

## S0401. Oral Session I

🕒 Nov 27, Wednesday, 13:30-15:00

📍 Room 505b

🗣️ Presider: Prof. Sheng-Hui Chen (National Central University, Taiwan)  
Prof. Jung-Ping Liu (Feng Chia University, Taiwan)

13:30

2024-WED-S0401-I001

Invited

### From Generative AI to Scientific Discovery: Foxconn's AI Innovation Journey and Future Vision

Dr. Yung-Hui Li, Hon Hai Research Institute (Taiwan)

14:00

2024-WED-S0401-O001

### Applying Conditional GANs for Blurry Image Restoration in Metalens-Based Optical Systems

Chang-Chou Hsu, National Yunlin University of Science and Technology (Taiwan); Cheng-Hung Chu, Yuan Luo, National Taiwan University (Taiwan); Hsuan-Ting Chang, National Yunlin University of Science and Technology (Taiwan)

14:15

2024-WED-S0401-O002

### Application of Volume Holographic Grating in Common-path Digital Holographic Microscopy for Quantitative

Yu-Xiang Wang, Chen-Ming Tsai, Yuan Luo, National Taiwan University (Taiwan)

14:30

2024-WED-S0401-O003

### Verify the Image Deblurring Capabilities of Deep Learning Networks

I-Hsuan Kuo, Jia-Lun Wu, Chieh-En Lee, Chung-Hao Tien, National Yang Ming Chiao Tung University (Taiwan)

14:45

2024-WED-S0401-O004

### Properties of nematic liquid crystal-based geometric phase grating and lenses devices

Chau Nguyen Hong Minh, Stefan Petrov, Vera Marinova, Shiuian Huei Lin, National Yang Ming Chiao Tung University (Taiwan)

## S0402. Oral Session II

🕒 Nov 27, Wednesday, 15:15-16:45

📍 Room 505b

🗣️ Presider: Prof. Shiuian-Huei Lin (National Yang Ming Chiao Tung University, Taiwan)  
Dr. Yun-Chorng Chang (Academia Sinica, Taiwan)

15:15

2024-WED-S0402-O001

### High-speed, long-range SS-OCT imaging based on HCG-VCSEL and real-time calibration framework

Chien-Hua Peng, Jian-Zhi Wang, Kuang-Lei Huang, Hao-Hsun Chung, National Taiwan University (Taiwan); Jyh-Tsung Hsieh, Bandwith10 Ltd. (Taiwan); Hsiang-Chieh Lee, National Taiwan University (Taiwan)

15:30

2024-WED-S0402-O002

### Continuously Variable Time Series Signal in Holographic Data Storage System

Yu Che Lu, Jia-Kai Ye, Yeh-Wei Yu, Tsung-Hsun Yang, Ching-Cherng Sun, National Central University (Taiwan)

15:45

2024-WED-S0402-O003

### Ghost Image Elimination and Crosstalk Analyses in a Volume Holographic Optical Elements-based Augmented Reality Glasses

Chi Sun, Yuan-Yan Liang, Chung-Hsuan Hsiao, Zi-Fan Chen, National Yang Ming Chiao Tung University (Taiwan); Wen-Kai Lin, Tsung-Hsun Yang, Yeh-Wei Yu, National Central University (Taiwan); Wei-Chia Su, National Changhua University of Education (Taiwan); Ching-Cherng Sun, National Central University (Taiwan); Shiuian-Huei Lin, National Yang Ming Chiao Tung University (Taiwan)

16:00

2024-WED-S0402-O004

### Fabrication of Photopolymers for Holographic Inscription with the Wavelength of 633nm

Hong-Jyun Guo, Kai-Dong Hsu, Wei-Hung Su, National Sun Yat-Sen University (Taiwan)

16:15

2024-WED-S0402-O005

### Field-of-view Extension 5x5 Array of Near Eye Display

Kuo Chen-Yuan, Sun Ching-Cherng, Wu Wei-Chi, Yu Yeh-Wei, National Central University (Taiwan)

