

Schedule

Tuesday, Dec. 5		Wednesday, Dec. 6		Thursday, Dec. 7	
		8:30	Opening		
9:00	Registration	8:50	Plenary Session	9:00	Session 4: Holographic Display
		10:10		Photograph	
		10:20	Coffee Break		
		10:40	Session 1: Holographic Imaging	10:45	Coffee Break
				11:05	Special Invited Session
				11:50	Awards & Closing
12:05	Lunch	12:05	Lunch	12:05	Lunch
14:00	Registration	14:00	Session 2: Holography Material	Lab. Tour	
		15:25	Coffee Break		
		15:45	Session 3: Holographic Memory		
		16:55	Poster Session		
18:00	Dinner	18:00	Banquet		

Technical Program

December 6, 2023

8:30	-	8:50	Opening
Presider: Prof. Hongen Liao (Tsinghua University, China)			
8:50	-	10:10	Plenary Session
Presider: Prof. Jianlin Zhao (Northwest Polytechnics University, China)			
Prof. Xinzhu Sang (Beijing University of Posts and Telecommunications, China)			
8:50	6a01	(Plenary) Intelligent Meta-lens for Imaging Underwater, Aerial and Land Xiaoyuan Liu, Mu Ku Chen, and Din Ping Tsai (City University of Hong Kong, Hong Kong)	
9:10	6a02	(Plenary) Holographic neural networks enabled by optical nanolithography Min Gu (University of Shanghai for Science and Technology, China)	
9:30	6a03	(Plenary) Computational Frameworks for Advanced Imaging and Holography Jun Tanida and Ryoichi Horisaki (Osaka University, Japan)	
9:50	6a04	(Plenary) Picometer comb and its applications Changhe Zhou (Jinan University, China)	
10:10	-	10:20	Photograph
10:20	-	10:40	Coffee Break
10:40	-	12:05	Session 1: Holographic Imaging
Presider: Prof. Qionghua Wang (Beihang University, China)			
Prof. Changhe Zhou (Jinan University, China)			
10:40	6b01	(Invited) High Definition 3D Light-field Display with Large Viewing Angle Xinzhu Sang, Xudong Wen, Xin Gao, and Xunbo Yu (Beijing University of Posts and Telecommunications, China)	
10:55	6b02	(Invited) Off-axis optical scanning holography (OSH) under coherent mode of operation Yaping Zhang, Yongwei Yao, Jung-Ping Liu, and Ting-Chung Poon	

		(Kunming University of Science and Technology, China)
11:10	6b03	(Invited) Deep learning-based holographic imaging Jianglei Di (Guangdong University of Technology, China)
11:25	6b04	Information interpretation techniques in scattered light fields Jinpeng Liu, Yi Feng, and Xiaopeng Shao (Xidian University, China)
11:35	6b05	Lensless anisotropic edge enhancement method based on Fresnel zone plate Zhanquan Tian, Ping Su, Da Sun, and Jianshe Ma (Shenzhen International Graduate School, Tsinghua University, China)
11:45	6b06	Shearing based compact digital holography and its application in cells investigation and diagnoses Junwei Min, Björn Kemper, Burkhard Greve, Xun Yuan, Yuge Xue, and Baoli Yao (Xi'an Institute of Optics and Precision Mechanics, CAS, China)
11:55	6b07	Numerical Demonstration of Edge Detection Using Motionless Optical Scanning Holography Yusuke Saita, Masamitsu Sugimoto, and Takanori Nomura (Wakayama University, Japan)
12:05	-	14:00 Lunch Time
14:00	-	15:25 Session 2: Holography Material
		Presider: Prof. Liyong Ren (Shaanxi Normal University, China) Prof. Yasuo Tomita (University of Electro-Communications, Japan)
14:00	6c01	(Invited) Full Poincare Metasurface from vectorial holography to polarization encoding Xiangping Li (Jinan University, China)
14:15	6c02	(Invited) Photonic glass: structure regulation and applications for optical data storage and holographic display Dezhi Tan (Zhejiang Lab, China)
14:30	6c03	(Invited) Ultraviolet Metasurfaces using Wide-bandgap Dielectrics Cheng Zhang (Huazhong University of Science and Technology, China)

