

Monday, 27 November 2023

**Time**

**PROGRAMME**

**1400 - 1800**

Registration (Level 4, Main Foyer)

**1600 - 1800**

SPIE Meeting (Sembawang Room, Level 3) (for students only)

**Adventures in Optical Metrology**

Dr Peter De GROOT

*SPIE, Vice President*

**1700 - 1900**

Welcome Reception (Sentosa Room, Level 3)

All are Welcome!

Tuesday, 28 November 2023					
Time	PROGRAMME				
0800 - 1600	Registration (Level 4, Main Foyer)				
0900 - 1700	Exhibition (Changi Ballrooms, Level 4)				
0900 - 0910	Opening Ceremony (Atrium Ballroom, Level 4)				
0910 - 0955	<b>Plenary 1 (Atrium Ballroom, Level 4)</b> Session Chair: Fang CHENG <b>Testing optics with interferometry and tunable-wavelength lasers</b> Dr Peter De GROOT <i>Zygo Corporation, United States</i>				
0955 - 1040	<b>Plenary 2 (Atrium Ballroom, Level 4)</b> Session Chair: Fang CHENG <b>Digital holographic metrology for imaging acoustics &amp; vibrations</b> Prof Pascal PICART <i>Le Mans Université, France</i>				
1040 - 1050	Group Photo (Atrium Ballroom, Level 4)				
1050 - 1105	AM Break (Changi Ballrooms, Level 4)				
1105-1125	<b>Keynote 1 (Atrium Ballroom, Level 4)</b> Session Chair: Cuong DANG <b>Specular surface shape measurement with collimated phase measuring deflectometry</b> Dr Lei Huang <i>Brookhaven National Laboratory, United States</i>				
1125-1145	<b>Keynote 2 (Atrium Ballroom, Level 4)</b> Session Chair: Cuong DANG <b>The slope deflectometry system development for three dimensional profile measurement</b> Dr Fugui YANG <i>Institute of High Energy Physics, China</i>				
1145-1205	<b>Keynote 3 (Atrium Ballroom, Level 4)</b> Session Chair: Cuong DANG <b>Sub-10 nm focusing of hard X-ray free-electron laser for reaching 10<sup>22</sup> W/cm<sup>2</sup> intensity</b> Prof Jumpei YAMADA <i>Department of Precision Engineering, Osaka University, Japan</i>				
1205 - 1330	<b>Lunch/Posters on Display</b> <b>Exhibition Area (Changi Ballrooms, Level 4)</b>				
Special Session (1330-1530)	<b>Breakout 1</b> (Atrium Ballroom, Level 4)	<b>Breakout 2</b> (Seletar 2, Level 3)		<b>Breakout 3</b> (Seletar 3, Level 3)	
	<b>Student Competition</b> Session Chair: Shijie FENG	<b>SS3:</b> Advances in digital holography techniques Session Chair: Peng GAO		<b>SS10:</b> <i>Industrial optical inspection and non-destructive testing (NDT)</i> Session Chair: Joseph LIFTON, Tong LIU	
1330-1345	<b>15485:</b> High robust spatio-temporal wavefront prediction in adaptive optics via a mixed graph neural network <b>Ju TANG</b> <i>Northwestern Polytechnical University, China</i>	1330-1350	<b>15669:</b> Digital holographic reconstruction and generation with unpaired and dual-distance learning models <b>Zhenbo REN</b> <i>Northwestern Polytechnical University, China</i>	1330-1350	<b>15477:</b> Exploitation of Industrial X-ray Computed Tomography for Surface Metrology of Metallic Additively Manufactured Parts <b>Shan LOU</b> <i>Future Metrology Hub, University of Huddersfield, United Kingdom</i>
1345-1400	<b>15472:</b> Sub-Aperture Stitching Interferometry With Dual Quaternion For X-ray Mirrors <b>Shuai ZHANG</b> <i>University of Chinese Academy of Sciences, China</i>	1350-1405	<b>15498:</b> Engineering Axial Resolution Realtime And Post-Recording of Incoherent Holograms Using Hybridization Techniques <b>Shivasubramanian GOPINATH</b> <i>University of Tartu, Estonia</i>	1350-1410	<b>15500:</b> Automated Visual Inspection System For Visible Particulates In Injections <b>Shaowei FU</b> <i>Applied Materials South East Asia Pte. Ltd, Singapore</i>
