The Final Announcement

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(ISPEMI 2018)

August 8-10 2018, Kunming, China

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Schedule at a Glance

August 8, 2018		August 9, 2018		August 10, 2018	
8:00:20:00	Reception and Registration (Hotel lobby)	8:30-8:50	Opening Ceremony	8:00-9:50	Section 1-4
		8:50-9:10	Photography	9:50-10:35	Poster Section
		9:10-9:25	Coffee Break	10:35-12:15	Section 5-8
		9:25-10:45	Plenary Session I (2)	12:15-13:30	Lunch
		10:45-12:05	Plenary Session II (2)	13:30-15:05	Section 9-12
		12:00-13:30	Lunch	15:05-15:50	Poster Section
		13:30-15:30	Plenary Session III (3)	15:50-17:45	Section 13-16
		15:30-15:45	Coffee Break	18:00-20:00	Closing Ceremony
		15:45-17:45	Plenary Session IV (3)		

Plenary speech: 40 min, keynote: 20min, Invited talk: 15 min, Ordinary presentation: 15 min.

Program on August 9, 2018

Time	Opening and Plenary Speaking	Chair
8:30-8:50	**Opening Ceremony**	Tony Wilson
8:50-9:10	**Photography**	
9:10-9:25	**Coffee Break**	
9:25-10:05	**Title: Optical fiber sensors for industrial applications** Prof. Kenneth Grattan, (*City University of London, UK*)	Tony Wilson
10:05-10:45	**Title： Miniature two-photon microscopy for brain imaging in freely behaving animals** Prof. Heping Cheng, (*Peking University, China*)	
10:45-11:25	**Title： Comb-based multidimensional coherent spectroscopy** Prof. Steven Cundiff, (*University of Michigan, US*)	Fu-Jen Kao
11:25-12:05	**Title: A novel high-precision mass measurement device for the new kilogram** Dr. Christian Rothleitner, (*Physikalisch-Technische Bundesanstaldt, Germany*)	
12:05-13:30	**Lunch**	
13:30-14:10	**Title: Time resolved imaging with stimulated emission in pump-probe microscopy** Prof. Fu-Jen Kao, (*National Yang-Ming University, Taiwan, China*)	Seung-Woo Kim
14:10-14:50	**Title: Size matters! Understanding and exploiting the length-scale dependence of material properties and nano/micro-scale measurements** Prof. Nigel M. Jennett, (*Coventry University, UK*)	
14:50-15:30	**Title: Innovative techniques for contrast, spectrometric and viscoelastic measurements in small animal MRI** Prof. Olivier Beuf, (*INSA-Lyon, France*)	
15:30-15:45	**Coffee Break**	
15:45-16:25	**Title: Interferometric microscopy for detection and visualization of biological nanoparticles** Prof. M. Selim Ünlü, (*Boston University, US*)	Nigel M. Jennett
16:25-17:05	**Title: Plasmonics: Exotic nanophotonics beyond the limits** Prof. Satoshi Kawata, (*Osaka University, Japan*)	
17:05-17:45	**Title: Drive operational excellence through intelligent quality** Dr. Liao Lu, (*Hexagon Manufacturing Intelligence*)	
17:45-20:00	**Dinner**	

Program on August 10, 2018

Oral Presentation					
Time	**Abstract ID**	**Report ID**	**Authors**	**Author affiliation**	**Title**
Session 1 Instrumentation Theory and Methodology (1) (Chairman: Dr. Christian Rothleitner and Prof. Shuming Yang)					
8:00-8:20	3_947	**S1-1 (Keynote)**	**Hao Jiang*, Zhicheng Zhong, Shiyuan Liu***	**Huazhong University of Science and Technology**	**Metrology of shock-induced dynamic responses based on ultrafast ellipsometry**
8:20-8:35	E_033	**S1-2 (Invited)**	**Xiaodong Hou**	**Coventry University, UK**	**A brief introduction of nano-indentation and it's application in small-scale mechanical testing**
8:35-8:50	2_1024	**S1-3 (Invited)**	**Xiaodong Wang, Xingyuan Wang, Tongqun Ren, Yue Wang, Zhifeng Lou, Yi Luo**	**Dalian University of Technology**	**The measurement technology for precision peg-in-hole assembly**
8:50-9:05	1_943	**S1-4 (Invited)**	**Haihua Cui*, Zhaojie Li, Xiaosheng Cheng, Wenhe Liao**	**Nanjing University of Aeronautics and Astronautics**	**Multiple-exposure adaptive selection algorithm for high dynamic range 3D fringe projection measurement**
9:05-9:20	E_018	S1-5	Xinghui Li, Jiao Bai, Xiaohao Wang*, Qian Zhou, Kai Ni	Graduate School at Shenzhen, Tsinghua University	Design and testing of a chromatic dispersion system for displacement application by using a spatial-bandpass-filter
9:20-9:35	2_979	S1-6	Shao-Kang Li, Zhong-Peng Zheng, Lin-Yan Wang*	Xi'an Technological University	Establishment of the measuring coordinate system for large gears by gauge block
9:35-9:50	3_841	S1-7	Jianfei Zhou, Suping Chang*, Chunbing Hu, Zhongyu Zhang, Hao Wu, Zhongyu Zhang	Huazhong University of Science and Technology	Control circuit design of magnetic suspension stylus measuring instrument

Session 2 Measurement for Precision and Ultra-Precision Machining (Chairman: Prof. Jie Zhang and Prof. Yan Zhang)					
8:00-8:20	3_920	**S2-1 (Keynote)**	**Chih-Liang Chu*, Hung-Chi Chen**	**Southern Taiwan University of Science and Technology**	**Development of a parallel micro-CMM with high-precision contact scanning probe**
8:20-8:35	3_1098	**S2-2 (Invited)**	**Huijie Zhao, Mingyi Xing, Hongzhi Jiang*, Yang Xu, Xiaochun Diao, Chenghao Liu**	**Beihang University**	**A new non-contact coordinate measuring machine equipped with light-duty optical probe based on fringe projection profilometry**
8:35-8:50	E_032	**S2-3 (Invited)**	**Liping Yan, Zhouqiang Chen, Benyong Chen*, Jiandong Xie, Shihua Zhang, Yingtian Lou, Enzheng Zhang**	**Zhejiang Sci-Tech University**	**Laser phase modulation interferomertic nanometer displacement measurement with a combined sinusoidal and triangular signal**
8:50-9:05	E_065	S2-4	Mingxin Yu, Lianqing Zhu*, Mingli Dong, Guangkai Sun, Hong Li, Yanlin He	Beijing Information Science and Technology University	EEG-based pain level measurement and assessment using machine learning
9:05-9:20	2_842	S2-5	Jiamin Chen[1], Hui Zhou[2], Yuxuan Tang[1], Lei Wang[1]*	[1]Harbin Institute of Technology [2]National Instruments	A method for GMA internal magnetic field measurement based on temperature compensation
9:20-9:35	4_902	S2-6	Jing Yang[1], Sijin Wu[1]*, Weixian Li[1], Lianxiang Yang[2], Ji Liu[3]	[1]Beijing Information Science and Technology University [2]Oakland University [3]North University of China	Precise measurement of large roll angle using digital speckle pattern interferometry
9:35-9:50	E_012	S2-7	Meng Su, Linyi Huang, Huawei Xu	China Electronic Product Reliability and Environmental Testing Research Institute	Research on multi-degree-of-freedom and high-precision touch screen characteristic test instrument
Session 3 Novel Instrument and Measurement System (1) (Chairman: Prof. Michael Krystek and Prof. Jiwen Cui)					
8:00-8:20	4_1059	**S3-1 (Keynote)**	**Igor A. Konyakhin**	**ITMO University**	**Development of optic-electronic autocollimators for monitoring the angular displacements of large objects**

8:20-8:35	8_935	**S3-2 (Invited)**	**Zhiliang Gao[1], Qizheng Ji[1], Jian Chen[2], Xunbiao Zhang[3], Weihong Zhang[1], Junge Tan[1], Chenyan Wang[2]**	**[1]Beijing Orient Institute for Measurement & Test [2]Suzhou Sujing Automation Equipment Corporation [3]Shanghai Indoor Contamination Control Industry Association**	**Research on statistical measurement method of the standard particles through airborne particle counter based on FESEM**
8:35-8:50	3_881	**S3-3 (Invited)**	**Shichao Li[1], Tonggang Zhang[1,2]*, Cheng Chen[1], Jiong An[1]**	**[1]Southwest Jiaotong University [2]State-province Joint Engineering Laboratory of Spatial**	**Precision assessment of high-speed railway slab intelligent inspection system**
8:50-9:05	4_944	**S3-4 (Invited)**	**Guanhao Wu*, Lei Liao**	**Tsinghua University**	**Absolute distance measurement using synthetic wavelength interferometry of optical frequency combs**
9:05-9:20	3_1028	S3-5	Lu Zhang[1], Chunhui Zhao[1], Yingzhe Tu[1], He Yang[1], Chunwei Zhang[1], Lele Luo[1], Li Yuan[2]	[1]School of Mechanical Engineering,Xian Jiaotong University [2]First Affiliated Hospital, Xian Jiaotong University	Single-shot capturing based on polarizing coupled interferometry for phase measurement of cells
9:20-9:35	5_904	S3-6	Hewen WANG[1], Kai PENG[2], Xiaokang LIU[2]*, Zhicheng YU[1], And Hongji PU[3]	[1]Hefei University of Technology [2]Chongqing University of Technology [3]Xi'an Jiaotong University	A novel miniaturized capacitive absolute angular position sensor based on time-grating with reflective structure
9:35-9:50	8_854	S3-7	Jia Hou[1,2]*, Zi Xue[2], Yao Huang[2], Shuliang Ye[1], Yuling Gu[2]	[1]China Jiliang University [2]National Institute of Metrology, China	Study on the angular measuring accuracy of the rotary station with varying load
Session 4 Novel Instrument and Measurement System (2) (Chairman: Prof. Olivier Beuf and Prof. Weihu Zhou)					
8:00-8:20	E_041	**S4-1 (Keynote)**	**Seung-Woo Kim**	**Korea Advanced Institute of Science and Technology**	**Advanced optical metrology using mode-locked lasers**

