

OPTICS & LASER-2019



International Summit on
**OPTICS, PHOTONICS AND LASER
TECHNOLOGIES**

June 03-05, 2019

Venue

**Crowne Plaza Hotel
San Francisco Airport**

1177 Airport Blvd, Burlingame
CA

Our Supporters



DAY ONE | MONDAY, 3rd JUNE 2019

08:00-08:30 Registrations and Introduction to Optics & Laser-2019

Keynote Session

08:30-09:00

Michael A. Krainak

NASA Goddard Space Flight Center, MD

Spaceflight Laser and Photonics Technology

09:00-09:30

David J. Hagan

University of Central Florida, FL

Giant, Ultrafast Nonlinear Refraction in Indium-Tin-Oxide at Epsilon-Near-Zero

09:30-10:00

Jian-Rong Gao

SRON Netherlands Institute for Space Research, The Netherlands

THz Multi-Beam Source by a Phase Grating and a Quantum Cascade Laser for Space Applications

10:00-10:30

Bumki Min

KAIST, South Korea

Linear Frequency Conversion in Time-Variant Metasurfaces

10:30 -10:45

Coffee Break

10:45-11:15

Koji Sugioka

RIKEN Center for Advanced Photonics, Japan

Femtosecond Laser 3D Micro and Nanofabrication

11:15-11:45

Sunao Kurimura

National Institute for Materials Science, Japan

Nonlinear Photon Generation/ Manipulation for Quantum Optics

Session on:

Nanophotonics; Optoelectronics and Silicon and Carbon Photonics

11:45-12:05

Seongkeun Cho, Semiconductor R&D Center, Samsung Electronics, South Korea
Super-Contrast-Enhanced Darkfield Imaging Through the Delicate Control of Illumination Polarization

12:05-12:25

Isahar Gabay, Bar-Ilan University, Israel

2D Mono Detection Spatially Super Resolved Microwave Imaging for Radar Applications

12:25-12:45

M. I. Marques, Autonomous University of Madrid, Spain

Novel Phenomena in Optical Manipulation Due to Magnetic-Field-Induced Resonant States

12:45-13:05

Park So Hee, Chosun University, South Korea

Luminescent effect of LGP using side-emitting POE light guidance system

DAY ONE | MONDAY, 3rd JUNE 2019

- 13:05-13:10** **Group Photo**
- 13:10-14:00** **Lunch**
- 14:00-14:20 **Qun Wei**, Nanjing Hua Opt-tech Co., Ltd, China
A Compact Top-View Conformal Optical System Based on a Single Rotating Cylindrical Lens with Wide Field of Regard
- 14:20-14:40 **Seongkeun Cho**, Semiconductor R&D Center, Samsung Electronics, South Korea
ECA (Electrical Conductive Adhesive) Induced Failure on Shingling Module
- 14:40-15:00 **Wei Jiang**, Nanjing University, Nanjing, China
2D Mono Detection Spatially Super Resolved Microwave Imaging for Radar Applications
- 15:00-15:15 **Maria Jessabel Talite**, National Chiao Tung University, Taiwan
Enhanced Light-Harvesting Efficiency of Luminescent Solar Concentrators Based on Organosilane-Functionalized Carbon Nanodots
- 15:15-15:30 **HaijunZhou**, Key Laboratory of Optoelectronic Technology & Systems, Ministry of Education, Chongqing University, China
High-Speed Pure Frequency Modulation and Pulse Optimization Based on a Quantum Cascade Laser by all-Optical Modulation
- 15:30-15:45 **Boe Mendewala**, University of California, CA
Hybrid Perovskite Thin Films as Highly Efficient Luminescent Solar Concentrators
- Session on:** **Applications and Trends in Optics , Lasers and Photonics**
- 15:45-16:05 **Thomas Kroll**, SLAC National Accelerator Laboratory, CA
Hard X-ray Lasing from Stimulated Emission Pumped by an X-ray Free-Electron Laser
- 16:05-16:25 **Hiromitsu Kiriya**, National Institutes for Quantum and Radiological Science and Technology (QST), Japan
Recent Advances on the J-KAREN-P High Intensity Laser Facility at QST
- 16:25-16:45 **A. E. Martirosyan**, NAS of Armenia, Armenia
Optical Monitoring of Arbitrary Distributed Substance: An Alternative Approach Against Image Processing
- 16:45-17:05 **Yen-Yin Lin**, National Tsing-Hua University, Taiwan
A Compact and Portable Laser Radioactive Decontamination System Using a Fiber Laser and a Polygon Scanner
- 17:05-17:15** **Coffee Break**