1400-1415	<b>15511:</b> Image-based wavefront sensing and correction for atmospheric turbulence by using deep reinforcement learning <b>Mengmeng ZHANG</b> <i>Northwestern Polytechnical University, China</i>	1405-1420	<b>15529:</b> Surface Plasmon Resonance Holographic Microscopic Imaging Technology And Application Research <b>Jiazhen DOU</b> <i>Guangdong University of Technology, China</i>	1410 - 1425	<b>15638:</b> Transformer-Based Smart Inspection For Agricultural Products Via X-ray Images <b>Chaoyu DONG</b> <i>Nanyang Technological University, Singapore</i>
1415-1430	<b>15497:</b> Parallel synthetic aperture transport-of-intensity diffraction tomography with annular illumination <b>Habib ULLAH</b> <i>Nanjing University of Science and Technology, China</i>	1420-1435	<b>15532:</b> High-speed 3D particle tracking using neuromorphic digital holography <b>Ge ZHOU</b> <i>Shanghai University, China</i>	1425-1440	<b>15481:</b> An initial study on using X-ray computed tomography to measure the surface roughness of additively manufactured metal lattices <b>Ronnie SSEBAGGALA</b> <i>University of Huddersfield /Advanced Remanufacturing, United Kingdom</i>
1430-1445	<b>15502:</b> Some recent advances in mirror-assisted multi-view digital image correlation <b>Kaiyu ZHU</b> <i>Beihang University, China</i>	1435-1450	<b>15574:</b> Digital Holography with Deep Learning for Algae Identification and Classification <b>Chinnapat RUTTANASIRAWIT</b> <i>King Mongkai's Institute of Technology Ladkrabang, Thailand</i>	1440-1455	<b>15650:</b> Use of X-Ray Computed Tomography (CT) of weld spots defects <b>Marcus NG</b> <i>Singapore Institute of Manufacturing Technology, Singapore</i>
1445-1500	<b>15514:</b> Heat haze neutralization on high-temperature digital image correlation measurements via deep learning <b>Yanzhao LIU</b> <i>Beihang University, China</i>	1450-1505	<b>15605:</b> Real-time 3D scenes acquisition method for light field 3D display <b>Qionghua WANG</b> <i>Beihang University, China</i>	1455 -1510	<b>15544:</b> Three-dimensional height measurement with an improved 3D camera <b>Hon Luen SECK</b> <i>Singapore Institute of Manufacturing Technology, Singapore</i>
1500-1515	<b>15531:</b> Validating The Efficacy of Deformation Distribution Measurement In CFRP Laminates During Three-Point Bending Using The Sampling Moiré Method <b>Tong DING</b> <i>Beihang University, China</i>			1510-1525	<b>15513:</b> Development of a vision system for cast mould defect inspection under extreme high temperature <b>Weili WANG</b> <i>Advanced Remanufacturing &amp; Technology Centre (ARTC), Singapore</i>
1515-1530	<b>15573:</b> Deep learning-enabled structured light system for single-shot absolute 3D shape measurement <b>Yixuan LI</b> <i>Nanjing University of Science and Technology, China</i>				
1530 - 1545	<b>PM Break</b> <b>Exhibition Area (Changi Ballrooms, Level 4)</b>				
(1545-1745)	<b>Breakout 1</b> (Atrium Ballroom, Level 4)	<b>Breakout 2</b> (Seletar 2, Level 3)		<b>Breakout 3</b> (Seletar 3, Level 3)	
