Paper: 19-02-16-104 <i>Visualization of Multiscale Bubble Flow in Gas-Liquid Pipeline</i> Luhaiibo Zhao, Chuanlong Xu, <b>Zhiyong Tang</b> (Chinese Academy of Sciences/Southeast University, China)
14:00 – 14:15	Paper: 19-02-24-145 <i>On The Shielding Design of A Contactless Electrical Tomography Sensor</i> <b>Yandan Jiang</b> , Baoliang Wang, Zhiyao Huang, Haifeng Ji (Zhejiang University, China)

14:15 – 14:30	Paper: 19-02-15-098 <i>Characteristics of Bubble Plume Movement and Oxygen Mass Transfer in Microporous Hose Aeration System</i> Jiehui Ren, <b>Wen Cheng</b> , Jikai Liu, Cheng Lu, Tian Wan, Min Wang (Xi'an University of Technology, China)
14:30 – 14:45	Paper: 19-02-20-134 <i>Investigation of Gas-Solids Flow with High Moisture Content Particel by Process Tomography</i> Yonglei Lin, Jiamin Ye, Wuqiang Yang, <b>Haigang Wang</b> (Chinese Academy of Science, China)
14:45 – 15:00	Paper: 19-02-18-122 <i>Internal Flow of a Sessile Charged Droplet on A Heated Substrate</i> Haojie Xu, <b>Junfeng Wang</b> , Dongbao Wang, Wei Zhang, Jiang Yao (Jiangsu University, China)

13:30 – 15:00 @ Room 4	<b>Venue: 2F Boardroom 1</b>
<b>Session 4: Optical, non-intrusive techniques (3)</b>	
Chairs: Kuanfang Ren (NORMANDIE) / Hongwei Li (NEEPU)	

13:30 – 13:45	Paper: 19-04-19-154 <i>Measurement of Local Two-Phase Flow Characteristics in Annular-Mist Flow</i> <b>Tatsuya Hazuku</b> , Tomonori Ihara (Tokyo University of Marine Science and Technology, Japan)
13:45 – 14:00	Paper: 19-04-17-131 <i>An Effectively Method for Evaluation of Liquid Separation Structure in Gas-Droplet Two-Phase Flow</i> Xing Li, <b>Haibin Zhang</b> , Binbin Pei, Bofeng Bai (Xi'an Jiaotong University, China)
14:00 – 14:15	Paper: 19-06-10-046 <i>Light Extinction Spectrometry for Determining the Size Distribution and Concentration of Gold Nanospheres and Nanorods</i> Paerhatjiang Tuersun, Changjiang Zhu, <b>Xiang'e Han</b> , Kuan Fang Ren, Yingzeng Yin (Xidian University, China)
14:15 – 14:30	Paper: 19-04-20-159 <i>Parameter Optimization of Thermal Tagging Method for the Velocity Measurement of Body Fluid</i> Jinyao Wang, Dong Li, <b>Bin Chen</b> (Xi'an Jiaotong University, China)
14:30 – 14:45	Paper: 19-10-06-049 <i>Measurement of Solid Mass Flow Rate under Different Flow Regimes in Pneumatic Conveying by Non-Intrusive Acoustic Emission Detection</i> Peng Zhang, <b>Yao Yang</b> , Zhengliang Huang, Jingyuan Sun, Jingdai Wang and Yongrong Yang (Zhejiang University, China)

14:45 – 15:00	<p>Paper: 19-04-21-161</p> <p><i>Effect of Polymer Additives on Singular Jet Behaviors of Droplet Impact on Superhydrophobic Surfaces</i></p> <p>Honglei Wu, Xuefeng Shen, Junfeng Wang, <b>Hailong Liu</b> (Jiangsu University, China)</p>
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13:30 – 15:00 @ Room 5	<b>Venue: 2F Boardroom 2</b>
<b>Session 5: Fundamentals of measurement techniques (3)</b>	
Chairs: Zhiqiang Sun (CSU) / Huan Lian (IMCAS)	