8:20-8:35	E_009	**S4-2 (Invited)**	**Weiqian Zhao*, Lirong Qiu, Yun Wang**	**School of Optoelectronics, Beijing Institute of Technology**	**Infrared lens refractive index measurement using confocal tomography**
8:35-8:50	7_851	**S4-3 (Invited)**	**Hao Pan, Xinghua Qu, Fumin Zhang***	**Tianjin University**	**Method for high-precision distance estimation and dispersion mismatch compensation in frequency scanning interferometry**
8:50-9:05	E_063	S4-4	Fan Zhang*, Lianqing Zhu	Beijing Information Science and Technology University	Cell traction force measurement in a large field of view based on the Moire fringe method
9:05-9:20	4_992	S4-5	Qian Zhou, Peng Yan, Xinghui Li*, Kai Ni, Xiaohao Wang	Research Institute of Tsinghua University in Shenzhen	Modified mid-wave offner imaging spectrometer with low F number and large field of view
9:20-9:35	3_1089	S4-6	Feng Meng, Zhimin Zhang, Dianlong Zhang	National Institute of Metrology, China	Torque standard machine for calibration of reference torque wrench and torque transducer at NIM
9:35-9:50	E_043	S4-7	Ruitao Yang*, Hao Sun, Jiahao Guo, Haijin Fu, Hongxing Yang, Pengcheng Hu, Zhigang Fan, Jiubin Tan	Harbin Institute of Technology	Dual-comb generation from a dual-ring hybrid mode-locked fiber laser
Session 5 Modern Optics and Instruments for Precision Measurement (1) (Chairman: Prof. M. Selim Ünlü and Prof. Shiyuan Liu)					
10:25-10:45	E_039	**S5-1 (Keynote)**	**Yongsheng Gao**	**Hong Kong University of Science and Technology**	**Removal of opaque coolant barrier for in-process form profile optical measurement**
10:45-11:00	6_860	**S5-2 (Invited)**	**Dawei Xu*, Fang Cheng, Yu Zhou, Natalaray Thaddie, Peixian Lim, Liping Zhao**	**Advanced Remanufacturing and Technology Centre (Singapore A*STAR)**	**Process optimization: internal feature measurement for additive-manufacturing parts using X-ray computed tomography**
11:00-11:15	E_044	**S5-3 (Invited)**	**Lianqing Zhu**	**Beijing Information Science and Technology University**	**Optical fiber sensing techniques and its applications**

11:15-11:30	E_008	S5-4	Kun Zhang[1], Qing Yu[1]*, Changcai Cui[2], Shiwei Fu[1], Fang Cheng[1], Ming Chang[1], Ruilan Zhou[1]	[1]College of Mechanical Engineering and Automation, Huaqiao University [2]Institute of Manufacturing Technology, Huaqiao University	Development of chromatic dispersion lens for chromatic confocal microscopy
11:30-11:45	4_921	S5-5	Qiyu Wang, Jinyang Feng, Shanliang Liu, Duowu Su, Chunjian Li, Shuqing Wu*	National Institute of Metrology, China	Evaluation of the diffraction correction during the 10th International Comparison of Absolute gravimeters (ICAG 2017)
11:45-12:00	6_869	S5-6	Ying–Jun Lei[1], Rui–Jun Li[1*], Zhen–Xin Chang[1], Lian-Sheng Zhang[1], Kuang-Chao Fan[1,2]	[1]Hefei University of Technology [2]Dalian University of Technology	Design of optical accelerometer using four-quadrant photodetector
Session 6 Sensors, Actuators and Application (1) (Chairman: Prof. Nigel M. Jennett and Prof. Qibo Feng)					
10:25-10:45	E_050	**S6-1 (Keynote)**	**Zhengang Lu, Jiubin Tan*, Heyan Wang, Limin Ma, Yeshu Liu, Xi Lu, Jinxuan Cao, Shen Lin**	**Harbin Institute of Technology**	**Recent research advance in EMI shielding transparent conductors**
10:45-11:00	4_971	**S6-2 (Invited)**	**Yongying Yang[1]*, Rui Zhang[1], Zijian Liang[1], Pin Cao[2]**	**[1]Zhejiang University [2]Hangzhou Zernike Optical Technology Co., Ltd**	**Research and application of a novel randomly encoded hybrid grating interferometric wavefront sensor**
11:00-11:15	E_045	**S6-3 (Invited)**	**Masaki Michihata**	**University of Tokyo**	**Dielectric micro-sphere measurement using whispering gallery mode resonances**
11:15-11:30	10_987	**S6-4 (Invited)**	**Heng Zhao*, Dengxin Hua, Jun Wang, Qing Yan**	**Xi'an University of Technology**	**Micro-LED optical engine with biologically inspired artificial compound eyes for pico-projection display**
11:30-11:45	3_843	S6-5	Hao Wu, Suping Chang*, Chunbing Hu, Jianfei Zhou, Zhongyu Zhang	Huazhong University of Science and Technnology	Analysis of contracting characteristics on aerostatic bearing stylus displacement sensor

11:45-12:00	2_983	S6-6	Fanyi Wang, Pin Cao, Yongying Yang, Rongzhi Liu, Fan Wu, Pengfei Zhang, Jiabin Jiang, Huiting Chai, Yihui Zhang, Yubin Du, Guohua Feng, Xiang Xiao, Yanwei Li	Zhejiang University	Complicated intermittent scratches detection research on surface of optical components based on adaptive sector scanning algorithm cascading mean variance threshold algorithm
Session 7 Micro and Nano Metrology, Macro Metrology (Chairman: Prof. Seung-Woo Kim and Prof. Pengcheng Hu)					
10:25-10:45	E_031	**S7-1 (Keynote)**	**Jie Zhang**	**University of Bristol, UK**	**Ultrasonic array for NDT using total focusing method imaging algorithm**
10:45-11:00	E_042	**S7-2 (Invited)**	**Ling Hao**	**National Physical Laboratory, UK**	**Measurement and sensing for graphene and 2D materials by microwave resonance**
11:00-11:15	5_1038	**S7-3 (Invited)**	**Lu Wang , Dejiang Lu*, Libo Zhao, Zhuangde Jiang**	**Xi'an Jiaotong University**	**Novel double-FBARs-on-beam for PZT micro-accelerometer**
11:15-11:30	4_872	**S7-4 (Invited)**	**Qun Hao, Yan Ning, Yao Hu***	**Beijing Institute of Technology**	**Applications of wavefront modulation devices in aspheric and freeform measurement**
11:30-11:45	9_837	S7-5	Chuan-Zhi Fang[1, 2], Qiang-Xian Huang[1]*, Meng Mi[1], Chao-Qun Wang[1], Li-Juan Chen[1], Lian-Sheng Zhang[1]	[1]Hefei University of Technology [2]Anhui Institute of Information Technology	A measurement method for probe microsphere of micro-CMM with double SPMs
11:45-12:00	11_870	S7-6	Shan-Liang Liu, Jin-Yang Feng, Qi-Yu Wang, Duo-Wu Su, Chun-Jian Li, Shu-Qing Wu*	National Institute of Metrology	Investigation on the dynamic characteristics of CG-6 relative gravimeter for the micro-gravity network
Session 8 Laser Measurement Techniques and Instruments (1) (Chairman: Prof. Igor Konyakhin and Prof. Xiaodong Wang)					

10:25-10:45	E_038	**S8-1 (Keynote)**	**Shuang Zhang**	**University of Birmingham**	**Weyl degeneracies in topological metamaterials**
10:45-11:00	E_016	**S8-2 (Invited)**	**Weihu Zhou*, Dabao Lao, Fengdeng Dong, Rongyi Ji, Jingguo Zhu**	**Academy of Opto-Electronics, Chinese Academy of Sciences**	**The advance of laser precision measurement instrumentation in the Academy of Opto-Electronics, Chinese**
11:00-11:15	8_1083	**S8-3 (Invited)**	**Hongfang Chen*, Liang Tang, Huixu Song, Bo Yu, Zhaoyao Shi**	**Beijing University of Technology**	**Energy analysis method of the laser tracing measurement optical system**
11:15-11:30	E_060	S8-4	Wen Zhang, Lianqing Zhu*, Mingli Dong*	Beijing Information Science and Technology University	All-fiber Fabry-Perot interference structure: key technology and its applications
11:30-11:45	6_1060	S8-5	Tong Guo*, Zhenshan Sun, Jinping Chen, Xing Fu, Xiaotang Hu	Tianjin University	Development of hybrid measuring system for the complex micro-arrayed surface
11:45-12:00	8_863	S8-6	Sen Wang, Guanbin Gao, Jun Zhao, Wen Wang	Kunming University of Science and Technology	Kinematics identification and measurement accuracy verification of articulated arm coordinate measuring machines
Session 9 Instrumentation Theory and Methodology (2) (Chairman: Prof. Ling Hao and Prof. Liandong Yu)					
13:30-13:50	E_049	**S9-1 (Keynote)**	**Pengcheng Hu, Haijin Fu, Hongxing Yang, Ruitao Yang, Jiubin Tan***	**Harbin Institute of Technology**	**Displacement laser interferometry with sub-nm or deep sub-nm accuracy**
13:50-14:05	4_1091	**S9-2 (Invited)**	**Xiaobing Feng[1]*, Rong Su[1], Tuomas Happonen[2], Jian Liu[3], Richard Leach[1]**	**[1]University of Nottingham [2]VTT Technical Research Centre of Finland [3]Harbin Institute of Technology**	**All-optical difference engine for in-process defect inspection for roll-to-roll printed electronics**
14:05-14:20	5_1104	**S9-3 (Invited)**	**Chao-Ching Ho*, Jhih-Jia Lu, Po-Chieh Li**	**National Taipei University of Technology**	**Development of auto defect inspection system for cell phone silicone rubber gasket**