16:30

2024-WED-S0402-O006

### Refractive Index Information Measurement of Volume Holographic Optical Elements

Chi-Ho Lee, Wen-Kai Lin, Yeh-Wei Yu, Tsung-Hsun Yang, Ching-Cherng Sun, National Central University (Taiwan)

## S0403. Oral Session III

🕒 Nov 28, Thursday, 10:45-12:00

📍 Room 505b

🗣️ Presider: Prof. Wei-Feng Hsu (National Taipei University of Technology, Taiwan)  
Prof. Han-Yen Tu (Chinese Culture University, Taiwan)

10:45

2024-THU-S0403-I001

Invited

### Integration of functional nanomaterials toward opto-electronic and photonic devices

Prof. Vera Marinova, Bulgarian Academy of Sciences (Bulgaria)

11:15

2024-THU-S0403-O001

### Classification of Major Datasets Using Feedforward Neural Network with Integrating Sphere

Keito Ito, Takeo Maruyama, Kanazawa University (Japan)

11:30

2024-THU-S0403-O002

### Lensless Driver Monitoring System with Video Classification

Tzu-Yuan Huang, Jia-Lun Wu, Chieh-En Lee, Chung-Hao Tien, National Yang Ming Chiao Tung University (Taiwan)

11:45

2024-THU-S0403-O003

### ONE-SHOT Polarization Interferometer for Measuring Surface Profiles

Yue-Jhe Tsai, Hsing-Hsien Tsai, Ju-Yi Lee, Ting-Hao Cao, National Central University (Taiwan)

## S0404. Oral Session IV

🕒 Nov 28, Thursday, 13:30-14:45

📍 Room 505b

🗣️ Presider: Prof. Cheng-Chih Hsu (National United University, Taiwan)  
Prof. Wei-Hung Su (National Sun Yat-sen University, Taiwan)

13:30

2024-THU-S0404-I001

Invited

### Photonic Crystal Spatial Filters

Prof. Kestutis Staliunas, Universitat Politècnica de Catalunya (Spain)

14:00

2024-THU-S0404-O001

### Simulation of Retinal Peripheral Refractive Signals when Wearing Pantoscopic Tilt Spectacles

Ching-Yao Huang, Da-Yeh University (Taiwan)

14:15

2024-THU-S0404-O002

### Post Deposition Tuning of the Electrical and Optical Properties in Aluminum Doped Zinc Oxide

Stefan Petrov, Chau Nguyen Hong Minh, Vera Marinova, National Yang Ming Chiao Tung University (Taiwan); Dimitre Dimitrov, Bulgarian Academy of Science (Bulgaria); Shiuan Huei Lin, National Yang Ming Chiao Tung University (Taiwan)

14:30

2024-THU-S0404-O003

### The Phasor-based Fluorescence Lifetime for Fast and High Contrast Image Analysis Application

Min-Zhen Lu, Chia-Yuan Chang, National Cheng Kung University (Taiwan)

## S0405. Oral Session V

🕒 Nov 28, Thursday, 15:00-16:00

📍 Room 505b

🗣️ **Presider:** Prof. Chung-Hao Tien (National Yang Ming Chiao Tung University, Taiwan)  
Prof. Hoang Yan Lin (National Taiwan University, Taiwan)

15:00

Invited

2024-THU-S0405-I001

### Super-frequency resolution using sub-bin in discrete Fourier transform and application

Prof. Manabu Sato, Yamagata University (Japan)

15:30

Invited

2024-THU-S0405-I002

### Optical processing with reconfigurable liquid crystal based scattering media

Prof. Zhiwen Liu, Penn State University (USA)

## S4. Poster Session I

🕒 Nov 27, Wednesday, 13:30-16:00

📍 Room 521

2024-WED-P0401-P001

### Applying Shape From Focus Technology to Measure the Thickness of the Modified Layer in Silicon Carbide

Yu-Cheng Kuo, Ji-Ru Jiang, Ju-Yi Lee, National Center University (Taiwan)