13:30 – 13:45	<p>Paper: 19-05-14-128</p> <p><i>Experimental Investigations on The Stable Multi-Jet Mode and Its Droplet Size Distribution of Electrospray Formed by Anhydrous Ethanol</i></p> <p>Cong Zhang, <b>Yuanping Huo</b>, Junfeng Wang, Hailong Liu, Ziwen Zuo (Jiangsu University, China)</p>
13:45 – 14:00	<p>Paper: 19-08-17-156</p> <p><i>Comparative Analysis of Coupling Techniques for PTS Accident Using CFD and RELAP5</i></p> <p>Abdullah Adnan Rawashdeh, <b>Tenglong Cong</b> (Harbin Engineering University, China)</p>
14:00 – 14:15	<p>Paper: 19-05-17-139</p> <p><i>An Intensive Review of The Reported Literature of The Fluid Induced Vibration Problems in Reactor Plants</i></p> <p><b>Tahir E. Adreani</b>, Tenglong Cong (Harbin Engineering University, China)</p>
14:15 – 14:30	<p>Paper: 19-05-05-105</p> <p><i>Characteristics of Secondary Drops Produced During Single Drop Impact onto A Liquid Film</i></p> <p><b>Tomio Okawa</b>, Sota Kitabayashi, Katsuyuki Kawai, Kohei Kubo (The University of Electro-Communications, Japan)</p>
14:30 – 14:45	<p>Paper: 19-05-15-129</p> <p><i>Transition from Dripping to Jetting in The Presence of An Electric Field</i></p> <p>Yaosheng Zhang, <b>Zhentao Wang</b>, Qisi Wang (Jiangsu University, China)</p>
14:45 – 15:00	<p>Paper: 19-06-16-066</p> <p><i>New Development of A Liquid Film Thickness Measurement Using Pre-Signal of A Single Tip Optical Fiber Probe</i></p> <p><b>Yuki Mizushima</b>, Akiro Sakamoto (Shizuoka University, Japan)</p>

13:30 – 15:00 @ Room 6	<b>Venue: 2F VIP Room 1</b>
<b>Session 6: Computational methods for multiphase flow (1)</b>	
Chairs: Jun Yao (UPC) / Xuesong Li (SJTU)	

13:30 – 13:45	<p>Paper: 19-08-02-026</p> <p><i>Simulation Study of Ultrasonic Time of Flight Measurement in Gas-Oil-Water Thre- Phase Flow</i></p> <p>Xuwei Shi, Chao Tan, <b>Feng Dong</b> (Central South University, China)</p>
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13:45 – 14:00	Paper: 19-08-15-151 <i>A Numerical Analysis on Hydrodynamic Deformation of Molten Droplets in A Sodium Pool</i> Nassir Yassin, <b>Zhigang Zhang</b> , Rabin Ahmed, Zhi Yang, Fang Wang (Harbin Engineering University, China)
14:00 – 14:15	Paper: 19-08-04-039 <i>Study on Gas-Liquid Separation Efficiency of Oil-Gas-Water Three-Phase Flow with Low Liquid Production and High Water Cut</i> Yuntong Yang, Haiwei Mu, Xingbin Liu, Ronghua Xie, <b>Yingwei Li</b> (Yanshan University, China)
14:15 – 14:30	Paper: 19-08-05-043 <i>Numerical Simulation of Air-Water Two-Phase Flow in Pipes with Branch Junction</i> Shun Miyawaki, <b>Ryo Kurimoto</b> , Hisato Minagawa, Takahiro Yasuda (The University of Shiga Prefecture, Japan)
14:30 – 14:45	Paper: 19-08-06-057 <i>A Coupled Neutronic-Thermal Hydraulic Model of A CERMET Nuclear Thermal Rocket Fuel Element Configuration</i> Adam Nassir, <b>Zhigang Zhang</b> (Harbin Engineering University, China)
14:45 – 15:00	Paper: 19-08-10-103 <i>CFD-DEM Simulation of Gas-Solid Flow of Wet Particles in A Fluidized Bed with Immersed Tubes</i> Meng Zhao, <b>Daoyin Liu</b> , Jiliang Ma, Xiaoping Chen (Southeast University, China)
15:00 – 15:20	Coffee Break <span style="float: right;"><b>Venue:</b> 2F Foyer</span>
15:20 – 16:50 @ Room 1	<b>Venue:</b> 2F Yuan He Ballroom 1
<b>Session 1: Novel sensors and measurement methods (3)</b> Chairs: Marie-Jean Thoraval (XJTU) / Shunchun Yao (SCUT)	
15:20 – 15:35	Paper: 19-06-14-062 <i>Gas Phase Distribution for Gas-Liquid Flows Using Multiple Optical Fiber Probes</i> Qiuyi Yang, <b>Ningde Jin</b> , Fan Wang (Tianjin University, China)
15:35 – 15:50	Paper: 19-06-21-107 <i>Model for Computing Optical Caustic Structures in Rainbow Regions for Tilted Spheriodal Drops</i> <b>Haitao Yu</b> , Jiayi Wang, Jianqi Shen and Cameron Tropea (University of Shanghai for Science and Technology/Technische Universität Darmstadt, China/Germany)
15:50 – 16:05	Paper: 19-06-17-075 <i>Investigations Into The Blockage of Pulverised Fuel Pipes on Coal-Fired Boilers Using An Electrostatic Sensor System</i> Jiarong Zhao, <b>Xiangchen Qian</b> , Xiaobin Huang (North China Electric Power University, China)