14:20-14:35	8_846	S9-4	Jintao Wang[1]*, Jinyue Zhang[2], Kai Wei[1], Lin Tong[1], Xuesong Bao[1]	[1]National Institute of Metrology [2]China Jiliang University	Measurement on deionized water density based on single silicon sphere
14:35-14:50	5_954	S9-5	Wei Wang[1], Zhaoyao Shi[1], Donglin Peng[2]*	[1]Beijing University of Technology [2]Chongqing University of Technology	A novel signal process system for angular displacement sensor of time-grating
14:50-15:05	5_1036	S9-6	Chengliang Pan*, Ting Zhang, Tianliang Dai, Haojie Xia, Liandong Yu	Hefei University of Technology	Design and simulation of a 2-DOF parallel linear precision platform utilizing piezoelectric impact drive mechanism
Session 10 Instrument and Measurement System Calibration (1) (Chairman: Prof. Yongsheng Gao and Prof. Zi Xue)					
13:30-13:50	E_040	**S10-1 (Keynote)**	**Michael Krystek**	**Physikalisch-Technische Bundesanstalt**	**Dealing with systematic effects in measurement uncertainty calculations**
13:50-14:05	E_047	**S10-2 (Invited)**	**Sen Han[1,2]**	**[1]University of Shanghai for Science and Technology [2]Suzhou H&L Instruments LLC**	**Advanced measurement of super- smooth surface**
14:05-14:20	E_036	**S10-3 (Invited)**	**Guanhao Wu, Lijiang Zeng**	**Tsinghua University**	**Dual-comb ranging**
14:20-14:35	5_908	S10-4	Aiganym Sakhariyanova*, Igor Konyakhin	ITMO University	The optical-electronic autoreflection sensor for angular deformations measurement
14:35-14:50	E_062	S10-5	Hong Li, Lianqing Zhu*, Fanyong Meng, Mingli Dong*	Beijing Information Science and Technology University	In-line optical fiber Mach-Zehnder sensor fabricated by CO2 laser and its applications
14:50-15:05	8_882	S10-6	Shengyang Zhou[1]*, Chenguang Cai[2], Ying Wang[1], Zhihua Liu[2], Ming Yang[1]	[1]Beijing University of Chemical Technology [2]National Institute of Metrology	A novel earth's gravity method for accelerometer calibration

Session 11 Signal Processing and Image Processing (Chairman: Prof. Jian Liu and Prof. Xinghui Li)					
13:30-13:50	E_048	**S11-1 (Keynote)**	**Junning Cui*, Xingyuan Bian, Yesheng Lu, Shaokai Wang**	**Harbin Institute of Technology**	**Ultraprecision 3D non-contact probing for measurement of micro-structure with high aspect ratio**
13:50-14:05	2_1074	**S11-2 (Invited)**	**Xiupeng Hao*, Kuang-Chao Fan, Xiaodong Wang**	**Dalian University of Technology**	**A measuring method of spindle rotation error using circular grating and self-collimator**
14:05-14:20	7_1069	**S11-3 (Invited)**	**Xiao-Qia Yin, Wei Tao*, Hui Zhao**	**Shanghai Jiaotong University**	**A curve segment method based on fixed dynamic programming and cycled optimization techniques**
14:20-14:35	2_940	**S11-4 (Invited)**	**Yuhua Cheng[1], Xue Chen[1], Bingbai Li[1], Lulu Tan[1], Bin Liu[2], Haichao Yu[1]**	**[1]University of Electronic Science and Technology of China [2]Harbin Engineering University**	**A fast infrared thermal imaging detection method based on spatial correlation**
14:35-14:50	1_1018	S11-5	Jiawei Ding, Jiandong Ma, Yunliang Qin, Jing Fan, Bo Fang, Jiacheng Hu	China Jiliang University	The method of solving the accurate displacement rule with acceleration signal
14:50-15:05	4_883	S11-6	Ying Zhang[1]*, Chenguang Cai[1], Zhihua Liu[1], Ming Yang[2]	[1]National Institute of Metrology [2]Beijing University of Chemical Technology	A high precision edge detection method for the blurred image in motion measurement
Session 12 Sensors, Actuators and Application (2) (Chairman: Prof. Shuang Zhang and Prof. Yongying Yang)					
13:30-13:50	E_017	**S12-1 (Keynote)**	**Taehwa Lee, Cheng Zhang, Qiaochu Li And L. Jay Guo**	**University of Michigan**	**Ultrasound detection and imaging using microring resonators and laser generated focused ultrasound**

13:50-14:05	E_046	**S12-2 (Invited)**	**Lingxiao Zhu, Shuhua Yan, Aiai Jia, Chunhua Wei, Qixue Li, Xu Zhang, Jun Yang***	**National University of Defense Technology**	**Cold atom interferometry gravimeter**
14:05-14:20	E_007	**S12-3 (Invited)**	**Qiao Sun*, Jie Bai, Lei Du, Zhe Fan, Hongbo Hu**	**National Institute of Metrology, China**	**Establishment of standard device for high rotational speed generation**
14:20-14:35	5_984	S12-4	Liang Wu*, Shi Xu, Rui Zhang, Yang Liu	Chongqing University of Technology	A novel two-dimensional inductive sensor based on planar coils
14:35-14:50	5_1088	S12-5	Yu Chen, Chunling Yang*, Yan Zhang*, Yuze Li	Harbin Institute of Technology	A domain adaptation deep transfer method for image classification
14:50-15:05	6_877	S12-6	Liang Yu[1,2]*, Gabor Molnar[2], Sebastian Bütefisch[2], Christian Werner[2], Rudolf Meeß[2], Hans-Ulrich Danzebrink[2], Jens Flügge[2]	[1]Harbin Institute of Technology [2]Physikalisch-Technische Bundesanstalt	Micro Coordinate Measurement Machine (μCMM) using voice coil actuator with interferometric position feedback
Session 13 Laser Measurement Techniques and Instruments (2) (Chairman: Prof. Dengxin Hua and Prof. Donglin Peng)					
15:50-16:10	E_030	**S13-1 (Keynote)**	**Guoan Zheng**	**University of Connecticut**	**Fourier ptychographic imaging**
16:10-16:25	4_957	**S13-2 (Invited)**	**Igor A. Konyakhin, Hoa M. Tong**	**ITMO University**	**Multi-matrix optic-electronic systems for measuring the line shifts of the points on the radio-telescope main mirror**
16:25-16:40	5_861	**S13-3 (Invited)**	**Dajuan Lyu[1], Peide Liu[2], Wentao Zhang[2]*, Liangming Xiong[1]**	**[1]Yangtze Optical Fibre and Cable Joint Stock Limited Company [2]Institute of Semiconductors, Chinese Academy of Sciences**	**Measurement of 3-dB linewidth of FBG Fabry–Perot interferometer using tunable fiber laser**
16:40-16:55	4_950	S13-4	Changli Li, Min Fu*, Ge Zhu, Zhiwei Pu, Xiaoyu Yu	Chongqing University of Technology	Study on integrated linear time-grating displacement sensor with single alternating light field

16:55-17:10	7_977	S13-5	Bin Mao[1,2], Jianjun Cui[2]*, Kai Chen[3], Honglin Shu[3], Hongwei Shao[2]	[1]Shanxi Institute of Metrology Science [2]National Institute of Metrology [3]Henan Polytechnic University	Deformation measurement of testing machine based on laser interference method
17:10-17:30	E_021	S13-6	Xinghui Li, Weihan Yuan, Kai Ni*, Qian Zhou, Xiaohao Wang	Graduate School at Shenzhen, Tsinghua University	A two-probe linear encoder by using an arrayed scale grating stitched by multiple separate short gratings
17:30-17:45	9_1002	S13-7	Cheng Chen[1], Hong Zhu[1], Jian Fu[1], Chi Zhang[1], Jian Wang[1], Xiaojun Liu[1],Wenlong Lu[1]*, Xiangqian (Jane) Jiang[1,2]	[1]HuaZhong University of Science and Technology [2]University of Huddersfield, Huddersfield	Corrected differental fitting for height extraction in confocal microscopy
Session 14 Novel Instrument and Measurement System (3) (Chairman: Prof. Benyong Chen and Prof. Lianqing Zhu)					
15:50-16:10	E_029	**S14-1 (Keynote)**	**Erwan Sourty**	**Thermo Fisher Scientific, China**	**Thermo scientific themis Z: the ultimate in optical performance, reproducibility and flexibility**
16:10-16:25	7_1081	**S14-2 (Invited)**	**Tao Jin[2]*, Zhi Li[1], Lars Daul[1], Helmut Wolff[1], Ludger Koenders[1], Wenmei Hou[1]**	**[1]Physikalisch-Technische Bundesanstalt (PTB) [2]University of Shanghai for Science and Technology**	**Interferometric characterization of large-stroke nano-positioning stage using an optical fiber interferometer with subatomic resolution**
16:25-16:40	3_1097	**S14-3 (Invited)**	**Huijie Zhao, Yang Xu, Hongzhi Jiang, Xiaochun Diao, Chenghao Liu, Mingyi Xing**	**Beihang University**	**Real-time 3D shape measurement by fringe projection and GPU parallel computing**
16:40-16:55	11_923	**S14-4 (Invited)**	**Yao Huang[1]*, Zi Xue[1], Dan Qiao[2]**	**[1]National Institute of Metrology [2]Beijing Aerospace Times Optical-electronic Technology Co.**	**Measurement uncertainty analysis for self-calibration angle encoder**
16:55-17:10	6_1025	S14-5	Changchun Chai, He Zhou, Peng Zhou, Chi Zhang, Hz Yan, Xt Guo, Xiaojun Liu*	Huazhong University of Science and Technology	More efficient optical sectioning structured illumination microscopy

17:10-17:30	2_1109	S14-6	Huaxia Deng[1], Lijun Ren[1], Jin Zhang[1]*, Mengchao Ma[1], Xiang Zhong[1]*, Pengcheng Wen[2]	[1]Hefei University of Technology [2]AVIC Xi'an Aeronautics Computing Technique Research Institute	Measurement of unmanned aerial vehicle attitude angles based on a single captured image
17:30-17:45	E_006	S14-7	Lei Dong*, Zhen Li, Gang Zheng	Shaanxi Institute of Metrology Science	Error analysis method of weighing cycles based on robotic mass measurement system
Session 15 Modern Optics and Instruments for Precision Measurement (2) (Chairman: Prof. Lijiang Zeng and Prof. Zhaoyao Shi)					
15:50-16:10	E_028	**S15-1 (Keynote)**	**Haoyu Li**	**Harbin Institute of Technology**	**Three-dimensional imaging of live-cell dynamics using light-field microscopy**
16:10-16:25	E_035	**S15-2 (Invited)**	**Qibo Feng, Bin Zhang*, Fajia Zheng, Jiakun Li**	**Beijing Jiaotong University**	**Method for simultaneously measuring 6DOF motion errors of linear and rotary axes of CNC machine tools**
16:25-16:40	4_1112	**S15-3 (Invited)**	**Dian Bian, Xinyu Yan, Yang Lu, Liandong Yu***	**Hefei University of Technology**	**Development of surface profile measurement system based on super luminescent diode light source**
16:40-16:55	E_019	**S15-4 (Invited)**	**Xinghui Li, Haiou Lu, Weihan Yuan, Qian Zhou, Kai Ni, Xiaohao Wang***	**Graduate School at Shenzhen, Tsinghua University**	**Holographic fabrication of two-dimensional scale gratings for surface encoder by using an orthogonal type two-axis Lloyd's mirror interference lithography**
16:55-17:10	10_1047	S15-5	Tong Wang[1,2], Tao Liu[1], Shuming Yang[1]*, Biyao Cheng[1], Qiang Liu[1], Kang Liu[1]	[1]Xi'an Jiaotong University [2]Zhengzhou University of Light Industry	Subwavelength focusing and experimental detection of large-scale metallic multi-annular metasurfaces
17:10-17:30	1_967	S15-6	Yayong Wang, Shujie Liu*, Shixin Zhang, Yubin Huang, Kuang-chao Fan	Dalian University of Technology	A filter algorithm based on ARMA model to suppress the influence of atmospheric disturbance in laser straightness measurement