	<b>Student Competition</b> Session Chair: Shijie FENG	<b>GT9,11 NDT and others</b> Session Chair: Chenxing WANG		<b>SS19:</b> <i>Optical Engineering in Industry</i> Session Chair: QiongHua WANG <b>GT16:</b> Other Related Topics Session Chair: QiongHua WANG	
1545-1600	<b>15533:</b> The application of the moiré method to defect detection and strain imaging in Si single crystals <b>Qingcui HUANG</b> <i>Beihang University, China</i>	1545-1600	<b>15535:</b> Improved Video Motion Magnification Method Assisted by Digital Image Correlation <b>Tong DING</b> <i>Beihang University, China</i>	1545-1605	<b>15480:</b> All-In-One Microscope For 3D Inspection And Testing <b>Jingzhu HONG</b> <i>d'Optron Pte Ltd, Singapore</i>
1600-1615	<b>15534:</b> Development Of Light-induced Detection Method For Viruses With Plasmonic Nano-bowl Substrate <b>Masatoshi KANODA</b> <i>Osaka Metropolitan University, Japan</i>	1600-1615	<b>15538:</b> X-Ray computed tomography based high-accuracy analysis for the compressive properties of thin shell lattice structures: effect of geometric defects <b>Lei ZHANG</b> <i>Shanghai Jiao Tong University, China</i>	1605-1625	<b>15520:</b> An introduction of resin SRG wave guides in AR glasses <b>Weizheng HUANG</b> <i>Meta-Bounds, China</i>
1615-1630	<b>15507:</b> Uniform LIPSS on Copper Created Using Zeroth-Order Femtosecond Bessel Beam For SERS-based Applications <b>Dipanjan BANERJEE</b> <i>University of Hyderabad, India</i>	1615-1630	<b>15549:</b> Feasibility of in-situ health monitoring for composite structure with embedded piezoelectric sensor networks <b>Khanh VO</b> <i>Nanyang Technological University, Singapore</i>	1625-1640	<b>15600:</b> A Calibration Method For LED Point Light Sources In Near-Field Photometric Stereo <b>Jing YU</b> <i>University of Wollongong, Australia</i>
1630-1645	<b>15625:</b> Detecting and Characterizing Spatter Particles on Additively Manufactured Surfaces in 3D Using X-Ray Computed Tomography and Deep Learning <b>Chaoyu DONG</b> <i>Nanyang Technological University, Singapore</i>	1630-1645	<b>15569:</b> Optical Imaging and Optical Manipulation Based on Microdroplets <b>Xixi CHEN</b> <i>Institute of Nanophotonics, Jnan University, China</i>	1640-1655	<b>15508:</b> Point cloud pair constraint registration algorithm based on directed distance function <b>Xingzhao WANG</b> <i>Shanghai University, China</i>
1645-1700	<b>15491:</b> Internal defect detection method based on dual-channel speckle interferometry <b>Tianyu YUAN</b> <i>Southeast University, China</i>	1645-1700	<b>15617:</b> Active thermal marker using thermal images of heated areas with visible semiconductor laser <b>Assoc Prof Tomohiko HAYAKAWA</b> <i>Tokyo University of Science/ University of Tokyo, Japan</i>		
1700-1715	<b>15503:</b> Accuracy Analysis Of Stereo Calibration Methods With Large Field Of View <b>Wei KANG</b> <i>Southeast University, China</i>	1700-1715	<b>15613:</b> Parametric studies of liquid LIBS analysis for agricultural applications <b>Daryl LIM</b> <i>Nanyang Technological University, Singapore</i>		
1715-1730	<b>15572:</b> Robust acquisition-reduced iterative structured illumination microscopy <b>Jiaming QIAN</b> <i>Nanjing University of Science and Technology, China</i>	1715-1730	<b>15645:</b> Characterization of X-ray scintillation film <b>Timothy SHONG</b> <i>Singapore Institute of Manufacturing Technology, Singapore</i>		