DAY ONE | MONDAY, 3rd JUNE 2019

- 17:15-17:35 **Madoka Ono**, AGC, Research Center, Japan
Significant Suppression of Rayleigh Scattering Loss in Silica Glass formed by the Compression of its Melted Phase
- 17:35-17:55 **S. Arakelian**, Stoletovs Vladimir State University, Russia
A Laser Brightness Amplifier for Detection of Dynamic Processes in the Laser Thermostrengthening of the Material Surface in a Real-Time Scale
- 17:55-18:15 **Tsutomu Yoshida**, Takushoku University, Japan
Stress Measurement by Spectrum Analyses for Round Bar Subjected to Time-varying Load
- 18:15-18:35 **S. Arakelian**, Stoletovs Vladimir State University, Russia
New Physical Properties in the Laser-Induced 4D-Topological Nanocluster Structures: Electrophysics and Optics of Thin Films
- 18:35-18:55 **Kenta Takata**, NTT Nanophotonics Center and NTT Basic Research Laboratories, Japan
Topologically Insulating One-Dimensional Photonic Lattices Based on Gain and Loss
- 18:55-19:10 **Jinesh Jain**, USDOE National Energy Technology Laboratory, PA
Applications of Laser Induced Breakdown Spectroscopy in Elemental Analysis of Varied Materials
- 19:10-19:25 **Marc Labusch**, University of Duisburg-Essen, Germany
Acoustic Emission Monitoring and Control during Laser Synthesis of Colloids

DAY TWO | TUESDAY, 4th JUNE 2019

Keynote Session

08:00 -08:30

Jaime Gomez Rivas

Eindhoven University of Technology, The Netherlands
Plasmon-Exciton-Polariton Condensation and Lasing

08:30-09:00

Susumu Noda

Kyoto University, Japan
High-Power and High-Beam-Quality Photonic Crystal Lasers

09:00-09:30

Francis T. S. Yu

Penn State University, PA
Schrodinger's Cat and Timeless Quantum Mechanics

09:30-10:00

Ines Montano

Northern Arizona University, AZ
Semiconductor Hyperbolic Metamaterials at the Quantum Limit

10:00-10:10

Coffee Break

10:10-10:40

Richard P. Mildren

Macquarie University, Australia
Diamond Brillouin Lasers

10:40-11:10

Xiangqiang Jiang

University of Huddersfield, UK
Advanced Least-Squares Integration Method for Deflectometry

Session on:

Optoelectronics; Optical Physics and Theoretical Physics

11:10-11:30

Waseem Shaikh, STFC Rutherford Appleton Laboratory, UK
Simulations and Experimental Demonstration of Large Aperture Harmonic Generation Energy Clamping Due to Wavefront Distortion/Defocus in Glass Amplifier Systems for Nanosecond Pulses at 1 GW/cm²

11:30-11:50

Fumio Koyama, Tokyo Institute of Technology, Japan
VCSEL-Based Beam Scanner for 3D Sensing

11:50-12:10

Toshimasa Umezawa, National Institute of Information and Communications Technology(NICT), Japan
Energy Harvest Type Millimeter-Wave Integrated Photoreceiver for Photonic Wireless Communications

12:10-12:30

Zhen Deng, Institute of Physics, Chinese Academy of Sciences, China
Photogenerated Carrier Extraction from Low Dimensional Semiconductor Materials and its Application in Inter Band Transition Quantum Well Infrared Detector (IQWIP)