17:30-17:45	E_064	S15-7	Xu Zhang, Yang Hu, Daoming Qu, Guangkai Sun, Lianqing Zhu*	Beijing Information Science and Technology University	Optical fiber sensing technology in morphing aircrafts and soft robotics
Session 16 Instrument and Measurement System Calibration (2) (Chairman: Prof. Steven T. Cundiff and Prof. Qun Hao)					
15:50-16:10	E_025	**S16-1 (Keynote)**	**Yan Zhang*, Xinke Wang, Jiasheng Ye, Shengfei Feng, Peng Han, Wenfeng Sun**	**Capital Normal University**	**Ultrathin Terahertz wavefront modulator based on metasurface**
16:10-16:25	4_931	**S16-2 (Invited)**	**Yongmeng Liu[1]*, Cuilian Zuo[1], Chuanzhi Sun[1]*, Hui Jin[2], Jihui Ma[3], Jiubin Tan[1]**	**[1]Harbin Institute of Technology [2]Changchun institute of optics, fine mechanics and physics, Chinese Academy of sciences [3]Beijing Institute of Spacecraft Environment Engineering**	**EMI shielding performance evaluation model of the randomized overlapping ring metallic mesh**
16:25-16:40	1_961	**S16-3 (Invited)**	**Yongfeng Song, Liangzhou Chen*, Chang Song, Xiaojun Liu**	**Huazhong University of Science and Technology**	**The optimization of segment's supporting for large astronomical telescopes**
16:40-16:55	E_026	**S16-4 (Invited)**	**Lei Liu[1], Zhi Zhong[1], Mingguang Shan[1]*, Bin Liu[1], Guangyu Luan[2]**	**[1]Harbin Engineering University [2]Heilongjiang Bayi Agricultural University**	**Dual-wavelength off-axis quasi-common-path digital holography using polarization-multiplexing and flipping**
16:55-17:10	E_061	S16-5	Wei He, Lianqing Zhu*, Mingli Dong*	Beijing Information Science and Technology University	Key technology and applications of fiber grating fabricated by femtosecond laser
17:10-17:30	3_1056	S16-6	Lei Du*, Qiao Sun, Jie Bai, Zhe Fan	National Institute of Metrology	Field test method and standard instruments for verification of traffic speed meters based on actual traffic
17:30-17:45	11_839	S16-7	Hongtao Yang, Li Li, Yongjun Pang, Bangshen Chen, Shidai Zhang	Anhui university of science and technology	Theoretical determination and validation of thermal deformation critical point of CNC machine tool bed

Poster Presentation

9:50-10:35, Aug. 10, 2018, Poster Presentation (Odd Numbered Poster ID will be attended)

15:05-15:50, Aug. 10, 2018, Poster Presentation (Even Numbered Poster ID will be attended)

Abstract ID	Poster ID	Authors	Affiliation	Title
1_850	P1-1	Lin Jiang, Jingzhi Huang*, Xiangshuai Ding, Xiangzhang Chao	Harbin Institute of Technology	Method for spherical form error evaluation using cuckoo search algorithm
1_856	P1-2	Wei Xia, Junbao Chen, Yufeng Tao, Hui Hao, Dongmei Guo, Ming Wang	Nanjing Normal University	Research on photonic detection method of laser self-mixing interference
1_905	P1-3	Jingzhi Huang*, Huixin Zheng, Lin Jiang, Xiangzhang Chao, Xiangshuai Ding	Harbin Institute of Technology	Design of Gaussian filters based on odd and even function continuation for non-closed circular profile
1_942	P1-4	Yang Bai, Yunfeng Lu, Zhengkun Li, Dawei Wang, Qing He, Zhonghua Zhang	National Institute of Metrology	Misalignment recognition of mass pan in joule balance
1_975	P1-5	Binghe Wang, Yanhui Kang	National Institute of Metrology	Method of squareness measurement based on laser alignment measuring system
1_985	P1-6	Ivan S. Nekrylov, Maksim A. Kleshchenok, Anastasia A. Blokhina, Elena A. Sycheva, Igor Konyakhin, Sergey V. Mednikov	ITMO University	Choosing parameters of active reference mark optical-electronic systems spatial position control
1_991	P1-7	Mednikov V. Sergey, Vasilev S. Alexandr, Blokhina A. Anastasia, Kleshchenok A. Maksim, Nekrylov S. Ivan, Konyakhin A. Igor	ITMO University	Research of the temperature influence on the errority of incremental optical-electronic encoders of linear displacements based on raster structures
1_1005	P1-8	Jian Bao, Zai Luo, Dong Li*	China Jiliang University	Research of technologies in image-based omnidirectional AGV
1_1166	P1-9	Zhe Li, Jiwen Cui, Jianwei Wu Tong Zhou, Jiubin Tan	Center of Ultra-precision Optoelectronic Instrument, Harbin Institute of Technology	A Uniform and flexible model for three-dimensional measurement of line-structured light sensor

1_1167	P1-10	Jiwen Cui*, Yarui Ma, Houhu Lai, Hui Wang, Jiubin Tan	Institute of Ultra-precision Optoelectronic Instrument Engineering, Harbin Institute of Technology	Multi-structure elements morphology for improved anti-noise edge detection
2_835	P2-1	An Jin, Jie Lin, Jiamin Chen, Wenguo Yang, Xinggang Wang, Peng Jin, Lei Wang*, Jiubin Tan	Harbin Institute of Technology	Error analysis of target trajectory tracking applied for measurement of high speed spindle
2_890	P2-2	Yawei Li, Xiaodong Wang, Yi Luo, Shengsheng Sun	Dalian University of Technology	Force control and visual measurement in precision assembly system
2_913	P2-3	Yuansong Zheng, Zhifeng Lou, Xiaodong Wang*	Dalian University of Technology	A measuring method of coaxiality errors for far apart axis
2_936	P2-4	Miao Li, Xueyang Ma, Wei Yu, Yikang He, Lianwen Zhou, Yiwei Shen	Shanghai Institute of Aerospace Control Technology	Research on an accuracy test method of star sensor based on spatial transform
2_999	P2-5	Jianzhen Cai	Beijing orient institute of measurement	Variable frequency big current calibration technique
2_1019	P2-6	Yafei Yuan, Yu Zhang*, Weihong Zhang, Qizheng Ji, Na Feng, Ming Yang, Shanshan Ma, Jihao He	Beijing oriental institute of measurement and test	The effect of contact pressure on resistance measurement of antistatic material
2_1004	P2-7	Jianguo Tao	China Jiliang University	Fast measurement of small modulus gears based on machine vision
3_836	P3-1	Yuqing Xiao, Jie Cao, Zihan Wang, Qun Hao, Haoying Yu, Qiang Luo	Beijing Institute of Technology	Bionic vision improves the performances of super resolution imaging
3_848	P3-3	Xinyu Ma, Jintao Wang, Ziyong Liu	National Institute of Metrology	Measurement method of the compression coefficient of near-monocrystalline silicon density liquid
3_865	P3-4	Shengsheng Sun, Yi Luo, Xiaoxu Qiao, Xiaodong Wang	Dalian University of Technology	An exchangeable end effector for multi-part-assembly system
3_887	P3-5	Anton Nogin, Igor Konyakhin	ITMO University	Hough transform based image processing algorithm in the optical-electronic angle measuring device
3_898	P3-6	Jing Wang, Lei Wang*, Yixin Li, Junzhong Li, Xiaoyu Zhu	Harbin Institute of Technology	A Differential giant magnetostrictive mitro-displacement actuator
3_900	P3-7	Zhen Zhang, Lei Wang*, Junzhong Li, Jing Wang, Jiamin Chen, Pengxuan Li, Yunfei Han	Harbin Institute of Technology	Design of active vibration isolation system based on electromagnetic and floatation hybrid support

3_916	P3-9	Qiancheng Zhao, Jiang Shao*, Tianlong Yang	Hunan University of Science and Technology	Robust concrete crack recongnition based on improved image segmentation and SVM
3_919	P3-10	Meiju Zhang, Wei Liu, Defeng Liu, Feiyue An, Honglei Chen, Zenghua Liu	Beijing University of Technology	Development of portable digital ultrasonic guided wave detector based on COM express
3_938	P3-11	Hubing Du*, Jianhong Yu, Shaofeng Zhang	Xi'an University of Technology	Research on self-calibrating phase shifting shadow moir étechnique
3_996	P3-12	Zhuo Zhao[1,2], Bing Li[1,2]*, Fei Gao[1], Lei Chen[1], Meiting Xin[1]	[1]Xi'an Jiaotong University, [2]State Key Laboratory for Manufacturing System Engineering	An online vision system for battery FPC connector defects detection based on ASM template matching method
3_1022	P3-13	Lu Zhang, Lele Luo, Zewen Yang, Yingzhe Tu, Chunhui Zhao, Chunwei Zhang, Li Yuan	Xi'an Jiaotong University	Recognition and classification of label-free leukocyte scattering detection in peripheral blood basing on pattern recognition method
3_1031	P3-14	Lihua Peng	Huazhong University of Science and Technology	A new method for generating large area &tunable non-diffraction structured light
3_1040	P3-15	Yesheng Lu, Junning Cui*, Yue Zhao	Harbin Institute of Technology	Fast response circulating cooling water temperature control system based on Smith predictor
3_1043	P3-16	Xili Duan, Jing Le*, Yuyang Ming, Shaowei Chen, Mingxing Tang	Xi'an University of Technology	Research on adaptive segmentation method of embossed character image based on wellner algorithm
3_1050	P3-17	Zhenwei Huang, Jina Liang, Lei Liu, Jiacheng Hu	China Jiliang University	Method for detecting ring gear surface defects of wheel speed sensor based on neural network
3_1057	P3-18	Lei Du, Qiao Sun, Jie Bai, Zhe Fan	National Institute of Metrology	Field test method and standard instruments for verification of traffic speed meters based on test vehicle
3_1067	P3-19	Yindi Cai, Baokai Feng, Kuang-Chao Fan	Dalian University of Technology	Construction of a compact laser wavemeter with controlling laser angular drift
3_1070	P3-20	Yue Wang, Xingyuan Wang, Xiaodong Wang	Dalian University of Technology	Ultrasonic characteristics of contact stress of small interference fitting parts
3_1076	P3-21	Liang Xu, Zhifeng Lou*, Kuang-Chao Fan, Liding Wang, Yuchen Tian	Dalian University of Technology	Calibration of geometric error in passive laser tracker
3_1080	P3-22	Yubin Du, Pin Cao, Yongying Yang, Fanyi Wang, Rongzhi Liu, Fan Wu, Pengfei Zhang, Huiting Chai, Jiabin Jiang, Yihui Zhang, Guohua Feng, Xiang Xiao, Yanwei Li	Zhejiang University	Defect detection method for complex surface based on human visual characteristics and feature extracting