Wednesday, 29 November 2023					
Time	PROGRAMME				
0800 - 1500	Registration (Level 4, Foyer)				
0900 - 1700	Exhibition (Changi Ballrooms, Level 4)				
0900 - 0945	<b>Plenary 3 (Atrium Ballroom, Level 4)</b> Session Chair: Chao ZUO <b>Publishing in Nature Journals</b> Dr Rachel WON <i>Springer Nature Group, United Kingdom</i>				
0945 - 1030	<b>Plenary 4 (Atrium Ballroom, Level 4)</b> Session Chair: Chao ZUO <b>Advances in high-accuracy three-dimensional dynamic deformation measurement and its applications for large structures</b> Prof Xiaoyuan HE <i>Southeast University, China</i>				
1030 - 1045	AM Break (Changi Ballrooms, Level 4)				
1045-1105	<b>Keynote 4 (Atrium Ballroom, Level 4)</b> Session Chair: Haixia WANG <b>Three-dimensional shape measurement of diffused/specular surface by combining fringe projection profilometry and phase measuring deflectometry</b> Prof Zonghua Zhang <i>Hebei University of Technology, China</i>				
1105-1125	<b>Keynote 5 (Atrium Ballroom, Level 4)</b> Session Chair: Haixia WANG <b>Quantitative Phase Microscopy And Phase Correlation Spectroscopy for Biology</b> Prof Peng GAO <i>Xidian University, China</i>				
1125-1145	<b>Keynote 6 (Atrium Ballroom, Level 4)</b> Session Chair: Haixia WANG <b>Research on Single Pixel Imaging Method for Moving Object</b> Dr Dongfeng SHI <i>Chinese Academy of Sciences, China</i>				
1145 - 1330	Lunch / Poster Session Exhibition Area (Changi Ballrooms, Level 4) Presenter to standby Poster				
(1330-1530)	<b>Breakout 1</b> (Atrium Ballroom, Level 4)	<b>Breakout 2</b> (Seletar 2, Level 3)		<b>Breakout 3</b> (Seletar 3, Level 3)	
	SS14: Optical measurement and instrumentation Session Chair: Yingjie YU	SS15: Quantitative phase imaging Session Chair: Chao ZUO		SS18: X-ray optics and metrology Session Chairs: Lei HUANG, Junpei YAMADA	
1330-1350	<b>15672 :</b> Development of optical measurement techniques for large aperture optics applied in high power laser systems <b>Shijie LIU</b> <i>Shanghai Institute of Optics and Fine Mechanics (SIOM), Chinese Academy of Sciences (CAS), China</i>	1330-1350	<b>15679:</b> Deep-learning Quantitative Phase Imaging for High Throughput Live-cell Imaging and Analysis <b>Renjie ZHOU</b> <i>The Chinese University of Hong Kong, Hong Kong, China</i>	1330-1350	<b>15474:</b> X-ray optics development and metrology at Shanghai Synchrotron Radiation Facility <b>Lian XUE</b> <i>Chinese Academy of Sciences, Shanghai, China</i>
1350-1410	<b>15654 :</b> Trustworthy deflectometry: from precision to accuracy <b>Xiangchao Zhang</b> <i>Fudan University, China</i>	1350-1410	<b>15589:</b> Computational phase imaging for label-free 3D microscopy <b>Chao ZUO</b> <i>Nanjing University of Science and Technology, China</i>	1350-1410	<b>15587:</b> Development of stitching interferometry and ion beam figuring methods for high precision X-ray mirrors <b>Qishi HUANG</b> <i>Tongji University, China</i>
1410-1430	<b>15668:</b> High precision multi-surface interferometry under non-integer sampling <b>Yingjie YU</b> <i>Shanghai University, China</i>	1410-1430	<b>15647:</b> High-quality dynamic phase imaging based on fourier ptychographic microscopy <b>Jiasong SUN</b> <i>Nanjing University of Science and Technology, China</i>	1410-1430	<b>15470:</b> Surface Interferometric Measurement Method With Higher Accuracy For X-ray Optical Applications <b>Xi HOU</b> <i>Institute of Optics and Electronics, Chinese Academy of Sciences, China</i>
1430-1445	<b>15518:</b> Visible wide-angle optical reconnaissance system design with high resolution, low distortion and high relative illumination. <b>Ying-Shun HSU</b> <i>National Central University, Taiwan</i>	1430-1450	<b>15681:</b> Multi-harmonic structured illumination based optical diffraction tomography (MHSI-ODT) <b>Peng GAO</b> <i>Xidian University, China</i>	1430-1450	<b>15662:</b> Requirements of the SHINE optics and consideration of their optical metrology <b>Xiaohao DONG</b> <i>Chinese Academy of Sciences, China</i>
		1450-1505	<b>15468:</b> Deep learning-enabled pixel super-resolution quantitative phase microscopy from single-shot intensity measurement <b>Jie ZHOU</b> <i>Nanjing University of Science and Technology, China</i>	1450-1510	<b>15678:</b> X-ray Optical Technology At High Energy Photon Source (HEPS) <b>Fugui YANG</b> <i>Institute of High Energy Physics, CAS, China</i>
