### Agenda

Time and date shows here refers to China Standard Time (GMT+8).

Time and date shows here refers to China Standard Time (Chili-10).			
Aug 27th Registration			
14:00-18:00	Meeting platform test		
	Zoom ID: 810 8220 0233		
	Password: ICOIM		
Aug 28th Plenary Session			
Zoom Room ID: 845 1942 7408, Password: ICOIM			
	Chair: Shuming Yang		
8:45-9:00	Online Registration		
9:00-9:15	Opening ceremony Shuming Yang		
9:15-10:00	Super-resolution optical imaging from STED to MINFLUX Min Gu, Institute of Photonic Chips University of Shanghai for Science and Technology, Shanghai, China		
	Optical Microsphere Nanoscope Working in Non-Contact Mode		
10:00-10:45	Minghui Hong, Department of Electrical and Computer Engineering, National University of Singapore, Singapore		
10:45-10:50	Photography		
10:50-11:35	Metrology and Inspection for IC manufacturing: State-of-the-art, challenges, and future trends Shiyuan Liu, Huazhong University of Science and Technology, China		
11:35-12:20	Compressed Ultrafast Spectral-Temporal Photography Feng Chen, Xi'an Jiaotong University, China		
12:20-12:45	Networking		

Aug 28 <sup>th</sup> Parallel Session		
Zoom Room ID: 847 0471 9172, Password: ICOIM		
Chair: Benny Cheung		
13:30-13:55	Femtosecond laser microfabrication towards high efficiency, new materials and advanced devices Dong Wu, University of Science and Technology of China, China	
13:55-14:20	Planar super-oscillation lenses (SOLs): practical considerations and applications Yiting Yu, Northwestern Polytechnical University, China	
14:20-14:45	Laser applications for subsurface characterization and modification Jiwang Yan, Keio University, Japan	
14:45-15:10	Tailoring Light in Laser Processing Precision Mould and Die Xichun Luo, Centre of Precision Manufacturing, University of Strathclyde, UK	
15:10-15:25	Networking	
	Oral Presentation	
15:25-18:30	A Structure Based Speckle Filtering Method for Ocean SAR Images MVBI22QRWX- CHENG pu, Navy Submarine Academy, China	
	Laser high-speed shadow photography and sequential image processing technology for projectile penetration studies  MVBI22PLLW-Ce Sun, Xi'an Institute of Optics and Precision Mechanics, CAS, China	
	Experimental study on the influence of thickener type on the reflux characteristics of grease under starved lubrication  MVB122ZRSI-Zhijie Lin, Shanghai University, China	
	Investigation on the Influence of Macro-micro Grating Parameters on Diffraction Characteristics through FDTD Simulation MVBI22AKOD- Guoyong Ye, Xi'an Jiaotong University, China	

Study on Station Planning of Dual Lugs Hole Measurement by Laser Tracker MVBI22VCJF - Zhou Fan, Chengdu, China Research and Application of Aero-engine Interface Measurement Technology MVBI22NTKF- Shen YingDong, Chengdu, China Real-time wavelength compensation of laser diode interferometer MVBI22FSBD- Yindi Cai, Dalian University of Technology, China Fast Stereo Matching Method Based on Two-step AD-Census Fusion MVBI22TKZL- Yangfan Sun, Zhengzhou University of Light Industry, China Research on Edge Extraction and Detection Method of Tube Sheet Holes Based on Local Adaptive Threshold and Ellipse Band Shrinkage Approximation MVBI22BPCR- Qiongqiong Duan, Xi`an Jiaotong University, China Optical design of a backlight illumination system MVBI22JCDI- Qin Liu, Henan Academy of Special Optics Ltd., China Synthesis of HgTe Quantum Dots and Its Application in Broadband Photodetection MVBI22ETWD-Shuai Wen, Xi'an Technological University, China 15:25-18:30

Aug 28 <sup>th</sup> Parallel Session  Zoom Room ID: 884 6853 1912, Password: ICOIM  Chair: Feng Gao		
13:30-13:55	Light manipulation and integrated imaging based on metasurfaces Tao Li, Nanjing University, China	
13:55-14:20	Research Advances in Multiple-Measurement Technology Using Nanometer Time-grating Sensors Xiaokang Liu, Chongqing University of Technology, China	
14:20-14:45	Monitoring and detection of defects in additive manufacturing based on multi-sensor and data fusion technology Lingbao Kong, Fudan University, China	
14:45-15:00	Networking	
15:00-18:30	Binary fringe pattern in infrared phase measuring deflectometry MVB122AKRG- Zonghua Zhang, Hebei University of Technology, China  Research on a measurement method of precision linear displacement based on single-alternating light field MVB122DBVB- Min Fu, Chongqing University of Technology, China  Autostereoscopic Measurement System for Rapid 3D Inspection of Wire Bonding EJJZMMAMRXZ- Sanshan GAO, The Hong Kong Polytechnic University, Hong Kong, China  Creating Seed Coat Catalog Using Spectral Domain Optical Coherence Tomography EJJZMMAUPYC-Xinhua Li, Department of Electrical Engineering and Electronics, University of Liverpool, UK  EfficientPillarNet: A Fast Deep Network for Semantic Segmentation of Large-scale Point Clouds from Lidar  MVB122WQHL- Shusheng LI, Xi'an Jiaotong University, China  A Dense Three-Dimensional Point Flow Measurement Based on Triple Line-Scan Cameras  MVB122YEXI- Linghui Yang, Tianjin University, China	