14:45	6c04	Femtosecond Laser Fabricated Geometric Metasurface for Generation of Perfect Vector Vortex Beams Yao Fang, Han Hao, Qingsong Wang, Xiong Li, and Xiangang Luo (Institute of Optics and Electronics, CAS, China)
14:55	6c05	Multi-focus Femtosecond Laser for Manufacturing Phase Modulator Device Yu Meng, Qingsong Wang, Yao Fang, Xiong Li, and Xiangang Luo (Institute of Optics and Electronics, CAS, China)
15:05	6c06	Acrylate dendritic monomer for ultrafast holographic recording with pulse exposure Diqin Zhang, Yu Zhao, Bin Guo, Zhen Zhang, Jianhua Zhu, Yan Ye, and Yuxia Zhao (Technical Institute of Physics and Chemistry, CAS, China)
15:15	6c07	Holographic performance and stability of photosensitive polymer nanocomposite reinforced volume holographic storage Yourong Liu, Ke Li, Tong Shen, and Jihong Zheng (University of Shanghai for Science and Technology, China)
15:25 - 15:45		Coffee Break
15:45 - 16:55		Session 3: Holographic Memory
		Presider: Prof. Xiangping Li (Jinan University, China) Prof. Guohai Situ (Shanghai Institute of Optics and Fine Mechanics, China)
15:45	6d01	(Invited) Design and Properties of HDL Multi-Layered Media for Magnetic Hologram Memory Yuichi Nakamura, Hiroto Sugiura, and Pang Boey Lim (Toyohashi University of Technology, Japan)
16:00	6d02	(Invited) Efficient and Accurate Calibration Methods of LCVR and LC-SLM Liyong Ren, Rui Yang, and Yifu Zhou (Shaanxi Normal University, China)
16:15	6d03	Evaluation of the Effect of Hologram Discretization on Memory Characteristics in a Shift-multiplexing Surface Holographic Memory Soki Hirayama, Ryushi Fujimura, and Tsutomu Shimura (The University of Tokyo, Japan)
16:25	6d04	A Servo System for Collinear Holographic Data System Jie Yao, Lizhi Zhang, and Qiang Cao (Huazhong University of Science and Technology, China)

- 16:35 **6d05** A Pipelined QC-LDPC Encoder Based on FPGA
 Jiawei Yang, Yifan Zhang, Jie Yao, and Qiang Cao
 (Huazhong University of Science and Technology, China)
- 16:45 **6d06** In-situ generation of perovskite crystals in organic substrates by laser direct writing
 Dale Xie and Zongsong Gan
 (Huazhong University of Science and Technology, China)

16:55 - 18:00 Poster Session

Part 1: Holographic Imaging

- 6p01** Real-value encoding method for amplitude-type hologram based on single-scale retinex algorithm
 Shu-Feng Lin, Shi-Hang Zhang, Lu Rong, and Da-Yong Wang
 (Beijing University of Technology, China)
- 6p02** Deep Holographic Imaging: Slightly Off-axis Digital Holographic Reconstruction Method Using an Untrained Deep Neural Network
 Zhuoshi Li, Chao Zuo, and Qian Chen
 (Nanjing University of Science and Technology, China)
- 6p03** High-throughput slightly off-axis holographic imaging
 Qian Shen, Jiasong Sun, Qian Chen, and Chao Zuo
 (Nanjing University of Science and Technology, China)

Part 2: Holography Material

- 6p04** Direct laser lithography of single micro-crystals
 Kai Li and Zongsong Gan
 (Huazhong University of Science and Technology, China)
- 6p05** Multi-foci Metalens Embedded in Silica Glass for Multispectral and Polarization Ellipticity Detection
 Han Hao, Yao Fang, Xiong Li, and Xiangang Luo
 (Institute of Optics and Electronics, CAS, China)
- 6p06** High-performance photopolymers for recording transmission/reflection holographic gratings
 Bin Guo, Mingxuan Wang, Diqin Zhang, Minyuan Sun, Haoqiang Gao, Yong Bi, and Yuxia Zhao
 (Technical Institute of Physics and Chemistry, CAS, China)

- 6p07** Poly (vinyl acetate)-based photopolymer for holographic data storage
Yiwen Wu, Jinxin Guo, and Xinping Zhang
(Beijing University of Technology, China)
- 6p08** Hafnium Oxide Pancharatnam-Berry Metasurfaces for Flat-top Beam Shaping in the Ultraviolet
Hao Gao, Zhelin Lin, and Cheng Zhang
(Huazhong University of Science and Technology, China)
- 6p09** Automated experimental platform for preparing PQ/PMMA
Shaodong Zhang, Rupeng Yang, Jiale Yang, Yongkun Lin, JunchaoJin, Linlin Fan, Hongjie Liu, Rongquan Fan, Xiao Lin, and Xiaodi Tan
(Fujian Normal University, China)
- 6p10** Direct laser writing of luminescent structures with high resolution based on three-photon polymerization
Jiubin Jue and Zongsong Gan
(Huazhong University of Science and Technology, China)