				1510-1525	<b>15642:</b> Developments of stitching interferometry techniques for the SHINE long X-ray mirrors surface shape measurement <b>Guang ZHOU</b> <i>Shanghai Institute of Applied Physics, Chinese Academy of Sciences, China</i>
1530 - 1545	PM Break Exhibition Area (Changi Ballrooms, Level 4)				
(1545 - 1745)	<b>Breakout 1</b> (Atrium Ballroom, Level 4)	<b>Breakout 2</b> (Seletar 2, Level 3)		<b>Breakout 3</b> (Seletar 3, Level 3)	
	SS2: 3D shape measurement based on fringe projection Session Chair: Dongliang ZHENG	GT13: Quantitative Phase Imaging Session Chair: Liangcai CAO		GT6: Image Processing and Deep Learning Session Chair: Liyong REN	
1545-1605	<b>15655 :</b> The way towards AI-based high-speed structured light 3D imaging <b>Shijie FENG</b> <i>Nanjing University of Science and Technology, China</i>	1545-1605	<b>15578:</b> Aberration-free high bandwidth holographic imaging <b>Liangcai CAO</b> <i>Tsinghua University, China</i>	1545-1605	<b>15479:</b> Real-time polarimetric de-scattering imaging technology: from thread framework to algorithm optimization and underwater demonstration <b>Liyong REN</b> <i>Natural Science Foundation of Shaanxi Province, China</i>
1605-1625	<b>15604 :</b> Multi-dimensional information sensing based on DIC-assisted fringe projection profilometry <b>Zhoujie WU</b> <i>Sichuan University, China</i>	1605-1620	<b>15663:</b> High-speed 3D imaging and metrology: from classical fringe projection to deep learning approaches <b>Chao ZUO</b> <i>Nanjing University of Science and Technology, China</i>	1605-1620	<b>15488:</b> Polarization demosaicking algorithm based on polarization channels correlation <b>Yanji YI</b> <i>University of Science and Technology of China, China</i>
1625-1645	<b>15671 :</b> 3D Reconstruction OfDynamic Object Based On Improved Deep Optical Flow Tracking <b>Lei LYU</b> <i>Henan University of Technology, China</i>	1620-1635	<b>15461:</b> Transport of intensity diffraction tomography with non-interferometric synthetic aperture for three-dimensional label-free microscopy <b>Jiaji LI</b> <i>Nanjing University of Science and Technology, China</i>	1620-1635	<b>15505:</b> A Two-Stage Deep Learning Method for Foreign Object Detection and Localization <b>Zhenbiao WANG</b> <i>Advanced Remanufacturing &amp; Technology Centre (ARTC), Singapore</i>
1645-1700	<b>15616:</b> Phase-shift Error Estimation Based On Deep Learning <b>Ketao YAN</b> <i>Changzhou University, China</i>	1635-1650	<b>15622:</b> Differential phase contrast quantitative phase imaging based on optimal modulation of asymmetric illumination <b>Yao FAN</b> <i>Nanjing University of Science and Technology, China</i>	1635-1650	<b>15664:</b> CycleSR: Unsupervised Learning for 3D fingerprint Super-Resolution <b>Haixia WANG</b> <i>Zhejiang University of Technology, China</i>
1700-1715	<b>15590:</b> Indoor simultaneous localization and mapping based on fringe projection profilometry <b>Yang ZHAO</b> <i>Nanjing University of Science and Technology, China</i>	1650-1705	<b>15626:</b> High-throughput artifact-free slightly off-axis holographic imaging based on Fourier ptychographic reconstruction <b>Qian SHEN</b> <i>Nanjing University of Science and Technology, China</i>	1650-1705	<b>15628:</b> Microscopic Spectra Measurement Based on Coherence Scanning Interferometry <b>Cheng CHEN</b> <i>Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China</i>
1715-1730	<b>15568:</b> Prototype of High-brightness Fringe Projector Using Line LED Device and Cylindrical Lens Array <b>Motoharu FUJIGAKI</b> <i>University of Fukui, Japan</i>	1705-1720	<b>15460:</b> Non-interferometric optical diffraction tomography with Fourier ptychography <b>Shun ZHOU</b> <i>Nanjing University of Science and Technology, China</i>	1705-1720	<b>15631:</b> Design of Point Cloud Data Structures for Efficient Processing of Large-Scale Point Clouds <b>Yixuan WANG</b> <i>Beihang University, China</i>
1730-1745	<b>15619:</b> Theoretical Analysis and Discussion of The Measurement Methods in Fringe Projection Profilometry <b>Shenzhen LYU</b> <i>Nanyang Technological University, Singapore</i>				
1900 - 2130	Conference Dinner (Tien Court, Copthorne King's Hotel) Meeting Point: Holiday Inn Atrium Main Lobby (Level 1) @18:00hrs, @18:15hrs				