DAY TWO | TUESDAY, 4th JUNE 2019

- 12:30-12:50 **Xuan-Zhang Wang**, Harbin Normal University, China
Optically Extraordinary Behaviors of the HBN Crystal with an Oblique Surface
- 12:50-13:30 **Lunch**
- 13:30-13:50 **Wei-Xing Xu**, Newtech Monitoring Inc, Canada
The Behavior of Hydrogen Atom under Different Potential Well
- 13:50-14:05 **Weida Zhu**, Nanjing University, China
Broadband Two-Dimensional Electronic Spectroscopy in an Actively Phase Stabilized Pump-Probe Configuration
- 14:05-14:20 **Ayaki Sunaga**, Tokyo Metropolitan University, Japan
Enhancement Factors of Parity-and Time-Reversal-Violating Effects for Monofluorides
- Session on:** Lasers in Micro, Nano and Bio Systems;
Optics and Light in Life Science and Fibre Optics
- 14:20-14:40 **Ichiro Shoji**, Chuo University, Japan
Development of Composite Lasers and Stacked Wavelength-Conversion Devices by use of the Room-Temperature-Bonding Technique
- 14:40-15:00 **Mario Pothén**, Fraunhofer Institute for Production Technology IPT, Germany
Compensation of Scanner Based Inertia for Laser Structuring Processes
- 15:00-15:20 **A. Marcu**, National Institute for Laser Plasma and Radiation Physics, Romania
Laser Grown ZnO Nanowires for (SAW) Sensors Applications
- 15:20-15:40 **Valeriu Beiu**, Aurel Vlaicu University, Romania
Seeing Is Believing
- 15:40-16:00 **Valentina Giordano**, CNR-IMM, Italy
Signal-to-Noise-Ratio Investigation of Silicon Photomultipliers for Functional Near Infrared Spectroscopy Applications
- 16:00-16:20 **Estefania Hernandez-Martin**, University of La Laguna, Spain
Is it Possible to Measure Hemodynamic Changes Through the Frontal Sinus Using Continuous Wave DOT Systems?
- 16:20-16:40 **I. Hernandez-Romano**, University of Guanajuato, Mexico
Fabrication or Upgrade the Performance of Fiber Optic Sensors by using Polymer Composite
- 16:40-17:00 **Tommaso Del Rosso**, Pontificia Universidade Catolica do Rio de Janeiro, Brazil
Surface Plasmon Resonance Nanocounter and Nanosizer

DAY TWO | TUESDAY, 4th JUNE 2019

- 17:00-17:15 **Abdullah Oran**, Abdullah Gul University, Turkey
RF Injection Locked 18 GHz Regeneratively Mode-Locked Semiconductor Laser
- 17:15-17:30 **L. Neumann**, University of technology, Braunschweig, Germany
Rare Earth Nanocrystal Doped Polymer Optical Fiber via *In Situ* Polymerization for POF Laser Applications
- 17:30-17:40 **Coffee Break**
- 17:40-18:30 **Poster Presentation**

DAY TWO | TUESDAY, 4th JUNE 2019

Poster Presentation

- P01 **Peng-Cheng Li**, Shantou University, China
Shih-I Chu, University of Kansas, KS
Extracting Multiple Rescattering Events for Time-Resolved Emission of High-Order Harmonic Generation
- P02 **Hsiu-Ying Huang**, Chung Yuan Christian University, Taiwan
Synthesis and Characterization of Gold Nanoclusters for Widely Tunable PL Emission
- P03 **S. Arakelian**, Stoletovs Vladimir State University, Russia
Laser-Induced New Phase States in Carbon: Low Dimensional Controlled Structures Due to Nonlinear Dynamic Processes
- P04 **Wei Jiang**, Beijing Normal University, China
Optomechanically Induced Transparency in the Presence of Non-Markovian Effect
- P05 **S. R. Al-Sayed**, National Institute of Laser Enhanced Sciences (NILES), Cairo University, Egypt
Characterization of a Laser Surface-Treated Martensitic Stainless Steel
- P06 **Kun-Bin Cai**, Chung Yuan Christian University, Taiwan
Green White-Light Emitting Diode Based on Zn-Coordinated Gold Nano-Phosphors
- P07 **Lo-Yu Wu**, National Tsing Hua University, Taiwan
Aberration Analysis of Micro-offset Free-form Mirrors by Shack-Hartmann Wavefront Sensor
- P08 **Youyoung Kim**, Gwangju Institute of Science and Technology, South Korea
Light Extraction Efficiency Enhancement of Phosphor-in-Glass Plate Using Sapphire Powder for Laser Lighting Technology
- P09 **Youyoung Kim**, Gwangju Institute of Science and Technology, South Korea
Monitoring the Optical Power of LED by Combining Radiation Type Thermocouple
- P10 **R. Ungureanu**, University of Bucharest, Romania
Laser Impulse Transfer on Metallic Targets
- P11 **P.G. Sena**, Chung Yuan Christian University, Taiwan
Matrix-Enhanced Carbon Nanodots for Sustainable Luminescent Solar Concentrator
- P12 **Sheng Zhou**, Harbin Normal University, China
Narrowband Perfect Terahertz Absorber Based on Ionic Crystal Metasurface

DAY THREE | WEDNESDAY, 5th JUNE 2019

Session on: Nonlinear Optics; Optical Computing; Quantum Science and Technology and Biophotonics