Part 3: Holographic Memory

- 6p11** A FPGA-Based LDPC Decoder with Parallel Structure
Shaohua Wang, Yifan Zhang, Jie Yao, and Qiang Cao
(Huazhong University of Science and Technology, China)
- 6p12** Analyzing Performance Degradation for Wide Stripe Erasure Codes
Xiangrui Yang, Jie Yao, and Qiang Cao
(Huazhong University of Science and Technology, China)
- 6p13** Crosstalk test by the amplitude and polarization modulation
Luyi Xie, Shenghui Ke, Yongkun Lin, Jinyu Wang, Sheng Lin, Shujun Zheng, Hongjie Liu, Junchao Jin, Xiaoqing Zheng, Jie Zheng, Xiao Lin, and Xiaodi Tan
(Fujian Normal University, China)
- 6p14** Frame frequency matching for high-speed reading in collinear holographic storage system
Jing Xu, Yongkun Lin, Linli Zhong, Yuping Ke, Chen He, Dakui Lin, Xiao Lin, Kun Wang, and Xiaodi Tan
(Fujian Normal University, China)
- 6p15** Effect of ultraviolet curing on polarization hologram
Zaijing Chen, Hong Cheng, Jinyu Wang, Xiao Lin, and Xiaodi Tan

- (Fujian Normal University, China)
- 6p16** Reproduction properties of polarized hologram under Bragg mismatch condition
Hong Cheng, Zaijing Chen, Jinyu Wang, Xiao Lin, and Xiaodi Tan
(Fujian Normal University, China)
- 6p17** Research on Holographic Performance Under Different Exposure Intensities
Linli Zhong, Yongkun Lin, Jing Xu, Chen He, Junchao Jin, Yupin Ke, Zeyi Zeng,
Kun Wang, Dakui Lin, Xiao Lin, and Xiaodi Tan
(Fujian Normal University, China)
- 6p18** Influence of Different Encoding Methods on Phase Reconstruction of Holographic
Data Storage
Yuping Ke, Rongquan Fan, Jing Xu, Yongkun Lin, Linli Zhong, Sheng Lin, Dakui
Lin, Kun Wang, Xiao Lin, and Xiaodi Tan
(Fujian Normal University, China)
- 6p19** Holographic properties of PQ/PMMA photopolymer at different thicknesses
Li Wang, Po Hu, Junchao Jin, Junhui Wu, Zeyi Zeng, Qingdong Li, Xiao Lin, and
Xiaodi Tan
(Fujian Normal University, China)
- 6p20** Track servo development for holographic data storage
Jiale Yang, Linlin Fan, Shaodong Zhang, Rupeng Yang, Hongjie Liu, Yongkun Lin,
Rongquan Fan, Xiao Lin, and Xiaodi Tan
(Fujian Normal University, China)
- 6p21** Performance differences of different spatial light modulators in holographic data
storage
Sheng Lin, Yongkun Lin, Jianying Hao, Xiaoqing Zheng, Ruixian Chen, Jie Zheng,
Jing Xu, Kun Wang, Dakui Lin, Xiao Lin, and Xiaodi Tan
(Fujian Normal University, China)
- 6p22** Preliminary Study on Displacement Multiplexing Based on Collinear Holographic
Data Storage
Chen He, Yongkun Lin, Junchao Jin, Lingli Zhong, Rupeng Yang, Zeyi Zeng, Dakui
Lin, Kun Wang, Xiao Lin, and Xiaodi Tan
(Fujian Normal University, China)
- 6p29** Research on production of mother disc and PC disc for long-life holographic storage
Wenbo Chen, Weisheng Yue, Ziwen Zhou, Jianfeng Ye, and Xiong Li
(Institute of Optics and Electronics, CAS, China)

- 6p32** All-optical OR and NAND logic gates based on polarization holography
Di Zhang, Peiliang Qi, Jinyu Wang, Jinhong Li, Yiping Liu, Yi Yang, Xiao Lin, and Xiaodi Tan
(Fujian Normal University, China)