Thursday, 30 November 2023					
Time	PROGRAMME				
0800 - 1000	Registration (Level 4, Main Foyer)				
0900 - 1600	Exhibition (Chang Ballrooms, Level 4)				
(0900-1030)	Breakout 1 (Atrium Ballroom, Level 4)	Breakout 2 (Seletar 2, Level 3)		Breakout 3 (Seletar 3, Level 3)	
	SS12: Micro/Nano-Mechanical measurement and characterization by optical/spectral methods Session Chair: Wei HE	SS9: Imaging through scattering media and non-line-of-sight imaging Session Chair: Jing HAN		GT12: Optical Measurement Methods Session Chair: Satoru YONEYAMA	
0900-0920	15657: Uses of image features in digital image correlation for deformation measurement Zhenyu JIANG South China University of Technology, China	0900-0920	15463: Fingertip OCT Image Acquisition and Enhancement Haixia WANG Zhejiang University of Technology, China	0900-0920	15559: Finite strain measurement and stress mapping for thin plate specimen using digital image correlation Satoru YONEYAMA Aoyama Gakuin University, Japan
0920-0940	15652: New photomechanics methods in characterizing high-temperature fatigue crack growth behavior of nickel-based superalloys Wei HE Hunan University, China	0920-0940	15462: Exploring the range of optical memory effect by deep learning Wenqi HE Shenzhen University, China	0920-0935	15496: A Novel Method to Parallel Beam Generation for Roll Angle Measurement Shaohua MA Hefei University of Technology, China
0940-0955	15547: Measurement of geometric and mechanical parameters for fatigue microcrack based on tracking platform Xinxing SHAO Southeast University, China	0940-0955	15469: Modeling multiple scattering of polarized light with random matrices Niall BYRNES Nanyang Technological University, Singapore	0935-0950	15629: Extract focus variation data from coherence scanning interferometric measurement Jiayu LIU Shanghai Jiao Tong University, China
0955-1010	15540: Evolution of diffusion and induced stress and its effect on the lithium-storage performance of graphite electrode Prof Haimei XIE Tianjin University, China	0955-1010	15580: Multi-strategy close range 3-D shape measurement in turbid water based on structured light Nenqing LYU Nanjing University of Science and Technology, China	0950-1005	15524: Uncertainty analysis and optimization design of large-range laser triangulation displacement sensor applied to dynamic object Zhuojiang NAN Shanghai Jiao Tong University, China
				1005-1020	15528: Two-dimensional Angle Measurement with Sub-arcsecond Precision and MHz Acquisition Rate Using Heterodyne Interferometry with Optical Frequency Comb Chen LIN Tsinghua University, China
1030 - 1045	AM Break (Chang Ballrooms, Level 4)				
(1045-1215)	Breakout 1 (Atrium Ballroom, Level 4)	Breakout 2 (Seletar 2, Level 3)		Breakout 3 (Seletar 3, Level 3)	
	SS8: High-precision optical measurement Session Chair: Xiangchao ZHANG	GT2: Biomedical Optics and Imaging Session Chair: Yongtao LIU GT3: Computer Vision Techniques Session Chair: Yongtao LIU		SS1: 2D, 3D and Volumetric digital image correlation and their applications Session Chair: Zhenyu JIANG GT10: Optical Component and System Simulation Session Chair: Zhenyu JIANG GT15: Ultrafast Lasers and Applications Session Chair: Zhenyu JIANG	
1045-1100	15522: Smoothed-truncated-sine(STS) Pattern For Accuracy Improvement In Sinusoidal Fringe Projection Profilometry Zhibu LI Tsinghua University, China	1045-1100	15656: Upconversion Multimodality super resolution microscopy imaging in highly dynamic scattering environments Yongtao LIU Nanjing University of Science and Technology, China	1045-1105	15489: The theory and error analysis of crack propagation measurement for brittle materials based on virtual principal strain field Liuming GU Southeast University, China
1100-1115	15550: High-precision deflectometry: challenges and prospects Xiangchao ZHANG Fudan University, China	1100-1115	15457: Disordered Surface Plasmon Sensor for Scattering Enhanced Single Particle Detection Matthew FOREMAN Nanyang Technological University, Singapore	1105-1125	15576: Transformer-based deep learning for digital image correlation Zhenyu JIANG South China University of Technology, China
1115-1130	15523: A Weighted Least Squares Algorithm For Wrapped Phase Retrieval In Sinusoidal Fringe Projection Profilometry Zhibu LI Tsinghua University, China	1115-1130	15566: Light-induced Acceleration of Biomolecular Recognitions for Proteins and Nanoscale Extracellular Vesicles Takuya IIDA Osaka Metropolitan University, Japan	1125-1140	15548: New Virtual Model as A Built-in Thin Lens Component of Optical Software to Balance Component Aberrations Between Different Zoom Positions of Optical Lenses Chaoshen CHEN National Kaohsiung University of Science and Technology, Taiwan