2024-WED-P0401-P002

### Phase-modulated heterodyne interferometry for displacement measurement

Zhi-Jun Lan, Jyun-De Chung, Jinh-Heng Chen, Kun-Huang Chen, Feng Chia University (Taiwan)

2024-WED-P0401-P003

### Comparison study of 40GHz passive mode-locked fiber lasers by using a micro-ring resonator with and without EAM

Chen Yun Hsin, Lai Yinchieh, Hsu Tse-Wei, Yang Ming Chiao Tung University (Taiwan)

## S4. Poster Session I

🕒 Nov 27, Wednesday, 13:30-16:00

📍 Room 521

2024-WED-P0401-P004

### Measurement and Analysis of Retinal Peripheral Refractive Signals in Axial Myopic Eyes

Chao-Wen Lin, Ching-Yao Huang, Da-Yeh University (Taiwan)

2024-WED-P0401-P005

### Design and Fabrication of Novel Holographic Multi-Notch Filters

Bing-Han Zhuang, Cheng-Ting Huang, Fu-Ming Lu, Kun-Huang Chen, Jing-Heng Chen, Feng Chia University (Taiwan)

2024-WED-P0401-P006

### Direct Phase Modulation for Computer Generated Hologram Adaptation in Tilted Plane Image Reconstruction

Hsuan-Ting Chang, Tai-Jyun Dong, Chien-Yu Chen, National Yunlin University of Science and Technology (Taiwan)

2024-WED-P0401-P007

### Multi-Wave Interference and Phase Shifts in Microwave Systems Without Rectangular Waveguides

YanYu Chen, Zi-Hua Wang, You-Yun Ma, Kun-Huang Chen, Jing-Heng Chen, Feng Chia University (Taiwan)

2024-WED-P0401-P008

### Information Entropy Study of Laser Ablation Quality

Chien-Chung Tsai, Tung-Hon Yiu, Minghsin University of Science and Technology (Taiwan)

2024-WED-P0401-P009

### Dataset size optimization of Laser Ablation Quality Investigation

Chien-Chung Tsai, Tung-Hon Yiu, Minghsin University of Science and Technology (Taiwan)

2024-WED-P0401-P010

### Rotation Angle Measurement with Moire Interferometry

Chih-Hsiang Chang, Po-Han Chen, Che-An Yang, Chen-Ming Tsai, Cheng-Chih Hsu, National United University (Taiwan)

## S4. Poster Session I

🕒 Nov 27, Wednesday, 13:30-16:00

📍 Room 521

2024-WED-P0401-P011

### 360-Degree Automated Optical Inspection Process for Enhanced Detection of PCB Defects

Chun-Lung Cheng, Jing-Feng Weng, National Chiayi University (Taiwan)

2024-WED-P0401-P012

### Machine Learning Enhanced Quantum State Tomography on FPGA

Hsun Chung Wu, Hsien-Yi Hsieh, Ray-Kuang Lee, National Tsing Hua University (Taiwan)

2024-WED-P0401-P013

### Effect of Ti Thickness in Top Electrode on $\text{Al}_x\text{Ga}_{2-x}\text{O}_3$ Resistive Random-Access Memory

Tien-Yu Wang, Wei-Chih Lai, Qiao-Ju Xie, National Cheng Kung University (Taiwan); Sheng-Po Chang, National Kaohsiung University of Science and Technology (Taiwan); Cheng-Huang Kuo, National Yang Ming Chiao Tung University (Taiwan); Jinn-Kong Sheu, National Cheng Kung University (Taiwan)

2024-WED-P0401-P014

### Measuring Phase Retardation by Common-Path Vortex Interferometry

Bo-Han Ye, Jiun-You Lin, National Changhua University of Education (Taiwan)

2024-WED-P0401-P015

### Novel Autofocusing Algorithm for Smooth Surface by using Slope Variation Normalization

Jing-Feng Weng, National Chiayi University (Taiwan)