Convolutional Neural Networks' Applications in Automatic Target Recognition for Synthetic Aperture Images

EJJZMMAQFLP-Wenting Yu, Apartment of Electronic Technology Naval University of Engineering, Wuhan, China

**Experimental Research on the Influence of Glass Spacing on Digital Image Correlation in Measuring Optical Path** 

MVBI22SVFA-Xiaojun Tang, Beijing Spacecrafts China Academy of Space Technology, China

Blast furnace chute visual detection based on mechanism model

MVBI22UXDC, MVBI22FFOJ, MVBI22LHKA- Shuseng Cheng, University of Science and Technology Beijing, China

An Optical Periscope Technique for Measuring Cryogenic Liquid Level Height in Adverse Environment

MVBI22OFAL-Ping Fang, Beijing Institute of Technology, China

High-Speed and Accurate Method for the Gear Surface Integrity Detection Based on Visual Imaging

MVBI22VRRL- Qian Liu, Xi'an University of Technology, China

Form Recognition Based on Lightweight U-Net and Tesseract after Multi-level Retraining

15:00-18:30

MVBI22LUUR- Gang Li, Xi'an Jiaotong University, China

Research on OCT Imaging Law of Frozen Meat Applied with Electric Field During Storage

MVBI22HVRD- Lu Zhang, Xi'an Jiaotong University, State Key Laboratory for Manufacturing, System Engineering, China

Aug 29 <sup>th</sup> Parallel Session		
Zoom Room ID: 860 4341 9494, Password: ICOIM Chair: Liangcai Cao		
8:00-8:25	High-precision in-situ measurement with deflectometry Xiangchao Zhang, Fudan University, China	
8:25-8:50	Fiducial Aided Calibration and Positioning for Precision Manufacture of Optical Freeform Surfaces Benny Cheung, The Hong Kong Polytechnic University, Hong Kong, China	
8:50-9:15	Ring-Core Optical Fibers for OAM Modes Yang Yue, Nankai University, China	
9:15-9:30	Networking	
	Oral Presentation	
	Two-frame phase extraction technology based on vector normalization with single filter	
	MVBI22VVBZ- Hangying Zhang, Tsinghua University, China	
	Scintillator study for improving material separation ability in x-rays computed tomography imaging	
	MVBI22ZGRU- Xia Xiaoqin, The State Key Laboratory of Precision Measuring Technology and Instruments Tianjin University, China	
	Fast Positioning of Zero Path Difference of White Light Interference Based on Image Processing MVBI22VEEH- Yiyong Liang, Zhejiang University, China	
	Measuring the light environment of ship bridge based on CCD camera	
9:30-12:00	MVBI22JYNC- Xingfen Qin, Dalian Maritime University, China	
	An Accelerated Algorithm for 3D Reconstruction of Groove Structure Based on Parallel Light and White Light Interference	
	MVBI22IOEP- Kexin Zhang, Zhejiang University, China	
	Discussion of cross-axis isolation in vector atomic magnetometry via longitudinal field modulation  MVBI22KMCF- Yingying Li,National Innovation Institute of Defense Technology, AMS, China	
	A Neural Network-based Method for Fast Angle Calibration of MEMS LiDAR	
	MVBI22NEJW- Dayong Lin, Beijing Institute of Control Engineering, China	
	Distributed design of wind tunnel temperature test system based on CAN bus	
	MVBI22NXRO- Zhaoxin Yang, China Aerodynamics Research and Development Center, China	
	A Novel Lightweight Infrared and Visible Image Fusion Algorithm MVBI22YDUH- Chuanyun Wang, Shenyang Aerospace University, China	