1130-1145	15581: Spectral mechanical investigation of the elastic interface between a MoS2/graphene heterostructure and a soft substrate Huidan XING Tianjin University, China	1130-1145	15586: Opto-acousto-fluidic microplatform for label-free high-throughput detection and sorting of microalgal cells Xudong DUAN China University of Geosciences, Wuhan, China	1140-1155	15649: Versatile GHz burst-mode operation in high-power femtosecond laser for industrial applications Deividas ANDRIUKAITIS EKSPLA, Lithuania
		1145-1200	15641: Spinning disk confocal microscopy image stitching Mengjun LIU Advanced Remanufacturing and Technology Centre (ARTC), Singapore	1155-1210	15637: A simulation on quasi-phase-matched high-harmonic generation in gas-filled hollow core waveguide Qianqiang RAN Singapore Institute of Manufacturing Technology, Singapore
1215 - 1330	Lunch/Posters on Display Exhibition Area (Chang Ballrooms, Level 4)				
(1330-1530)	Breakout 1 (Atrium Ballroom, Level 4)	Breakout 2 (Seletar 2, Level 3)		Breakout 3 (Seletar 3, Level 3)	
	SS7: High-accuracy optical deformation measurement of large engineering structures Session Chair: Xinxing SHAO, Qinwei MA	SS16: Single-pixel imaging and optical encoding Session Chair: Wen CHEN		GT12: Optical Measurement Methods Session Chair: Fujun YANG	
1330-1350	15537: Bridge deflection measurement by drone aerial photography using the sampling moire method Shien RI National Institute of Advanced Industrial Science, Japan	1330-1350	15492: High-quality object reconstruction based on single-pixel imaging in highly dynamic scattering environments Yin XIAO The Hong Kong Polytechnic University, Hongkong, China	1330-1345	15515: Using three-dimensional electronic speckle pattern interferometry to study Quasi-static response of two-dimensional dense granular packings to localized force Fujun YANG Southeast University, China
1350-1410	15624: Camera Array Based Super Spatio-temporal Resolution Videometrics For Deformation Measurement Of Large Structures Qinwei MA Beijing Institute of Technology, China	1350-1410	15660: High Speed Photoacoustic Microscopy based on Single Pixel Imaging Method Chengbo LIU Chinese Academy of Sciences, China	1345-1400	15614: Illumination Variation Robust Circular Target Based on Digital Image Correlation Method Shuai DONG Changsha University of Science and Technology, China
1410-1430	15658: Adaptive fringe projection moiré method for large structure morphology measurement Chen SUN Shanghai Jiao Tong University, China	1410-1425	15499: Optical pixel-to-plane encoding with neural network for ghost transmission through complex scattering media Yang PENG The Hong Kong Polytechnic University, Hongkong, China	1400-1415	15630: Compact ARS probe to measure roughness of smooth surfaces Zihan CHEN Shanghai Jiao Tong University, China
1430-1450	15603: Simulation and experimental analysis of the precision for the standardized calibration Cong LIU Nanjing University of Science and Technology, China	1425-1440	15501: Random Encoding with Modified Gerchberg-Saxton Algorithm for Accurate Ghost Transmission through Complex Scattering Media Yining HAO The Hong Kong Polytechnic University, Hongkong, China	1415-1430	15632: Absolute testing of optical flats using a minimum norm least squares solution Xiaoyue QIAO Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China
1450-1510	15571: Full-field deformation measurement of large wing structure based on the multi-camera network with non-overlapping fields of view Yan LIU Shenzhen University, China	1440-1455	15506: Secured optical data transmission through dynamic scattering media using pixel-to-plane optical data encoding Yongqiu CAO The Hong Kong Polytechnic University, Hongkong, China	1430-1445	15634: Quality Inspection and Assembly Sequence Optimization of Revolved Thin-walled Parts Based on Point Clouds Zhaoyuan MA Beihang University, China
1510-1525	15560: Target based multi-camera stereo digital image correlation: calibration and registration Zhouyi YIN Southeast University, China	1455-1510	15464: Image-free tracking by Single-pixel Imaging Technologies Mingyang NI University of Science and Technology of China, China	1445-1500	15516: Direct strain measurement method based on the correlation of defocused laser speckle pattern Wenxin HU Shenzhen MSU-BIT University, China