Part 4: Holographic Display

- 6p23** Color holographic 3D display system with chromatic aberration elimination
Ye-Hao Hou, Qian Huang, Di Wang, and Qiong-Hua Wang
(Beihang University, China)
- 6p24** Enhancing accommodation response for depth-map computer-generated holography using complex loss function
Xiaosi Hu, Yusuke Saita, and Takanori Nomura
(Wakayama University, Japan)
- 6p25** Wavelength-division Multiplexing Computer-generated Holography
Lizhi Chen, Runze Zhu, Songzhi Tian, and Hao Zhang
(Tsinghua University, China)
- 6p26** Neural Encoder for High Quality Computer Hologram Generation
Runze Zhu, Lizhi Chen, and Hao Zhang
(Tsinghua University, China)
- 6p27** Research on Holographic Glitch Artwork
Xiaofan liu, Shuo Wang, Ye Li, Siyu Jiang, and Zhilin Zhu
(Beijing Institute of Graphic Communication, China)
- 6p28** An Investigation into Antiwar Themes of Holographic Artworks
Zhilin Zhu, Shuo Wang, Ye Li, Guan Yue, and Guanyu Liu
(Beijing Institute of Graphic Communication, China)
- 6p30** An Investigation into Audience Perceptions of Holographic Displays
Zhan Xu, Danmei Sun, Guobin Xia, and Shuo Wang
(Heriot-Watt University, U.K.)
- 6p31** Research on Expanding the Display Size of the Original 3D Display System
Chuanxin Wang, Rupeng Yang, Linlin Fan, and Xiaodi Tan
(Fujian Normal University, China)

18:00 - 20:00 Banquet

December 7, 2023

9:00 - 10:45

Session 4: Holographic Display

Presider: Prof. Yuichi Nakamura (Toyohashi University of Technology, Japan)

Prof. Jun Tanida (Osaka University, Japan)

- 9:00 **7a01** (Invited) Holographic 3D display system based on tunable liquid crystal grating
Yi-Long Li, Nan-Nan Li, Di Wang, and Qiong-Hua Wang
(Beihang University, China)
- 9:15 **7a02** (Invited) High-fidelity model-driven deep learning network for computer-generated
holographic display
Liangcai Cao, Jiachen Wu, Zehao He, and Kexuan Liu
(Tsinghua University, China)
- 9:30 **7a03** (Invited) Accelerating computation of CGH using convolutional summetric
compressed LUT method in 360° dynamic color 3D holographic display
Jiahao Wei and Juan Liu
(Beijing Institute of Technology, China)
- 9:45 **7a04** (Invited) Pixelated Light Reconstruction for 3D Display and Augmented Reality
Display
Wen Qiao and Jianyu Hua
(Soochow University, China)
- 10:00 **7a05** (Invited) Holographic dynamic three-dimensional displays study
Hongyue Gao, Jicheng Liu, and Xinge Fu
(Shanghai University, China)
- 10:15 **7a06** Holographic Projection for Ringing Artifacts and Zero-order Suppression
Songzhi Tian, Lizhi Chen, Runze Zhu, and Hao Zhang
(Tsinghua University, China)
- 10:25 **7a07** The application effects of holographic gratings with focal power as waveguide
couplers
Tong Shen, Yourong Liu, and Jihong Zheng
(University of Shanghai for Science and Technology, China)
- 10:35 **7a08** An Exploration of Bonsai Ideorealm through Holography
Yang Gao, Shuo Wang, Zicheng Liang, Jiahui Li, Shurui Wei, and Yifu Ding
(Beijing Institute of Graphic Communication, China)

10:45	-	11:05	Coffee Break
11:05	-	11:50	Special Invited Session
			Presider: Prof. Liangcai Cao (Tsinghua University, China) Prof. Juan Liu (Beijing Institute of Technology, China)
11:05		7b01	(Invited) An Exploration of the Holographic Installation Artwork 'Within Reach' Shuo Wang, Yang Gao, Zhan Xu, Xiaofan Liu, and Shasha Xie (Beijing Institute of Graphic Communication, China)
11:20		7b02	(Invited) Fourier transform-based diffraction theory - a review Poon Ting-Chung and Yaping Zhang (Virginia Polytechnic Institute and State University, USA)
11:35		7b03	(Invited) Recent advances in photopolymerizable nanoparticle-polymer composites for holographic applications in light and neutron optics Yasuo Tomita (University of Electro-Communications, Japan)
11:50	-	12:05	Awards & Closing
			Presider: Prof. Xiaodi Tan (Fujian Normal University, China)
12:05	-	14:00	Lunch Time
14:00	-	17:00	Lab. Tour