



Final Program



OPTICS2024

**3rd International Conference and Expo on
Lasers, Optics & Photonics**

October 21-22, 2024 | Edinburgh, UK



09:00 - 09:30

On Spot Registrations

Chair

Edik U. Rafailov, Head - Optoelectronics and Biomedical Photonics Research Group, Aston University, United Kingdom

Co - Chair

Tatjana Gric, Semiconductor Physics Institute, Center for Physical Sciences and Technology, Lithuania

09:30-10:10

P *Title:* Photonics as a Tools for Biomedical Applications: Imaging, Diagnostics and Treatments

Edik U. Rafailov, Head - Optoelectronics and Biomedical Photonics Research Group, Aston University, United Kingdom

10:10-10:50

P *Title:* A Roadmap from the Perspectives of the Effective Properties and Applications

Tatjana Gric, Semiconductor Physics Institute, Center for Physical Sciences and Technology, Lithuania

10:50-11:05

Refreshment Break

11:05-11:45

P *Title:* Multiwavelength Laser Diode Arrays for 3-D Projectors Without Goggles

Mike Leszczynski, President - Polish Society of Crystal Growth, Vice President - TopGaN Lasers, Head - Semiconductor Microstructure Laboratory, Poland

11:45-12:25

P *Title:* History of Coherent Optical Communication System Technology-Implications for Young Researchers from Research and Development Experience

Shiro Ryu, Meiji University, Japan

12:25-13:05

P *Title:* The Manufacture of Trimethyl Gallium (TMG): A Key Material in the Production of Semiconductor Photonic Device

David Cooke, Director of Sales - Metal Organics & Electronic Specialty Gases Vital Materials, USA

13:05-14:05		Group Photo
		Lunch Break
14:05-14:35	K	Title: Beyond 5G, Ultra-reliable and Low Latency Communication (URLLC) <hr/> Naoaki Yamanaka , Director - Asia Pacific Board at IEEE Communications Society, Japan
14:35-15:05	K	Title: Mode-locked Laser Diode With Semiconductor Quantum Dot <hr/> Kouichi Akahane , Director - Optical Access Technology Laboratory of National Institute of Information and Communications Technology, Japan
15:05-15:35	K	Title: Holmium:YAG and Thulium Fiber Lasers for Minimally Invasive Treatment of Kidney Stone Disease <hr/> Pei Zhong , Duke University, USA
15:35-16:05	K	Title: Validation of Photonic Quantum Devices <hr/> Xenia Bogomolec , Founder & CEO- Quant-X Security & Coding GmbH, Germany
16:05-16:20		Refreshment Break
16:20-16:50	K	Title: Mid-infrared Supercontinuum Generation Using Soft Glass Optical Fibers <hr/> Yasutake Ohishi , Vice President - Toyota Technological Institute, Japan
Sessions	Novel Laser Technologies & their Applications, Plasmonic Structures and Quantum Dots & Advanced Optical Techniques in Quantum Materials and Nonlinear Photonics	
Session Chair	Jun Zhang, Guilin University of Electronic Technology, China	
16:50-17:15	I	Title: Spectrally-resolved Polarization-resolved Multiphoton Luminescence and Second Harmonic Imaging in Quantum Materials <hr/> Steve Smith , Head - Nanoscience and Biomedical Engineering, USA
17:15-17:40	I	Title: Transient Induced Plasmonic Crystals <hr/> Stanislav Derevyanko , Ben Gurion University of the Negev, Israel

17:40-18:05 **I** **Title:** High-frequency Laser Phase Noise Suppression Using Adaptive Pound-Drever-Hall Feed Forward

Meng Khoon Tey, Tsinghua University, China

Closing the Day 1 Conference

Day 02 | October 22, 2024

Chair **Edik U. Rafailov**, Head - Optoelectronics and Biomedical Photonics Research Group, Aston University, United Kingdom

Co - Chair **Tatjana Gric**, Semiconductor Physics Institute, Center for Physical Sciences and Technology, Lithuania

09:30-10:10 **P** **Title:** Quant-X Security & Coding - Quantum Technology Transfer Catalysers. How we Enable the Integration of Quantum Technology in Classical Infrastructures

Xenia Bogomolec, Founder & CEO- Quant-X Security & Coding GmbH, Germany

10:10-10:50 **P** **Title:** Super-Resolution Imaging in a Lumen

Qing Yang, Director - Research Center for Humanoid Sensing, Zhejiang University, China

10:50-11:05 **Refreshment Break**

11:05-11:45 **P** **Title:** Suppressing Walking Errors in Time-of-Flight LiDAR Systems Through Rising Edge Slope Compensation

Jun Zhang, Guilin University of Electronic Technology, China

11:45-12:15 **K** **Title:** Gallium Nitride Lasers for Optical Communications and Quantum Applications

Scott Watson, University of Glasgow, United Kingdom

12:15-12:45 **K** **Title:** Assessing the Thermal Injury Risk of Renal Tissues Produced during Laser Lithotripsy

Pei Zhong, Duke University, USA

12:45-13:45

Group Photo

Lunch Break

13:45-14:15

K *Title:* Massive Wavelength Division Network for Ultra-low Latency Service Using Hollow Core Fiber

Naoaki Yamanaka, Director - Asia Pacific Board at IEEE Communications Society, Japan

Pannel Discussion

14:15-15:45

Title: Modern Trends in Optics and Photonics for Emerging Applications

Edik U. Rafailov, Head - Optoelectronics and Biomedical Photonics Research Group, Aston University, United Kingdom

Tatjana Gric, Semiconductor Physics Institute, Center for Physical Sciences and Technology, Lithuania

15:45-16:00

Refreshment Break

16:00-16:30

K *Title:* Direct Laser Processing and Laser Shock Peening of Ti6Al4V Alloy - Influence of Different Ambient Conditions

Dubravka Milovanovic, Institute of General and Physical Chemistry, Serbia

16:30-17:00

K *Title:* Mechanism of LMD 3D Printing and Optimization of Deposition Rate

Dieter Schuocker, University of Technology Vienna, Austria

17:00-17:30

K *Title:* Hybrid Prisms: Revolutionizing Optical Systems Across Spectral Ranges

Friedrich Grimm, MD at RES Institute, Germany

17:30-18:00

K *Title:* The Failure of Both Einstein's Space-time Theory and His Equivalence Principle and Their Resolution by the Uniform Scaling Method

Robert Buenker, University of Wuppertal, Germany

Video

K *Title:* Object Pose and Surface Material Recognition Using a Time-of-Flight Camera and Image Fusion

Yang Yue, Xi'an Jiaotong University, China

Closing the Day 2 Conference



Next Series

**4th International Conference and Expo on
Lasers, Optics & Photonics**

May 29-31, 2025 | Amsterdam, Netherlands