				1500- 1515	15584: A Transmission-Reflection Photoelastic Combined Technique for Internal Stress Analysis of Inorganic Flexible Electronic Bilayer Structures Quanyan HE Tianjing University, China
1530 - 1545	PM Break Exhibition Area (Chang Ballrooms, Level 4)				
(1545-1745)	Breakout 1 (Atrium Ballroom, Level 4)	Breakout 2 (Seletar 2, Level 3)		Breakout 3 (Seletar 3, Level 3)	
	SS13: Optical dynamic measurement Session Chair: Yu FU	SS16: Single-pixel imaging and optical encoding Session Chair: Wen CHEN GT1: 3D Image Acquisition and Display Session Chair: Wen CHEN		SS4: Advances in Moiré method and its applications Session Chair: Hongye ZHANG SS17: Infrared thermography and structural health monitoring Session Chair: Hongye ZHANG	
1545-1605	15623: Research and application of optical heterodyne interferometry with high precision Wensi ZHANG Chinese Academy of Sciences, Aerospace Information Research Institute, China	1545-1605	15564: Some Explorations for High-speed Fringe Projection Profilometry Yongkai YIN Shandong University, China	1545-1605	15585: TEM Moiré method and its application Hongye ZHANG Beijing Forestry University, China
1605-1625	15673: Flexible and high-intensity photoacoustic transducer for contact-free laser ultrasonic inspection Guo SHIFENG Shenzhen Institute of Advanced Technology, China	1605-1620	15517: Image-free multi-object tracking based on multi-channel single-pixel imaging system Yu CAI University of Science and Technology of China, China	1605-1625	15530: Microscale strain distribution measurement before and after crack and delamination occurrence in CFRP laminates by multiplication sampling moiré method Xinyun XIE Beihang University, China
1625-1645	15646: Full-field vibration measurement based on a combination of laser and imaging technology Yu FU Shenzhen University, China	1620-1635	15611: An optical image encryption method based on Fourier single-pixel imaging and iterated phase retrieval algorithm Tianyu ZENG Xi'an University of Technology, China	1625-1640	15567: Sampling moiré method and its application in 2D/3D deformation measurement Ru CHEN Tsinghua university, China
1645-1700	15543: Method for measuring full-field vibration of rotating components using laser and image fusion Zeren GAO Shenzhen University, China	1635-1650	15539: Hardware-based Fusion Sensing System for Lidar and Imaging Yuanzu WANG Tsinghua University, China	1640-1655	15487: Infrared colorimetric temperature measurement based on a two-band metals Zhendong LUO University of Science and Technology of China, China
1700-1715	15476: Modeling of Mechanoluminescent Strain Sensing Mechanisms and Their Application to Vibration Modal Measurements Bing CHEN Shenzhen University, China	1650-1705	15575: Microscopic fringe projection and applications in high-accuracy 3D measurements Yan HU Nanjing University of Science and Technology, China	1655-1710	15653: Non-destructive Evaluation using Continuous Laser-Line Scanning Thermography with an Improved Data Processing Algorithm Li CHAOYI Jiangsu University, China
1715-1730	15482: Improved Speckle Interferometry Method Based On High-Speed Camera And Laser Doppler vibrometers Ruyue ZHANG University of Science and Technology of China, China			1710-1725	15512: Online Detection Method for Additive Manufacturing Printing Based on Near-Infrared Dual-wavelength Thermometry Wei FENG Beijing Institute of Technology, China
				1725-1740	15639: A method for identifying precursors information on infrared deflection of instability and failure in wood Jian ZHAO Beijing Forestry University, China

Time	PROGRAMME
(0930 - 1430)	<p align="center"><b>Site Visit to d'Optron Pte Ltd and The Photonics Institute, Nanyang Technological University</b></p> <p align="center"><b>Registration of Attendance @ ImageX/d'Optron Booth No. T6</b>            Exhibition Area, Changi Ballrooms, Level 4  <b>Tuesday – Wednesday, 28 – 29 November 2023, 0930 – 1630 Hours</b></p>
0930	<p align="center"><b>Site Visit to d'Optron Pte Ltd</b>            No transportation Provided            8 Cleantech Loop, Block E,            #06-72 Cleantech 3,            Singapore 637145</p>
1000	<p align="center"><b>Contributions of Holography</b>            Dr Peter De GROOT  <i>Zygo Corporation, United States</i></p>
1100	<p align="center"><b>Site Visit of d'Optron Pte Ltd</b></p>
1200	<p align="center"><b>Coach Departs for Nanyang Technological University</b>  <b>Lunch at NTU Canteen (Free and Easy and on Pax Account)</b></p>
1330	<p align="center"><b>Tour of The Photonics Institute, NanyangTechnological University</b></p>
1430	<p align="center"><b>End of Programme</b></p>