3_1102	P3-23	Jiahao Ou, Xian Wang*, Zhou Xu	HuNan University Of Science and Technology(HNUST)	An identification method for casing weld in complex environment
3_1117	P3-24	Hongfu Zhou, Yanghua He, Yuguang Mo	South China U of Tech	Architecture of rail and wheelset NDT detecting test rig
3_1120	P3-25	Yalu Chen, Zhihui Li*	Shanghai Institute of Satellite Equipment	A design of high-accuracy angle measurement system for satellite ait processing
3_1140	P3-27	Guolong Wu, Haijin Fu, Hongxing Yang*, Pengcheng Hu	Harbin Institute of Technology	Design and performance analysis of a novel thermos-structure for measuring thermal drift of optics in a next generation interferometer
3_1161	P3-28	Duxi Liu*, Jinshun Xu, Tong Li	Northwestern Polytechnical University	Long-range automatic precision displacement measuring of winding system using double timing belt transmission
4_895	P4-1	Yuexin Wang*, Fuzhong Bai, Xiaojuan Gao, Ying Wang	Inner Mongolia University of Technology	Comparison of spacing detection algorithms for optical straight fringes images
4_911	P4-2	Qian Zhou, Peng Yan, Xinghui Li, Kai Ni, Xiaohao Wang	Research Institute of Tsinghua University in Shenzhen	Improved design principle of Dyson concentric infrared imaging spectrometer
4_917	P4-3	Daria A. Drozdova, Victoria A. Ryzhova	ITMO University	Research of scintillation crystal’s refractive index’s homogeneity based on ellipsometric method
4_960	P4-4	Yin-fei Pan, Rong-sheng Lu*	Hefei University of Technology	FPGA-accelerated one-dimensional Fourier reconstruction LCD defect detection algorithm LCD defect detection algorithm
4_965	P4-5	Pingping Jia[1,2], Hong Zhao[1], Yuwei Qin[2], Meiqi Fang[1], Xiaopeng Guo[1]	[1]Xi'an Jiaotong University, [2]Weinan Normal University	Non-destructive rapid inspection methods for sptial light modulator using swept source optical coherence tomography
4_986	P4-6	Hoang Anh Phuong, Gorbachev A. Alexey	ITMO University	Image displacement analysis for electro-optical system for deflection measurement of floating docks
4_989	P4-7	Qian Zhou, Peng Yan, Xinghui Li*, Kai Ni, Xiaohao Wang	Research Institute of Tsinghua University in Shenzhen	Modified visible offner imaging spectrometer with low F number and large field of view

4_990	P4-8	Qian Zhou, Peng Yan, Xinghui Li*, Kai Ni, Xiaohao Wang	Research Institute of Tsinghua University in Shenzhen	Modified short-wave offner imaging spectrometer with low F number and large field of view
4_1046	P4-9	S.S. Baev[12*], V.V. Korotaev[1], V.N. Kuzmin[2], A.A. Maraev[1], K.A. Tomsky[2]	[1]ITMO University, [2]TKA Scientific Instruments	Choice of optimal resolution and array for integrated photosynthetically active radiation spectroradiometer
5_830	P5-1	Zihan Wang, Jie Cao, Qun Hao*, Fanghua Zhang	Beijing Institute of Technology	Combining compound eyes and human eye: a hybrid bionic imaging method for FOV extension and foveated vision
5_897	P5-2	Junzhong Li, Lei Wang*, Bo Zhao, Guolong Zhao, Jing Wang, Zhen Zhang, Jiamin Chen, Shitong Wang	Harbin Institute of Technology	Parameter identification of inertial velocity sensor for low-frequency vibration measurement
5_973	P5-3	Hongbin An, Liangzhou Chen, Xiaojun Liu, Bin Zhao	Huazhong University of Science and Technology	Microfluidic contact lens for continuous non-invasive intraocular pressure monitoring
5_974	P5-4	Shuxian Wang, Donglin Peng, Zhiyi Wu, Tianheng Zhang, Yangyang Wang	Hefei University of Technology	Revise compensation to the angle estimate error using multi-groups sensor
5_1020	P5-5	Kejun Yan, Jun Liu, Na Sun, Wenting Zhong	Xi'an University of Technology	Soil moisture sensor design based on fiber Bragg grating
5_1030	P5-6	Heming Gao, Bingyan Fan, Huiwen Deng, Yingxing Min, Jun Liu	Xi'an University of technology	Dynamic sensitivity distribution of linear electrostatic sensor matrix
5_1032	P5-7	Xingyuan Bian, Junning Cui*, Jiubin Tan	Harbin Institute of Technology	Bias electric field distribution analysis for a non-contact nano-probe based on tunneling effect
5_1054	P5-8	Anastasia Blokhinaa, Maksim Kleshchenoka , Ivan Nekrylova , Sergey Mednikova, Victoria Ryzhovaa, Igor Konyakhin	ITMO University	The meat product quality control by a polarimetric method
5_1107	P5-9	Jianmin Zhou, Faling Wang, Chenchen Zhang, Xiaosu Liao	East China Jiaotong University	Eye positioning based on windowed gray-scale integral projection algorithm
5_1114	P5-10	Yazhuo Li*, Xiangdong Zhou	Jianghan University	Using carbon nanotube membrane as counter electrode in voltammetric electronic tongue system
5_1128	P5-11	Sili Liu, Jianyun Chen*, Jiahao Li	National University of Defense Technology	Autonomous time synchronization method of wireless ad hoc sensor network and its implementation on CC1350 system

5_1155	P5-12	Zhigang Wang[1], Chi Xiao[1], Yinming Zhao[2], Yongqian Li[1]*, Zili Zhou[3]	[1]Northwestern Polytechnical University, [2]Beijing Changcheng Institute of Metrology & Measurement, [3]Chinese Aeronautical Establishment	Strain transfer characteristics of resistance strain-type transducer
5_1158	P5-13	Zhigang Wang[1], Chi Xiao[1], Yunlong Mao[a], Yinming Zhao[2], Zili Zhou[3], Yongqian Li[1]*	[1]Northwestern Polytechnical University, [2]Beijing Changcheng Institute of Metrology & Measurement, [3]Chinese Aeronautical Establishment	Dependence of stress distribution in electrical strain gauges on micro-morphology of sensitive grids
5_1163	P5-14	Hong Dang, Kunpeng Feng, Xun Sun, Yihua Jin, Jiwen Cui*, Jiubin Tan	Center of Ultra-precision Optoelectronic Instrument, Harbin Institute of Technology	A high resolution and response speed interrogation method for fbgs-based sensors
6_1001	P6-1	Xuewei Cui, Hengzheng Wei, Weinong Wang	China Jiliang University	Research and evaluation of geometric element data fitting software for coordinate measurement machine
6_1164	P6-3	Su Zhang, Jingtao Li, Limin Zou*, Hui Zhong, Xuemei Ding	Institute of Ultra-precision Optoelectronic Instrument Engineering, Harbin Institute of Technology	Super-resolution scanning microscopy with virtually structured illumination
7_858	P7-1	Liheng Shi, Dongmei Guo*, Lingwen Kong, Ming Wang, Wenkui Cai	Nanjing Normal University	Orthogonally polarized self-mixing grating interferometer for two-dimensional displacement measurement
7_899	P7-2	Fuzhong Bai, Jun Kong, Tieying Zhang, Yongxiang Xu, Xingrong Shi	Inner Mongol University of Technology	Angle measurement for cross-line target image based on Fourier-polar transform algorithm
7_907	P7-3	Anastasia Bulykina, Victoria Ryzhova, Valery Korotaev, Igor Konyakhin	ITMO University	Analysis of modern non-invasive methods of optoelectronic control of the skin
7_910	P7-4	Leonid V. Smirnov*, Victoria A. Ryzhova, Alexander S. Grishkanich, Igor Konyakhin	ITMO University	Sensing the atmosphere of coastal areas of laser detection methods
7_925	P7-5	Zhi-Feng Zhang*, Xue-Nian Fu, Jian-Wei Chen, Yu-Rong Li, Jia-Min Chang, Yu-Sheng Zhai, Li-Jie Geng	Zhengzhou University of Light Industry	Cotton neps on-line measurement based on near-infrared structured light images fusion light images fusion
7_929	P7-6	Hang Chen, Yue Gao, Peng Jin, Jiubin Tan, Jie Lin*	Harbin Institute of Technology	Displacement measurement with MEMS based slit sensor