2024-WED-P0401-P016

### Optical Interpolation for Light Field Display

Yu-Hsiang Huang, Wei Wang, Yu-Hsiang Cheng, Homer Chen, National Taiwan University (Taiwan)

## S4. Poster Session II

🕒 Nov 28, Thursday, 13:30-16:00

📍 Room 500

2024-THU-P0402-P001

### Sectional Reconstruction of Optical Scanning Holographic Microscope by Using Random-Phase Encoding

Chen-Hsiang Huang, Jung-Ping Liu, Feng Chia University (Taiwan)

2024-THU-P0402-P002

### An Innovative Workflow for Robust 3D Point Cloud Reconstruction Using Structured Light Camera Data and Noise Reduction Techniques

Yu-Qian Cheng, Jing-Feng Weng, National Chiayi University (Taiwan)

2024-THU-P0402-P003

### Computer-Generated Holography of Camera-in-the-Loop at Tilted Illumination

Ting-Hung Chou, Jung-Ping Liu, Feng Chia University (Taiwan)

2024-THU-P0402-P004

### Fluorescence Lifetime with Higher Accuracy by using Phasor Approach

Sheng-Bo Lai, Min-Zhen Lu, Zhi-Wei Xu, Chia-Yuan Chang, National Cheng Kung University (Taiwan)

2024-THU-P0402-P005

### A Novel Image Processing Algorithm for Effective Detection of O-Ring Burrs

Jia-Peng Huang, Yu Chen, Jing-Feng Weng, National Chiayi University (Taiwan)

2024-THU-P0402-P006

### Refractive Index Correction in Multi-view Optical Coherence Tomography (OCT) and Image Registration Algorithm for Accurate Tooth Imaging

Zi-Wen Kao, Pei-Chen Sung, National Taiwan University (Taiwan); Fang-Ying Hua, National Taiwan University Hospital (Taiwan), Chuan-Bor Chueh, Heng-Yu Li, Ting-Hao Chen, National Taiwan University (Taiwan); Yin-Lin Wang, National Taiwan University Hospital (Taiwan); Hsiang-Chieh Lee, National Taiwan University (Taiwan)



## S4. Poster Session II

🕒 Nov 28, Thursday, 13:30-16:00

📍 Room 500

2024-THU-P0402-P007

### Design of Diffractive Optical Elements for High-resolution Wide-angle Structured Light for a Wavelength of 1380nm

Ko-Lun Chang, Zhe-Wei Wu, Wei-Feng Hsu, National Taipei University of Technology (Taiwan)

2024-THU-P0402-P008

### Development of a machine learning algorithm in optimizing quantitative analysis for optical coherence tomography skin imaging

Chau-Hsiang Cheng, Ting-Hao Cheng, Cheng-An Huang, Cheng-Hsi Yang, National Taiwan University (Taiwan); Chau-Yee Ng, Meng-Tsan Tsai, Chang Gung University (Taiwan); Cheng-Kuang Lee, NVIDIA (Taiwan); Hsiang-Chieh Lee, National Taiwan University (Taiwan)

2024-THU-P0402-P009

### A signal processing algorithm for coaxial scanning fringe profilometer in applications of 3D shape measurements

Nai-Jen Cheng, National Kaohsiung University of Science and Technology (Taiwan); Wei-Hung Su, National Sun Yat-Sen University (Taiwan); Hsin-Jen Hsu, Liang-Cheng Xu, National Kaohsiung University of Science and Technology (Taiwan)

2024-THU-P0402-P010

### Quantitative transfer function measurement based on incoherent digital holography

Kai-Yun Cheng, Yu-Chih Lin, Feng Chia University (Taiwan)

2024-THU-P0402-P011

### Light Field Near Eye Display Base On View-Angle Extraction

Sheng-Min Shen, Ching-Cherng Sun, Tsung-Hsun Yang, Yeh-Wei Yu, Guan-Yu Ji, National Central University (Taiwan)

2024-THU-P0402-P012

### Enhanced Glass Surface Scratch Detection Using Phase Data and Gray-Value Gradient with HDR Processing

Jin-Bo Ou, Jing-Feng Weng, National Chiayi University (Taiwan)