- 08:00-08:20 **Huizhong Xu**, San Francisco State University, CA
Tunable Optical Nonlinearity in Synthetic Soft-matter
- 08:20-08:40 **Shinji Matsuo**, NTT Corporation, Japan
Heterogeneously Integrated Low-operating Energy Directly Modulated Lasers on Si
- 08:40-09:00 **Haodong Shi**, Changchun University of Science and Technology, China
Nodal Aberration Theory in Non-Rotationally Asymmetric Freeform Optical System Design
- 09:00-09:20 **Chunhua Wang**, Shanghai University, China
Spectral Polarization Spreading in Stimulated Brillouin Scattering and its Influences on Brillouin Frequency Shift in Single Mode Fiber
- 09:20-09:40 **Carlos Wiechers**, Universidad de Guanajuato, Mexico
Spectral Polarization Spreading in Stimulated Brillouin Scattering and its Influences on Brillouin Frequency Shift in Single Mode Fiber
- 9:40-10:00 **Heongkyu Ju**, Gachon University, Korea
Surface Plasmon Aided Fluorescence for Quantitative Biomedical Assay with High Sensitivity and Good Reproducibility
- 10:00-10:15 **Irfan Ahmed**, City University of Hong Kong, Hong Kong
Spontaneous Parametric Four Wave Mixing and Fluorescence Lifetime Manipulation in Diamond NV Center
- 10:15-10:30 **Nisha Prakash**, CSIR-NPL Campus, India
Novel Ultrabroadband Binary Photoswitching in High-Performance g-C₃N₄/Si Hybrid Photodetector
- 10:30-10:45 **Jacob Gade Koefoed**, Technical University of Denmark, Denmark
Solutions to Continuous-Wave Four-Wave-Mixing Equations in Silicon-on-Insulator Waveguides
- 10:45-10:55** **Coffee Break**

DAY THREE | WEDNESDAY, 5th JUNE 2019

Session on: Photonic & Plasmonic Nanomaterials; Optical Metrology; Optical MEMS and Nanophotonics

- 10:55-11:15 **Cheng Zhang**, National Institute of Standards and Technology, MD
Reliable Characterization of Hyperbolic Metamaterials Using Total Internal Reflection Ellipsometry
- 11:15-11:35 **Douglas Gill**, IBM T.J. Watson Research Center, NY
Making Short Reach Link Transmitter Figure of Merits Cognizant of Transmission Format
- 11:35-11:55 **Feng Zhao**, Washington State University, DC
Optical Electrostatic MEMS Microactuator on 4H-SiC
- 11:55-12:15 **Gad Bahir**, Technion-Israel Institute of Technology, Israel
Metamaterial Nano-cavities and MHA Coupled to Near and Mid-Infrared Intersubband Transitions in the GaN/AlGaIn Based Quantum Cascade Detectors
- 12:15-12:35 **Jiangtao Xi**, University of Wollongong, Australia
Error Analysis in the Absolute Phase Maps Recovered by Fringe Patterns with Three Different Wavelengths
- 12:35-12:55 **Christophe Gorecki**, FEMTO-ST, France
MOEMS-based Imaging Probe with Integrated Mirau Micro-interferometer and MEMS Microscanner for Swept-source OCT Endomicroscopy
- 12:55-13:35 Lunch & Networking**
- 13:35-13:55 **Lishuang Feng**, Beihang University, China
Enhancement of Optical Sensitivity in a Grating Based Micromechanical Accelerometer by Reducing Non-Parallelism Error
- 13:55-14:15 **Sen-Yeu Yang**, National Taiwan University, Taiwan
Replication of Large-Area Microstructures for Optics Using Induction Heated Belt Roller Embossing
- 14:15-14:35 **Greg Sun**, University of Massachusetts, Boston
Landau Damping in Isolated and Coupled Plasmonic Nanoparticles
- 14:35-14:55 **Rishi Maiti**, George Washington University, WA
Heterogeneous Integration of 2D materials on Si Photonic Platform
- 14:55-15:15 **T. Sikola**, Brno University of Technology, Czech Republic
Quantitative Phase Imaging of Fields Shaped by Plasmonic Metasurfaces
- 15:15-15:30 **Dennis Visser**, KTH Royal Institute of Technology, Sweden
Dielectric Metasurfaces Based on a-Si Nanodisk Arrays for Anti-Reflection and Color Filter Applications

*We wish to see you
at
San Francisco, CA*



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