16:05 – 16:20	Paper: 19-06-19-082 <i>Investigation on Two-Sensor Conductivity Probe Measuring System</i> Guangyuan Huang, <b>Junlian Yin</b> , Dezhong Wang (Shanghai Jiao Tong University, China)
16:20 – 16:35	Paper: 19-06-20-088 <i>Development of Wire Mesh Sensor for Measurement of Void Fraction Distribution in Refrigerant-Air Two Phase Flow</i> <b>Hiroaki Tsubone</b> , Masaaki Muto, Kenyu Imaue (Ariake College, Japan)
16:35 – 16:50	Paper: 19-06-15-063 <i>Void Fraction Measurement of Oil-Gas-Water Three Phase Flow Using Mutuallyperpendicular Ultrasonic Sensor</i> Weikai Ren, An Zhao, <b>Ningde Jin</b> (Tianjin University, China)

15:20 – 16:50 @ Room 2	<b>Venue:</b> 2F Yuan He Ballroom 2
<b>Session 2: Ultrasound/Acoustic techniques (1)</b>	
Chairs: Tomonori Ihara (TUMSAT) / Lijun Xu (BUAA)	

15:20 – 15:35	Paper: 19-10-03-025 <i>A Ray-Based Method for Biphasic Medium Ultrasonic Tomography Using Gaussian Process Regression</i> Hao Liu, Chao Tan, <b>Feng Dong</b> (Tianjin University, China)
15:35 – 15:50	Paper: 19-10-02-022 <i>Ultrasonic Measurement of The Change of Concentration under Slurry Interface During The Flocculated Sedimentation</i> Zijian Hu, <b>Mingxu Su</b> , Junfeng Li (University of Shanghai for Science and Technology, China)
15:50 – 16:05	Paper: 19-10-01-014 <i>Ultrasound Pulse Imaging of Highly Turbulent Bubbly Flows</i> Yuichi Murai, Shintaro Akasaka, Hyun Jin Park, <b>Yuji Tasaka</b> (Hokkaido University, Japan)
16:05 – 16:20	Paper: 19-10-04-031 <i>Multi-Frequency Ultrasound Attenuation Method for Droplet Size Distribution in Oil-Water Dispersed Flow</i> Han Yu, <b>Chao Tan</b> , Feng Dong (Tianjin University, China)
16:20 – 16:35	Paper: 19-10-11-119 <i>Measurement Quality of UVP under Low Particle Concentration</i> <b>Tomonori Ihara</b> (Tokyo University of Marine Science and Technology, Japan)
16:35 – 16:50	Paper: 19-10-05-033 <i>Identification of Horizontal Oil-Water Two-Phase flow Pattern Using Ultrasonic Doppler and Conductance Sensor</i> Weiling Liu, <b>Chao Tan</b> , Feng Dong (Tianjin University, China)

15:20 – 16:50 @ Room 3	<b>Venue:</b> 2F Yuan He Ballroom 3
<b>Session 3: Tomography and visualization techniques (4)</b>	
Chairs: Haigang Wang (IET) / Xingbin Liu (DQYT-CNPC)	