Aug 29 <sup>th</sup> Parallel Session		
Zoom Room ID: 833 2718 0785, Password: ICOIM Chair: Huigao Duan		
8:00-8:25	Image restoration techniques and applications based on scattering suppression	
	Ping Yang, Chinese Academy of Sciences, China	
8:25-8:50	Topology optimization for micro/nano optics Yongbo Deng, Chinese Academy of Sciences, China	
8:50-9:15	Chromatic confocal measurement method and algorithms Tao Liu, Xi'an Jiaotong University, China	
9:15-9:30	Networking	
	Oral Presentation	
	An object recognition method based on deep learning MVBI22NHSV-Yingni Duan, Xi'an university, China	
	3D Super-resolution Optical Imaging Using Deep Image Prior EJJZMMAHLWZ- Ruoxin Wang, The Hong Kong Polytechnic University, Hong Kong, China	
	An object recognition method based on deep learning MVBI22NHSV-Yingni Duan, Xi'an University, China	
	Design of Intelligent Robot for Bank Early Warning and Security Based on Robot Vision MVBI22PSBY- Yan Ren, Henan Forestry Vocational College, China	
	A fast point cloud precision registration method based on spatial grid division MVBI22DFWB-FaHeng Liu, Xi'an Jiaotong University, China	
9:30-12:00	Design & Optimization of F-Theta Focusing Lens Based on ZEMAX MVBI22EEJI-Hong Zhu, Chongqing University of Technology, China	
	A Simulation Algorithm of The Space-based Optical Star Map with Any Exposure Time MVBI22MHVW- Yupeng Wang, National Key Laboratory of Science and Technology on ATR	
	National University of Defense Technology, China	
	A Simple Optical Fiber-coupled Chromatic Confocal 3D Measurement System	
	MVBI22JIVB- Tao Liu, Xi'an Jiaotong University, China	
	A Phased Landmark Navigation Method for Lunar Exploration MVBI22HHTD- Anran Wang, Beijing Institute of Control Engineering, China	
	Analysis of effects of retroreflector motion errors on measurement accuracy of a homodyne interferometer	
	MVBI22CAZK- Yindi Cai, Dalian University of Technology, China	

Aug 29 <sup>th</sup>		
Zoom Room ID: 852 0078 9374, Password: ICOIM Chair: Zonghua Zhang		
13:30-13:55	Lensless imaging using compressive sensing and deep learning Liangcai Cao, Tsinghua University, China	
13:55-14:20	Dual-comb distance measurement and its applications Guanhao Wu, Tsinghua University, China	
14:20-14:45	In-situ inspection system for electron beam additive manufacturing based on phase measurement profilometry Feng Gao, University of Huddersfield, UK	
14:45-15:00	Networking	
15:00-17:00	Research on Inversion Law of Label-free Two-dimensional Light Scattering Cell Size Based on Gray-Level Co-occurrence Matrix MVBI22LTTK -Lu Zhang, Xi'an Jiaotong University, China  High Spatial Resolution Reconstruction of Underwater Acoustic Signal from Drawing Tower Grating with Long Cavity Based on GA-BP MVBI22IYEN- Hanjie Liu, Wuhan University of Technology, China  Characterizing static aberration in reflective liquid crystal spatial light modulators (LC-SLM) using random phase shifting interferometry MVBI22SLSB- Zixin Zhao, Xi'an Jiaotong University, China  A dual-comb ranging system without aliasing based on free-running fiber lasers—Ruilin Jiang- Tsinghua University, China  A Dense Three-Dimensional Point Flow Measurement Based on Triple Line-Scan Cameras—Ruiying Liao- Tianjin University, China  A Novel High-Speed Fringe Projection Profilometry Calibration Method Using a Checkerboard—Jian Wang- Huazhong University of Science and Technology, China  Characteristics of the circular fringe projection profilometry—Chunwei Zhang- Xi'an Jiaotong University, China  Alleviating the defocusing problem in monoscopic phase measuring deflectometry system—Yunuo Chen- Fudan University, China	
17:00-17:30	Closing ceremony / Award announcement	

### Aug 28th-29th Poster Session

#### **Show on Conference Website and Zoom**

Nonlinearity suppression method for optical frequency scanning based on the Phenomenological model

MVBI22BPIJ-Zhongwen Deng, 1. Xidian University, China 2. Xi'an Jiaotong University, China (Poster)

Ultrasonic inspection of aircraft secondary co-curing skin Recognition method of defect signal

MVBI22CGYJ- He Xiao, China Aircraft Strength Research Institute, China (Poster)

Research on Microbial Detection Technology Based on Femtosecond Laser Technology Raman Spectroscopy

MVBI22EWHJ- TIAN Hu-Qiang, Inner Mongolia University, China (Poster)

Measurement of Elastic Constants of Additive Manufactured Ti-6Al-4V by Noncontact Multi-mode Laser Ultrasonic System

MVBI22ZLDX- Zhenlong Zhang, Xi'an Jiaotong University, China (Poster)

Test system of laser ultrasonic directional transmission channel characteristics

MVBI22QKFH- Peipei Zhang, Xi`an Traffic Engineering Institute, China (Poster)

Design of test system for gun stabilization accuracy

MVBI22IVKZ- Zelin Sun, 63876 Unit of People's Liberation Army of China, China (Poster)