7_994	P7-8	Jianning Liu, Zheng Lu, Lina Ren, Mingxing Jiao, Xiaoyun Bian	Xi'an University of Technology	Study on the temperature characteristics of the triangular prisms ring cavity
7_1000	P7-9	Ke Kou, Tianhong Lian, Cuo Wang, Guanlei Zhan	Xi'an University of Technology	Doppler-shifted laser self-mixing interferometry for enhanced detection sensitivity
7_1012	P7-10	Haiyan Hou, Jun Liu, Wenting Zhong, Kejun Yan, Huige Di	Xi'an University of Technology	Aerosol particle size distribution retrieval algorithm and error analysis based on multi-wavelength radar
7_1013	P7-11	Yun Liu, Xuan Li, Junhong Xing,	Xi'an University of Technology	Comparison and analysis of automatic focusing methods on pure phase objects in digital holographic microscopy
7_1015	P7-12	Guili Xu, Danyu Mu, Shuanggao Li, Huang Xiang, Dawei Zeng	Nanjing University of Aeronautics and Astronautics	Research on the key technology of detecting the defects of wheelset tread based on photoelectricity
7_1023	P7-13	Juan Su, Mingxing Jiao, Fei Jiang, Junhong Xing	Xi'an University of Technology	Research on laser frequency locking system using orthogonally demodulated pound–drever–hall method
7_1034	P7-14	Ang Wu, Juanhua Zhu, Zeliu Tao, Hao Zhang	Henan Agricultural University	Non-destructive detection of seed viability based on biospeckle technique
7_1075	P7-15	Ying Li, Zhifeng Lou, Kuang-Chao Fan	Dalian University of Technology	The Structural optimal design and stability improvement of dual-axis optoelectronic level
7_1085	P7-16	D.T. Nguyen, E.G. Lebedko	ITMO University	The possibility of measuring low altitudes above the sea surface with pulsed laser altimeter under conditions of fog and haze
7_1090	P7-17	L. Yang*, F. Ji, Y. Z. Zhang, M. J. Xu, J. J. Chen, R. S. Lu	School of Instrument Science and Opto-electronics Engineering, Hefei University of Technology	Characterization of surface roughness by double blanket model from laser speckle images

7_1096	P7-18	Chien-Kai Chung[1]*, Chen-Chang Lin[1], Ming-Fu Chen[1], Shih-Feng Tseng[2]	[1]Instrument Technology Research Center, National Applied Research Laboratories, [2]Department of Mechanical Engineering, National Taipei University of Technology	Design, fabrication, identification and test of a closed-loop moving magnetic scanning module for RGB laser projector
7_1108	P7-19	Beishen Wei, Lin Zhou*	South China U of Tech.	Data processing for Femur Model Laser scanning
7_1131	P7-21	Ke Wang, Haijin Fu, Di Chang, Pengcheng Hu*, Hongxing Yang, Ruitao Yang, Jiubin Tan	Harbin Institute of Technology	An auto-gain based homodyne laser vibrometer with enhanced adaptability to reflectivity
7_1132	P7-22	Haijin Fu, Yue Wang, Ruidong Ji, Pengcheng Hu*, Hongxing Yang, Ruitao Yang, Jiubin Tan	Harbin Institute of Technology	A real-time nonlinear error measurement method with picometer accuracy and free from target motion state
8_873	P8-2	Guisuo Xia, junfeng Qin, Yanjun Fu, Ziyang Qin	Nanchang Hangkong University	Research on high accuracy calibration method of rotary axis of tube parts
8_880	P8-3	Qi Lv, Chenguang Cai, Guodong Zhai, Zhihua Liu, Jiachun Cheng	China University of Mining & Technology	Study on resonant high-acceleration calibration system
8_885	P8-4	Anastasiya Y. Lobanova, Victoria A. Ryzhova, Igor A. Konyakhin*	ITMO University	Research of the polarization-optical parameters of a solid-state matrix photomultiplier
8_892	P8-5	Beichen Guo, Jingjing Li, Zhi Sun	Beijing Oriental Measurement Institute	Keysight B1505A power device analyzer output pulse current calibration method
8_948	P8-6	Song Zhang, Jiamin Liu, Hao Jiang, Shiyuan Liu	Huazhong University of Science and Technology	Characterization of beam splitter using Mueller matrix ellipsometry
8_952	P8-7	Maksim Kleshchenok*, Ivan Nekrylov , Anastasia Blokhina, Sergey Mednikov, Valery Korotaev, Igor Konyakhin	ITMO University	Parameter optimization of measuring and control elements in the monitoring systems of complex technical objects with triple reflector
8_958	P8-8	Xiang Cheng, Xiaojun Liu*, Hongzhou Yan, Jian Luo, Hong Zhu, He Zhou	Huazhong University of Science and Technology	Wavelength calibration system for diode laser
8_959	P8-9	Zhenmin Zhu*, Xinyun Wang, Quanxin Liu	East China Jiaotong University	Analysis of the extraction accuracy of the corner point of the camera using polarization imaging

8_962	P8-10	Xu Liu, Rongsheng Lu	Hefei University of Technology	Directional phase-shift circular arrays targets for out-of-focus camera calibration
8_980	P8-11	Xiaotong Wu, Shenghuai Wang, Chunlong Zou	Hubei University of Automotive Technology	Fabrication and characterization of nanostructure multi-step sample
8_1003	P8-12	Qiyu Wang, Lishuang Mou, Shuqing Wu, Chunjian Li, Duowu Su	National Institute of Metrology, China	Study of gPhone gravimeter-119 for gravity variations observation during International Comparison of Absolute Gravimeters 2017
8_1009	P8-13	Ye Ruan	Dalian University of Technology	A calibration method of micro device reconfigurable assembly system
8_1017	P8-14	Na Feng, Ya-Fei Yuan, Yu Zhang, Shan-Shan Ma, Qi-Zheng Ji	Beijing Oriental Institute of Measurement and Test	Study on the calibration technology of electrostatic field tester
8_1064	P8-15	Honggang Gu, Peng Wei, Xiuguo Chen, Hao Jiang, Chuanwei Zhang, Shiyuan Liu	Huazhong University of Science & Technology	Characterization of a liquid crystal variable retarder by Mueller matrix ellipsometry
8_1078	P8-16	Yuchen-Tian, Zhifeng Lou, Kuang-Chao Fan, Liang Xu, Ying Li	Dalian University of technology	Parallelism measurement based on rail stack installation
8_1119	P8-17	Run Zhang, Wenhui Bao, Huining Zhao, Huakun Jia, Liandong Yu*	Hefei University of Technology	Self-calibration method of precision shafting angle measurement error based on multiple reading heads
10_941	P10-1	Danyang Li, Jian Guan, Peng Jin, Jie Lin	Harbin Institute of Technology	Optimization algorithm to shape optical beam for laser direct writing
11_838	P11-1	Chenzhe Hang[1,2], Guoyuan Ma[1,*], Jianli Liu[3], Dinghua Xu[2]	[1]Beijing University of Technology,[2]National Institute of Metrology,[3]Henan Institute of Metrology	A chi-square statistic of arithmetic mean and its application in inter-laboratory comparison
7_1130	P11-2	Jiale Kang, Dengxin Hua, Tingyao He, Jingjing Liu, Qing Yan, Jun Wang*	Xi'an University of Technology	Decoupling atmosphere Rayleigh-Brillouin scattering spectrum in kinetic regime
11_840	P11-3	Haiyun Zhang[1]*, Dinghua Xu[1], Jianli Liu[2], Tiepeng Zhao[3]	[1]National Institute of Metrology, [2]Henan Institute of Metrology, [3]China Academy of Building Research	Based on MATLAB: the analysis of Key Comparison Reference Value (KCRV) and its uncertainty using Markov Chain Monte Carlo (MCMC) method
11_918	P11-4	Jingjing Li, Xiaoding Huang, Huan Zhang, Beichen Guo, Beibei Hu	Beijing Oriental Institute of Measurement and Test	An expression method of cmc based on unitary linear regression equastion

11_982	P11-5	Peili Yin, Jianhua Wang	Xi'an Technological University	Evaluation of task specific measurement uncertainty for gear measuring instrument using VGMI
11_1011	P11-6	Zeliang Cai, Za Luo, Hui Liu	China Jiliang University	Probe error analysis of articulated arm coordinate measuring machine
11_1026	P11-7	Yinbao Cheng[1], Zhongyu Wang[1], Xiaohuai Chen[2], Hongli Li[2], Jing Lü[3], Huadong Fu[3]	[1]Beihang University, [2]Hefei University of Technology, [3]China National Accreditation Service for Conformity Assessment	Misjudgment risk estimation for product inspection based on measurement uncertainty
E_001	P12-1	Dongzhao Huang, Qiancheng Zhao	Hunan University of Science and Technology	A Fast global calibration method for T-type 3D four-wheel aligner
E_002	P12-2	Dongliang Liu, Peng Zheng, Zhanxin Zhi	Mechanical Engineering Institute of Zhengzhou University	A new method for measuring the geometrical characteristics of crankshaft in-situ
E_003	P12-3	Qi Chang*, Heming Gao, Weixi Yang, Guoqiang Shi	School of mechanical and precision instrument engineering, Xi'an university of technology	A research on bolt loosening monitoring based on Lamb wave
E_004	P12-4	Meng Su*, Linyi Huang, Huawei Xu	China Electronic Product Reliability and Environmental Testing Research Institute	Design and implementation of flexible display reliability testing instrument
E_010	P12-5	Meng Su, Linyi Huang, Huawei Xu	China Electronic Product Reliability and Environmental Testing Research Institute	Instruments and equipment monitoring system based on the internet of things technology
E_013	P12-6	Tongqun Ren, Bo Qin, Xiangdong Xu, Zhirou Liu, Xiaodong Wang	Dalian University of Technology	The internal air gap measurement equipment for dynamic pressure motor
E_014	P12-7	Dianhong Yu, Ximin Li, Lin Li	Xi'an University of Technology	Theoretical analysis and digital simulation of a new capacitive sensor
E_015	P12-8	Yan Zhang[1], Zili Zhang[2,3], Yueqiang Li[1], Weihu Zhou[2,3]*, Yang He[1], Wei Li[1]	[1]Beijing Information Science & Technology University, [2]Chinese Academy of Science, [3]University of Chinese Academy of Sciences	Phase measuring method and error compensation in 3D profile measurement
E_020	P12-9	Qian Zhou, Kai Hu, Kai Ni, Xinghui Li*, Xiaohao Wang	Graduate School at Shenzhen, Tsinghua University	An underwater detecting system based on photoacoustic effect for underwater ranging and 3D topography measurement
E_022	P12-10	Xinghui Li, Yaping Shi, Peirong Wang, Kai Ni, Qian Zhou*, Xiaohao Wang	Research Institute of Tsinghua University in Shenzhen	A compact design of optical scheme for a two-probe absolute surface encoder