15:20 – 15:35	Paper: 19-02-22-137 <i>Clustering-Based Component Fraction Measurement in Mixed Solid-Liquid Two-Phase Flow</i> Chang Sun, <b>Shihong Yue</b> (Tianjin University, China)
15:35 – 15:50	Paper: 19-02-23-143 <i>Prediction of Cross-Sectional Interface Shapes for Gas-Liquid Two-Phase Flow in Small Channels</i> <b>Zhentao Dai</b> , Haifeng Ji, Xiao-Yu Tang, Zhiyao Huang (Zhejiang University, China)
15:50 – 16:05	Paper: 19-02-21-136 <i>Solid Component Fraction in Multi-Phase Flows Using Electrical Resistance Tomography and Kalman Filter</i> Yongguang Tan, <b>Shihong Yue</b> (Tianjin University, China)
16:05 – 16:20	Paper: 19-04-16-110 <i>Visualization of Liquid-Liquid Flow Interfaces in Inclined Pipes Using PLIF and Conductance Parallel-Wire Array Probe</i> Lusheng Zhai, Zihan Meng, Jie Yang, <b>Ningde Jin</b> (Tianjin University, China)
16:20 – 16:35	Paper: 19-02-17-109 <i>Water Level Detection Sewage Using Electrical Resistance Tomography</i> Chenning Wu, <b>Manuchehr Soleimani</b> (University of Bath, UK)
16:35 – 16:50	Paper: 19-02-25-162 <i>Numerical Study on Impact Dynamics of Shear-thinning Fluid Droplets on a Solid Surface</i> Nuo Zheng, Xufeng Shen, Junfeng Wang, <b>Hailong Liu</b> (Jiangsu University, China)

15:20 – 16:50 @ Room 4

Venue: 2F Boardroom 1

**Session 4: Other advanced measurement techniques (1)**

Chairs: Tatsuya Hazuku (TUMSAT) / Hongbing Ding (TJU)

15:20 – 15:35	Paper: 19-07-10-144 <i>A New Void Fraction Contactless Measurement Method for Bubble/Slug Flow in Small Channel</i> <b>Junchao Huang</b> , Xiaoyu Tang, Haifeng Ji, Baoliang Wang, Zhiyao Huang (Zhejiang University, China)
15:35 – 15:50	Paper: 19-07-03-064 <i>Application of Spatiotemporal Filter Velocimetry to Evaluation of Drag Force Acting on Single Drop</i> <b>Gaku Shigekane</b> , Shigeo Hosokawa, Kosuke Hayashi, Akio Tomiyama (Kobe University, Japan)
15:50 – 16:05	Paper: 19-07-04-106 <i>Flow Pattern Identification of Gas-Liquid Two-Phase CO<sub>2</sub> in A Horizontal Pipeline Based on Gradient Boosting Random Forest Method</i> Caiying Sun, Yong Yan, <b>Wenbiao Zhang</b> , Ding Shao (North China Electric Power University, China)

16:05 – 16:20	Paper: 19-07-05-111 <i>Experimental Investigation of Erosion-Corrosion of 304 Stainless Steel by Two-Phase Impinging Flows</i> Yanlin Zhao, Shaoshuai Yang, Lin Li, <b>Jun Yao</b> (China University of Petroleum (Beijing), China)
16:20 – 16:35	Paper: 19-07-06-116 <i>Simultaneous Measurement of Liquid Film Thickness and Temperature on Metal Surface</i> Weiwei Wu, Yufeng Guo, <b>Huinan Yang</b> , Mingxu Su (University of Shanghai for Science and Technology, China)
16:35 – 16:50	Paper: 19-07-12-148 <i>A New C4D Sensor for Monitoring of Boiling Process in Mini-Channels</i> Xin Ye, Yuchen He, Xiao-Yu Tang, <b>Haifeng Ji</b> , Zhiyao Huang (Zhejiang University, China)

15:20 – 16:50 @ Room 5 **Venue: 2F Boardroom 2**

**Session 5: Other advanced measurement techniques (2)**

Chairs: Jidong Lu (SCUT) / Tomio Okawa (UEC)