# Zoom: 12:00-13:20

Design of high quantum efficiency photodetector based on graphene/silicon nanometer truncated cone array

MVBI22BQUX- Jijie Zhao, Xi`an Technological University, China (Poster)

**Building Damage Detection Method Based on Normal Vector Computation of Airborne Point Cloud Data** 

MVBI22XMDI- Shusong Huang, China Centre for Resources Satellite Data and Application, China (Poster)

Phase extraction of a set of Phase-shifting patterns reduced basis decomposition

MVBI22VKRV- Hubin Du, Xi`an Technological University, China (Poster)

A Dynamic Following-based Binocular Vision Method for the Deformation Measurement of Motion Structures

MVBI22TYXM-Xiaojun Tang, Beijing Spacecrafts China Academy of Space Technology, China (Poster)

Quantitative relationship study between spatial heterogeneity and uncertainty of high-resolution pixel scale based on spectral measurement simulation

MVBI22HQWR- Gao Hailiang, The Aerospace Information Research Institute Chinese Academy of Sciences, China (Poster)

#### Angle-resolved scatterometer for nanostructure metrology

MVBI22RHKE- Hao Jiang, Huazhong University of Science and Technology, China (Poster)

Volumetric measurement of flame using CTC at sparse-projection condition and fast 3-D contour rebuilding

MVBI22TIRX- Yanting Cheng, China Datang Corporation Science and Technology Research Institute, China (Poster)

#### Design of readout circuit chip for medium wave 640 × 512-25um IRFPA

MVBI22AFBL-QiLiu, National ASIC System Engineering Research Center Southeast University, China (Poster)

Reciprocal optical voltage sensor with rotating double-crystal structure based on Pockels effect

MVBI22SYVA- Zhi Li, North China Electric Power University, China (Poster)

#### Active Millimeter Wave Imaging based on CGC Lens

MVBI22CUBE-Jingduo Cui, Beijing Normal University, China (Poster)

#### Calibration method for measuring angle device with CCD

MVBI22LGMT- Zelin Sun, 63876 Unit of People's Liberation Army of China, China (Poster)

### Zoom: 12:00-13:20

### Design of the Telecentric Lens for Dual Side Imaging of the Small Size Particles with Equal Optical Path

MVBI22CVER- Xinsen Wang, Research Center for Photonics Technology, Quanzhou Normal University, China (Poster)

The measurement of the center of mass and the optical center in a freely falling body of absolute gravimetry

MVBI22ENAS- Lv Kang, Wuhan University of Technology, China (Poster)

#### Characterization of tissue texture with Mueller matrix parameters

MVBI22VSHR- Yongtai Chen, Dalian University of Technology, China (Poster)

Analysis of the Anti-magnetic Interference Characteristics of the Stacked Magnetooptical Current Sensor and Error Compensation Method

MVBI22MRIG- Xiaojun Zhao, North China Electric Power University, China (Poster)

FPGA-based Detection Module for the Chromatic Confocal Measurement Sensor MVBI22SIBT- Tao Liu, Xi'an Jiaotong University, China (Poster)

Fabrication of large-sized stitching computer generated hologram (CGH)

MVBI22PBWR- Yingying Bai, Changchun Institute of Optics, Fine Mechanics and Physics, CAS, China (Poster)

#### Research on the measurement of micro display luminance

MVBI22UVPM-WANG Shaoshui, The 41st Research Institute of CETC, China (Poster)

Image Reconstruction of Photonics Integrated Interference Imaging System: stablized CLEAN methods

MVBI22UEKB-Tianbao Chen, Changchun Institute of Optics, Fine Mechanics and Physics, CAS, China (Poster)

Concentric ring structure on the front surface of fused silica induced by a focused femtosecond pulse

MVBI22UNZV- Hao Jiang, Huazhong University of Science and Technology, China (Poster)

Error analysis for repeatability enhancement of a dual-rotation Muller matrix ellipsometer

MVBI22MNFS- Zhou Jiang, Huazhong University of Science and Technology, China (Poster)

## Zoom: 12:00-13:20

Impact Analysis of spectral response on the measurement of infrared radiation characteristics

MVBI22OEYP- Lijun Ma, 63615 army, China (Poster)

MVBI22EUVN- Yuanping Xu, Chengdu University of Information Technology, China

Analysis of Lidar Technology Development Based on Autonomous Driving Competition

Towards a Novel Phase Unwrapping Model for Three Dimensional Measurement

MVBI22OWWX- FengHua Yang, Jianghan University, China (Poster)

Error analysis of a photoelastic-modulated Mueller matrix ellipsometer EJJZMMABDQW- Song Zhang, Huazhong University of Science and Technology, China (Poster)

Speckle reduction using deep learning

Shuo Liu- Huazhong University of Science and Technology, China (Poster)