E_023	P12-14	Xinghui Li, Su Xiao, Qian Zhou, Kai Ni*, Xiaohao Wang	Research Institute of Tsinghua University in Shenzhen	Real-time distance measurement data processing platform based on absolute two-dimensional grating scale
E_024	P12-15	Xinghui Li, Xiang Xiao, Haiou Lu, Kai Ni, Qian Zhou*, Xiaohao Wang	Research Institute of Tsinghua University in Shenzhen	Design and testing of a compact optical lens module for multi-degree-of freedom grating interferometry application
E_027	P12-16	Han Zhou, Bingkun Wu, Mingguang Shan, Lei Liu, Haichao Yu, Zhi Zhong, Bin Liu*	Harbin Engineering University	Optical fiber Fabry-Perot acoustic sensor based on large PDMS diaphragm
E_051	P12-18	Cun Chang[1]*, Tianjian Wu[1], Wanfu Yang[1], Hao Li[2], Zhonghan Hao[3], Qing Chang[1]	[1]College of Engineering, Heilongjiang University, [2]Heilongjiang Provincial Institute of Measurement & Verification, [3]East China University of Science and Technology	System design of lithium battery internal resistance measurement using Labview
E_052	P12-19	Haitao Li[1]*, Jiangong Sun[1], Xianming Gao[1], Xinlong Yang[2], Junjie Guo[3]	[1]Shaanxi University of Science & Technology, [2]Xi'an Institute of Space Radio Technology, [3]Xi'an Jiaotong University	Error mapping for rotary axes of machine tools based on pose measurement principle
E_053	P12-20	Fuan Cheng, Xugang Feng*, Jiayan Zhang	Anhui University of Technology	Probe design of nano coordinate measuring machine based on grating strain sensor
E_054	P12-21	Fan Zhu*, Xinran Tan, Jian Shi, Yang Yu, Jiubin Tan*	Harbin institute of technology	Improved two dimensional micro-/nanoradian angle generator with single rotation center located on tilting plane and error compensation of capacitive sensors
E_055	P12-22	Wei Jin[1], Qi Li[2]*, Yushu Shi[2], Sitian Gao[2], Wei Li[2], Shi Li[2]	[1]China Jiliang University, [2]National Institute of Metrology	Automatic real-time compensation of wavelength of heterodyne interferometer
E_056	P12-23	Qi Zhou[1,2], Qi Li[2], Yu-Shu Shi[2], Shi Li[2], Lu Huang[2], Si-Tian Gao[2]*	[1]Zhejiang Sci-tech University, [2]National Institute of Metrology	Experimental study on non-linear calibration of two-dimensional nano-positioning stage
E_005	P12-24	Guodong Liu, Qifeng Luo, Bingguo Liu*, Binghui Lu, Pan Guo	Harbin Institute of Technology	Embedded intelligent camera algorithm based on hardware IP
6_833	P12-25	Cong Cao*, Dongsheng Zhao, Ying Tang, Tingting Peng	Shandong Institute of Metrology	Synthesis and metrology of cellulose nanocrystal films

E_057	P12-26	Lingcheng Liu, Xuemin Cheng*	Graduate School at Shenzhen, Tsinghua University	Fabrication process and error detection technologies for injection molding aspheric lens
E_058	P12-27	Yong Ren, Xuemin Cheng*	Graduate School at Shenzhen, Tsinghua University	Review of convolutional neural network optimization and training in image processing
E_059	P12-28	He Ni, Jingtao Li, Limin Zou*, Peng Zhang, Xuemei Ding	Department of Automatic Test and Control, Harbin Institute of Technology	Research on key technologies of quadrupole electromagnetic tweezer
7_1111	P12-29	Jingzhong Xu, Ge Wang*, Lina Ma, Jiarong Wang	Wuhan University	Extracting road edges from MLS point clouds via a local planar fitting algorithm
E_011	P12-30	Lu Wang, Mingdong Lv, Xuerong Ye*	Harbin Institute of Technology	Optimization on metering accuracy of smart electricity meter by temperature compensation
E_066	P12-31	Xiaoding Huang[1], Yazhen Tong[1], Jianzhen Cai[1],Jianting Zhao[2], Xin Zhang[3]	[1]Beijing Orient Institute of Measurement and Test, [2]National Institute of Metrology, [3]ShenyangZhongchuan Measurement Technology Co., LTD	Research of variable-frequency big current calibration
E_067	P12-32	Jincheng Song, Lizhen Guo, Hao Zhu, Yinxiao Miao, Ke liu	Beijing Aerospace Institute for Metrology and Measurement Technology	Study on FMCW laser ranging technology based on nonlinear error compensation

Plenary Session I

Title: **Optical fiber sensors for industrial applications**

9:25-10:05, Aug. 9, 2018
Chairman: Prof. Tony Wilson

Prof. Kenneth Grattan

President of the International Measurement Confederation (IMEKO)
Dean, City Graduate School
Royal Academy of Engineering - George Daniels Professor of Scientific Instrumentation
City University of London, UK

Professor Grattan graduated in Physics from Queen's University Belfast with a BSc (First Class Honors) in 1974 and a PhD in Laser Physics. His research involved the use of laser-probe techniques for measurements on potential new laser systems. Following Queen's, in 1978 he became a Research Fellow at Imperial College of Science and Technology, sponsored by the Rutherford Laboratory to work on advanced photolytic drivers for novel laser systems. This involved detailed measurements of the characteristics and properties of novel laser species and a range of materials involved in systems calibration. In 1983 he joined City University as a "new blood" Lecturer in Physics, being appointed Professor of Measurement and Instrumentation in 1991 and Head of the Department of Electrical, Electronic and Information Engineering. He was appointed Dean of the Schools of Engineering & Mathematical Sciences and of Informatics in 2008, serving until 2012 when he became Dean of the newly formed City Graduate School. His research interests include the use of fiber optic and optical systems in the measurement of a range of physical and chemical parameters. The work has been sponsored by a number of organizations including EPSRC, the EU, private industry and venture capital and he holds a number of patents for his work with industry. He obtained a DSc from City University in 1992 for his sensor work.

Professor Grattan is extensively involved with the work of the professional bodies having been Chairman of the Science, Education and Technology of the Institution of Electrical Engineers, the Applied Optics Division of the Institute of Physics and he was President of the Institute of Measurement and Control during the year 2000. He was awarded the Callendar Medal of the Institute of Measurement and Control in 1992, the Hartley Medal of the same Institution in 2015 and the Honeywell Prize for work published in the Institute's journal as well the Institute of Physics Applied Optics Divisional Prize in 2010. Professor Grattan had been Deputy Editor of the Journal Measurement Science and Technology for several years and currently serves on the Editorial Board of several major journals in his field in the USA and Europe. In January 2001 he was appointed Editor of the IMEKO Journal "Measurement" and now is Editor Emeritus of the Journal. After many years serving on their General Council, he was appointed the President of the International Measurement Confederation (IMEKO) in 2015. He is the author and co-author of about 1300 publications in major international journals and at conferences and is the co-editor (with Professor B T Meggitt) of a five volume topical series on Optical Fiber Sensor Technology. Professor Grattan was Dean of the School of Engineering & Mathematical Sciences and also Dean of the School of Informatics at City University from 2008 to 2012 and in that year was appointed as the Inaugural Dean of the new City Graduate School at the University.

Plenary Session I

Title: **Miniature two-photon microscopy for brain imaging in freely behaving animals**

10:05-10:45, Aug. 9, 2018
Chairman: Prof. Tony Wilson

Prof. Heping Cheng

Leader of Institute of Molecular Medicine, Peking University
Fellow of the Chinese Academy of Sciences

Professor Heping (Peace) Cheng received his bachelor and master degrees in applied mathematics & mechanics and biomedical engineering, with physiology as his minor, from Peking University, China. Upon graduation, he served as a junior faculty member in the Department of Electrical Engineering at the same university before earning his Ph.D. degree in physiology in 1995 from the University of Maryland at Baltimore. He then joined the NIH Intramural Research Program as a senior staff fellow, was selected as a tenure-track investigator in 1998 and became the head of the Ca2+ Signaling Section in the Laboratory of Cardiovascular Science, National Institute of Aging, NIH. He was promoted to senior investigator in 2004. He is now a senior investigator heading the Laboratory of Ca2+ Signaling & Mitochondrial Biomedicine in the Institute of Molecular Medicine at Peking University. He was elected to the Chinese National Academy of Sciences in 2013. Co-discovering “Ca2+ sparks” in 1993 and mitochondrial “superoxide flashes” in 2008, he strives to resolve elemental physiological signals in the pursuit of principles of cell signaling. Currently he is engaged in developing novel imaging technology for reverse engineering of brain information processing.

Plenary Session II

Title: **Comb-based multidimensional coherent spectroscopy**

10:45-11:25, Aug. 9, 2018
Chairman: Prof. Fu-Jen Kao

Prof. Steven Cundiff

Fellow Adjoint of JILA. Harrison M. Randall Collegiate Professor of Physics, University of Michigan, Ann Arbor
Fellow of the IEEE, Fellow of the APS, Fellow of the OSA, OSA Meggers Award, Humboldt Research Award

Professor Cundiff and his research group work on several aspects of ultrafast optics. One area involves generating and controlling ultrashort pulses, which, of course, provides the foundation for the field of ultrafast optics. However, the group is primarily interested in using ultrashort light pulses for a variety of scientific applications. A natural application is to use the very short duration of the pulses to study processes that occur on similar timescales, which is generally known as ultrafast spectroscopy. Ultrafast spectroscopy not only gives dynamical information, but it also provides information about the fundamentals of how light interacts with matter. One type of ultrafast spectroscopy, known as optical multidimensional coherent spectroscopy, has been developed over the last decade as has proven to be very powerful. The Cundiff group uses ultrafast spectroscopy, including multidimensional coherent spectroscopy, to study a range of system including semiconductors, semiconductor nanostructures and atomic vapors.

Plenary Session II

Title: **A novel high-precision mass measurement device for the new kilogram**

11:25-12:05, Aug. 9, 2018
Chairman: Prof. Fu-Jen Kao

Dr. Christan Rothleitner

Leading scientist of the group mass metrology for Planck balances,
Physikalisch-Technische Bundesanstaldt (PTB)
Member of German physical society DPG and American physical society

Dr. Christian Rothleitner studied physics in Germany, Italy and Venezuela. He received his PhD in experimental physics at the Max Planck Institute for the Science of Light, in Germany, about the development of two free-fall absolute gravimeters in the group of Prof. Lijun Wang (now at Tsinghua University, China). After he received his PhD he made a postdoctorate at the University of Luxembourg where he developed a free-fall experiment to measure the Newtonian constant of gravitation. Thereafter, he joined the German national metrology institute, the Physikalisch-Technische Bundesanstaldt (PTB), where he gained several years of experience in length metrology with a special focus on computed tomography. Now he is the leading scientist of the group mass metrology for Planck balances at PTB. In this position he is responsible for developing a high-precision weighing instrument that will allow to make primary realizations of the SI unit kilogram after its re-definition by end of 2018. This is done in collaboration with the Technical University of Ilmenau where Dr. Rothleitner is also doing his ‘habilitation’, a qualification as a lecturer. Dr. Rothleitner published more than 30 scientific articles in international peer reviewed journals. He is member of the German physical society DPG and of the American physical society APS.