15:20 – 15:35	Paper: 19-07-09-142 <i>Concentrations of TENORM in Oily Sludge of Petroleum Industries and Its Risks of Environmental and Human Exposure</i> Mohsen M. M. Ali, <b>Hongtao Zhao</b> , Nassir Yassin, Abbati, Zahraddeen and Abdullah Rawashdeh (Harbin Engineering University, China)
15:35 – 15:50	Paper: 19-07-02-060 <i>In Situ Measurement of High Temperature Radiative Properties of Hydrocarbon Flames</i> Dongxu Wang, Mengting Si, Qi Zhang, <b>Qiang Cheng</b> (Huazhong University of Science and Technology, China)
15:50 – 16:05	Paper: 19-07-11-147 <i>Research on Characteristics of A New Oil-Based Logging-While-Drilling Instrument</i> Yongkang Wu, Weining Ni, Xin Li, Wei Zhang, <b>Baoliang Wang</b> , Yandang Jiang, Zhiyao Huang (Zhejiang University, China)
16:05 – 16:20	Paper: 19-07-07-127 <i>Radioactivity of Uranium in The Oil-Rich Ma'rib Region in Central Yemen</i> Mohsen M. M. Ali, <b>Hongtao Zhao</b> , Zhongyu Li and Najeeb N. M. Maglas c (Harbin Engineering University, China)
16:20 – 16:35	Paper: 19-07-13-149 <i>In Vitro Blood Flow Velocity Measurement with Multiexposure Speckle Imaging</i> Xu Sang, Dong Li, <b>Bin Chen</b> (Xi'an Jiaotong University, China)
16:35 – 16:50	Paper: 19-07-14-157 <i>Effect Using Local and Global Condition on Critical Heat Flux Correlations in Upward and Downward Flow in Research Reactors Using Plate-Type Fuel</i> Abdullah Adnan Rawashdeh, <b>Tenglong Cong</b> , Nassir Yassin (Harbin Engineering University, China)

15:20 – 16:50 @ Room 6		Venue: 2F VIP Room 1
<b>Session 6: Computational methods for multiphase flow (2)</b>		
Chairs: Daoyin Liu (SEU) / Ryo Kurimoto (USP)		
15:20 – 15:35	Paper: 19-08-08-091 <i>Measurement of Mass Transfer Process of Gas-Liquid Multiphase Flow in Annular Self-Oscillation Jet Pump</i> Xiaogang Deng, <b>Xiong Zhou</b> (Chongqing Technology and Business University, China)	
15:35 – 15:50	Paper: 19-08-07-080 <i>A Comprehensive Stress Model for Gas Particle Flows in Dense and Dilute Regimes</i> Junnan Zhao, <b>Guodong Liu</b> , Yao Wu, Huilin Lu (Harbin Institute of Technology, China)	
15:50 – 16:05	Paper: 19-08-11-108 <i>Measurement and Numerical Simulation of Electric Field in Cylindrical Silo Considering Particle Segregation in Powder Filling Process</i> Qun Zhou, Peng Zhang, <b>Cai Liang</b> (Southeast University, China)	
16:05 – 16:20	Paper: 19-08-13-130 <i>Investigation on The Effects of Double Mixer on Urea Conversion Efficiency and Ammonia Concentration Distribution Uniformity in SCR System</i> Dayong Lu, <b>Bifeng Yin</b> (Jiangsu University, China)	
16:20 – 16:35	Paper: 19-08-14-141 <i>The Use of Monte Carlo Technique (MCNP5) to Simulate The High Purity Germanium Detector (HPGe)</i> Mohsen M. M. Ali, <b>Hongtao Zhao</b> , Zhongyu Li, Mohamadou Al Hassand (Harbin Engineering University, China)	
16:35 – 16:50	Paper: 19-08-03-032 <i>Flow Simulation Based on Liquid-Solid Two-Phase Flow with Hydrate-Like Particles</i> Hanrui Zhang, <b>Chao Tan</b> , Feng Dong (Tianjin University, China)	
18:00 – 20:30	<b>Symposium Banquet</b>	Venue: 3F Yong He Ballroom

<b>Date: Wednesday 06/Nov/2019</b>		
09:00 – 12:00	<b>City Tour</b>	
12:10 – 14:00	<b>Lunch</b>	Venue: 1F M-café
14:00 – 18:00	<b>Optional Campus &amp; lab Tour (Booking required at registration desk)</b>	
18:00 – 20:30	<b>Invited Dinner (By invitation only)</b>	Venue: 1F M-café