2024-THU-P0402-P013

### 3D Surface measurement of transparent sample by using polarization sensitive digital holography

Pin-Chia Huang, Yu-Chih Lin, Feng Chia University (Taiwan)

2024-THU-P0402-P014

### Signal Enhancement of Absolute Optical Rotary Encoder Using Integrated System Design

Shau-Chi Pan, Hsi-Fu Shih, National Chung Hsing University (Taiwan)

2024-THU-P0402-P015

### Implementation of Holographic Projection Augmented Reality Head-Mounted Display

Chun-Huang Ko, Zong-Han Yang, Min-Feng Chen, Wei-Feng Hsu, National Taipei University of Technology (Taiwan)

2024-THU-P0402-P016

### Development of Non-Iterative Computer Holography Algorithms for Head-Mounted AR Displays

Ya-Hsuan Lee, Zhi-Chan Yu, Wei-Ren Chen, Wei-Feng Hsu, National Taipei University of Technology (Taiwan)

2024-THU-P0402-P017

### Fabrication of Dynamic Phase Gratings using Azobenzene Holographic Materials

Yu-Jie Qiu, Tsung-Lin Lu, Kai-Sheng Liu, Fang-Yong Lee, Wei-Hung Su, National Sun Yat-Sen University (Taiwan)

2024-THU-P0402-P018

### Terahertz Reflective Ptychography Using Divergent Illumination with a Beam Splitter

Shou-Feng Chang, National TsingHua University (Taiwan); Harrison Lees, Withawat Withayachumnankul, The University of Adelaide (Australia); Shang-Hua Yang, Shang-Hua Yang, Shang-Hua Yang, National TsingHua University (Taiwan)

## S4. Poster Session II

🕒 Nov 28, Thursday, 13:30-16:00

📍 Room 500

2024-THU-P0402-P019

### An Optimized Parameter Design of Holographic Quarter-Wave Plate

H. Y. Chen, F. H. Hsu, K. Z. Lin, National United University (Taiwan)

2024-THU-P0402-P020

### Analysis of Field of View for Exit Pupil Expansion Light Guide using Volume Holographic Optical Elements by Exit Pupil Imaging

Kai-Jui Liang, Ching-Cherng Sun, Tsung-Hsun Yang, Yeh-Wei Yu, National Central University (Taiwan)

2024-THU-P0402-P021

### Ultrafast Laser Processing and Inspection with 4H-SiC

Yi-Hung Lee, Chia-Yuan Chang, National Cheng Kung University (Taiwan)

## S4. Poster Session III

🕒 Nov 29, Friday, 09:00-11:00

📍 Room 500, 521

2024-FRI-P0403-P001

### Design of phase-only CGH for colorful holographic display by using gradient decent method

Chiungtze Wang, National Yang-Ming Chiao Tung University (Taiwan); Shiuian Huei Lin, National Yang-Ming Chiao Tung University (Taiwan); Ken Yu Hsu, National Yang-Ming Chiao Tung University (Taiwan)

2024-FRI-P0403-P002

### Structured-light 3D surface imaging for facial behavior analysis

Po Chun Peng, Tsung-Yu Chen, Yen-Hsiang Huang, Han Yen Tu, Chinese Culture University (Taiwan)

2024-FRI-P0403-P003

### Research and Implementation of Non-Iterative Computer Holography Algorithms for Head-Mounted Augmented Reality Displays

Ya-Hsuan Lee, Wei-Feng Hsu, Zhi-Chan Yu, Wei-Ren Chen, National Taipei University of Technology (Taiwan)

2024-FRI-P0403-P004

### Fabrication of Volume Holographic Lightguide with Optical Power

Hung-Hui Huang, Shao-Kui Zhou, National Changhua University of Education (Taiwan); Wen-Kai Lin, National Central University (Taiwan); Ching-Cherng Sun, National Central University (Taiwan); Wei-Chia Su, National Changhua University of Education (Taiwan)