Plenary Session III

Title: **Time resolved imaging with stimulated emission in pump-probe microscopy**

13:30-14:10, Aug. 9, 2018
Chairman: Prof. Seung-Woo Kim

Prof. Fu-Jen Kao

Professor, Institute of Biophotonics, National Yang-Ming University (2004-)
Association of Asia Pacific Physical Societies (2016-)

Professor Fu-Jen Gao is now in Institute of Biophotonics, National Yang-Ming University since 2004 and also the association of Asia Pacific Physical Societies. He was the president of Physics Society of ROC (2012-2014), vice president of Physics Society of ROC (2012-2014), associated Dean of Office of Research & Development, NYMU (2006-2011), and also the director, Institute of Biophotonics, NYMU (2004-2011). His research interests are in the field of Stimulated emission based pump-probe microscopy, 4-channel Stokes vector resolved SH polarization microscopy and biomedical optical instrument for endoscopy. During his academic career, the long working distance fluorescence and lifetime measurement via stimulated emission, and laser illumination for endoscopy are the two research highlights.

In the field of “long working distance fluorescence and lifetime measurement via stimulated emission”, Prof Gao and his team are focusing on the unique aspect of spatial coherence as a result of stimulated emission, which is utilized for long distance fluorescence detection and lifetime imaging. In contrast with the case of spontaneous emission, high numerical aperture optics is not required to collect the stimulated emission signal efficiently.

Meanwhile, in the field of “Laser illumination for endoscopy”, Prof Gao’s team have successfully established a novel ultra-compact endoscopic imaging system, which uses a miniature CMOS sensor (O.D. <1.0 mm) and a few multimode fiber for light delivery. Critically, the illumination is realized by coupling the output of a supercontinuum or RGB laser into the fiber. In this way, very high brightness is possible with extremely small footprint on the illumination part. As a result, the overall diameter (< 1.2 mm) of the endoscope can be much smaller than the currently used models.

Plenary Session III

Title: **Size matters! Understanding and exploiting the length-scale dependence of material properties and nano/micro-scale measurements**

14:10-14:50, Aug. 9, 2018
Chairman: Prof. Seung-Woo Kim

Prof. Nigel M Jennett

Professor of Materials, Mechanics and Measurement at Coventry University
Chairs of the BSI indentation hardness committee

Professor Nigel M Jennett BSc (Hons) (Physics), PhD (Physics), CSci CPhys MinstP has over 25 years' experience of fabrication and characterization of nano-structured materials and 20 years' developing nano-mechanical test methods. He is: Professor of Materials, Mechanics and Measurement at Coventry University, visiting Professor of Engineering at Leicester University, Associate Editor of Philosophical Magazine (and Philos. Mag. Letters), international chair of VAMAS Technical Working Area 22 'Mechanical properties measurement of thin films and coatings', UK technical expert on the CIPM consultative committee hardness working group (CCM-WGH), chairs the BSI indentation hardness committee, leads the UK delegation for ISO working groups drafting standards for indentation-based test methods. Nigel has also served two terms (six years) on the European Commission Certification Advisory Panel for Physical and Physicochemical Properties.

Nigel studied Physics at Bristol University (Physics Laboratory prize in 1984 and 1986, and the Raychem prize in 1985). He spent six years researching magnetic multilayers (1990 PhD, 1991 Chartered Physicist), before moving to NPL (1992) to develop traceable Scanned Probe Microscopy and nano-mechanical measurements. In 1998 he created his own research group focused on surfaces, coatings and nano-mechanics and was awarded a Glazebrook Fellowship in 2003 and the NPL Rayleigh award in 2010. Nigel is an experienced leader of projects (Government, Industry and European Commission), and is a regular invited speaker at international conferences.

Plenary Session III

Title: **Innovative techniques for contrast, spectrometric and viscoelastic measurements in small animal MRI**

14:50-15:30, Aug. 9, 2018
Chairman: Prof. Seung-Woo Kim

Prof. Olivier Beuf

Senior CNRS research scientist
Team leader “NMR and optics: From measure to biomarker”
Director of the CREATIS lab (CNRS UMR5220, INSERM U1206)

Dr. Olivier Beuf is the senior CNRS research scientist in France. He obtained his PH.D in physics from Université Claude Bernard Lyon 1 in 1998. Dr. Beuf has widely research interests in the field of MR imaging, RF coils, multi-parameters quantitative imaging, liver analysis, cartilage ultra-structure and morphology, and so on.

He published more than 80 peer reviewed international journal articles and 8 book chapters. His research works are 1105 citations in WOS and the h-index is as high as 19. Meanwhile, the transfer of technology are 3 patents. Dr. Beuf is also the supervisor of 17 PhD students (14 defended and 3 still supervised). Dr. Beuf is the chairman of the “journées scientifiques sur les nouvelles méthodologies en imagerie du vivant”, Lyon, France (300 delegates). He is the distinguished reviewer of Journal of Magnetic Resonance Imaging (2011 and 2014) and Magna Cum Laude Merit Award of the 30th Meeting of the International Society for Magnetic Resonance in Medicine (2012).

Plenary Session IV

Title: **Interferometric microscopy for detection and visualization of biological nanoparticles**

15:45-16:25, Aug. 9, 2018
Chairman: Prof. Nigel M. Jennett

Prof. M. Selim Ünlü

Distinguished Professor of Engineering appointed in electrical and computer engineering, biomedical engineering, physics, and graduate medical sciences. Boston University
IEEE Fellow and OSA Fellow
Editor-in-Chief for IEEE Journal of Quantum Electronics
Contact Information: selim@bu.edu www.bu.edu/OCN

Professor M. Selim Ünlü received the B.S. degree from the Middle East Technical University, Ankara, Turkey, in 1986, and the M.S.E.E. (1988) and Ph.D. (1992) degrees from the University of Illinois at Urbana-Champaign, all in electrical engineering. Since 1992, he has been a professor at Boston University. He is currently a Distinguished Professor of Engineering appointed in electrical and computer engineering, biomedical engineering, physics, and graduate medical sciences. He has also served as the Associate Dean for Research and Graduate Programs in engineering. His research interests are in the areas of nanophotonics and biophotonics focusing on high-resolution solid immersion lens microscopy of integrated circuits and development of biological detection and imaging techniques, particularly in high-throughput digital biosensors based on detection of individual nanoparticles and viruses.

Dr. Ünlü was the recipient of the NSF CAREER and ONR Young Investigator Awards in 1996. He has been selected as a Photonics Society Distinguished Lecturer for 2005-2007 and Australian Research Council Nanotechnology Network (ARCNN) Distinguished Lecturer for 2007. He has been elevated to IEEE Fellow rank in 2007 for his “contributions to optoelectronic devices” and OSA Fellow rank in 2017 for his “for pioneering contributions in utilization of optical interference in enhanced photodetectors and biological sensing and imaging.” In 2008, he was awarded the Science Award by the Turkish Scientific Foundation. His professional service includes serving as the chair of the Annual Meeting for IEEE Photonics Society and Editor-in-Chief for IEEE Journal of Quantum Electronics.

Plenary Session IV

Title: **Plasmonics: Exotic nanophotonics beyond the limits**

16:25-17:05, Aug. 9, 2018
Chairman: Prof. Nigel M. Jennett

Prof. Satoshi Kawata

Professor Emeritus, Osaka University
Honorary Scientist RIKEN
Osaka University, Suita, Japan
Office: P3-300, Photonics Center
Email:kawata@ap.eng.osaka-u.ac.jp

Professor Satoshi Kawata is now Professor Emeritus at Osaka University and Honorary Scientist of RIKEN. He is the founder and the Chairman of the Board of Nanophoton Corp. He is a Fellow of OSA, IOP, SPIE, and JSAP.

Satoshi Kawata received his BSc, Msc, and PhD all in Applied Physics in 1974, 76, and 79, respectively, from Osaka University. After the experience of postdoctral fellow of JSPS, he spent two years in University of California, at Irvine as a Research Associate. He joined Osaka University as a faculty member in 1981 and was promoted to Professor of Applied Physics in 1993, and then Distinguished Professor in 2013. In 2002, he joined RIKEN as a Chief Scientist as Head of Nanophotonics Laboratory until his retirement in 2012, and Team Leader of RIKEN until 2015.

Professor Kawata is now the Professor Emeritus of Osaka University and Honorary Scientist of RIKEN. He has served as the President of JSAP (Japan Society of Applied Physics) from 2014 to 2016, and the President of Spectroscopical Society of Japan from 2007 to 2008, the Editor of Optics Communications from 2000 to 2009.

He is one of the pioneers in near field optics (the inventor of tip-enhanced near-field microscopy), three-dimensional microscopy (laser CT microscopy, 3D optical data storage), plasmonics (SPR sensors, plasmon holography, plasmon laser, plasmonic microscopy), two-photon engineering (two-photon polymerization, two-photon isomerization, two-photon photorefraction, two-photon SPP, etc), bio-imaging, and signal recovery. The "8-micron bull" fabricated with his invented two-photon technology has been awarded in Guinness World Record Book 2004 Edition.

Plenary Session IV

Title: **Drive operational excellence through intelligent quality**

17:05-17:45, Aug. 9, 2018
Chairman: Prof. Nigel M. Jennett

Ms. Liao Lu

Hexagon Manufacturing Intelligence Global Product Marketing Manager

Ms. Liao Lu is now Hexagon Manufacturing Intelligence Global Product Marketing Manager. She is also HxGN SMART Quality Product Marketing Manager. With more than 20 years of industrial experience in precision measurement, Ms. Liao Lu has extensive market knowledge and internationalized view on measuring technology and customer application, and has made important contributions to the application and popularization of advanced measuring technology. She received her MSc degrees in Precision Measuring Technology from Tianjin University in 2003.

Abstract: Quality is not just dimensional inspection. Quality minimises the difference between the intended and the actual. Intelligent Quality means the active use of data to make quality improvements throughout the product lifecycle. This presentation will review the mindset changing in quality management, blending the innovation hardware and software technology trends on data collection in shop floor, digital connectivity, advanced analytics, and further drive quality improvement via insights gained from digitally connected equipment, people, processes, and operational systems. Introduce using the concept of 3D digital thread to create a rich information ecosystem for smarter manufacturing.