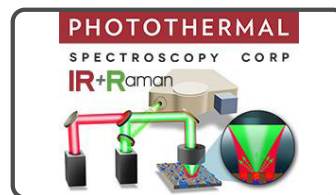
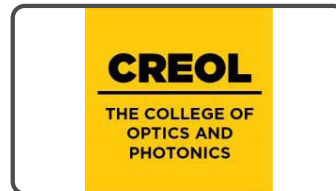
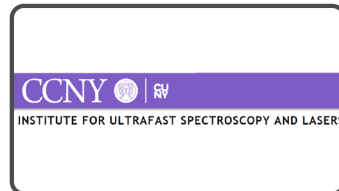


LOPS[®] 2024

4th Edition of Annual Conference on
**Lasers, Optics, Photonics, Sensors,
Bio Photonics & Ultrafast Nonlinear
Optics**
June 07-10, 2024

Venue: DoubleTree Resort by Hilton Hollywood Beach, 4000 South Ocean Dr., Hollywood, FL 33019

Sponsors & Supporters



ORGANIZING COMMITTEE MEMBERS



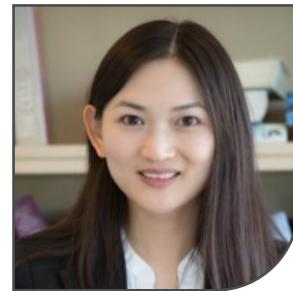
Robert Alfano, Chief Executive



Alex Kazemi, Chairman



Brock Koren, Co-Chair



Lingyan Shi, Co-Chair



Peter Delfett, Co-Chair



Bing Yu, Co-Chair



Keerthi Rajana, Director of the Conference

Day 1 | Friday | June 07, 2024

Start of Session | 09:00

Session Chairs:
Dr. Alex Kazemi
Peter J. Delfyett

Welcome Ceremony	09:00-09:10	Dr. Alex Kazemi, The Boeing Company, USA
Keynote Speaker	09:10-09:40	Talk: Lasers on Silicon Douglas Dykaar, DifTek Lasers Inc., Canada
Plenary Speaker	09:40-10:20	Talk: Update on Ultrafast optical physics for the generation of HHG and supercontinuum Robert R. Alfano, The City College of New York, USA

Coffee Break @ 10:20-10:40 @ Refreshments

Plenary Speaker	10:40-11:20	Talk: Recent advances in tabletop attosecond X-ray sources Zenghu Chang, University of Central Florida, USA
Keynote Speaker	11:20-11:50	Talk: LiDAR Enhancement using non-Classical Light Amr S. Helmy, University of Toronto, Canada
Keynote Speaker	11:50-12:20	Talk: Diffuse Optics in the Clinic: Recent Results Arjun G. Yodh, University of Pennsylvania, USA

Lunch Break @ 12:20-13:00

Panel Discussion	13:10-14:10	Industrial Panel Discussion Moderator: Dr. Jose Pozo, CTO, OPTICA, USA Introduction : Peter J. Delfyett University of Central Florida, USA Dr. Alex Kazemi, The Boeing Company, USA Brock Koren, DRS DAY LIGHT Solutions, USA Ming Yan, Cytek Biosciences, USA Wojtek Walecki, Optoprofiler, LLC:, USA Lu Ping, OFS Fitel LLC, USA
Invited Speaker	14:10-14:30	Talk: Recent progresses on deep-learning enabled, deep-ultraviolet scanning microscopy for tumor margin assessment Bing Yu, Marquette University and Medical College of Wisconsin, USA

Coffee Break @ 14:30-14:45

Plenary Speaker	14:45-15:25	Talk: Vibrational photothermal microscopy: new window for biology and medicine Ji-Xin Cheng, Moustakas Chair Professor of photonics and optoelectronics, Boston University Photonics Center
Invited Speaker	15:25-15:45	Talk: Multimodal In vivo Imaging Guided Stem Cell Retinal Therapy Yannis Paulus, University of Michigan, USA
Invited Speaker	15:45-16:05	Talk: Breaking the Limits in Photoacoustic Imaging: Faster, Deeper and More Colorful Junjie Yao, Science Drive Duke University, USA
Keynote Speaker	16:05-16:35	Talk: Toward Fully Stabilized Chip Scale Optical Frequency Combs Sources and Applications - Sources and Applications. Peter J. Delfyett, University of Central Florida, USA

Day 1 Closing Ceremony @ 17:05 | End of the Session

Day 2 | Saturday | June 08, 2024

Start of Session | 09:00

Welcome Ceremony	09:00-09:10	Session Chairs: Brock Koren Alexander Doronin
Plenary Speaker	09:10-09:50	Talk: Attosecond physics Louis F. DiMauro, The Ohio State University, USA
Keynote Speaker	09:50-10:20	Talk: Metabolic Nanoscopy for Studying Aging and Diseases Lingyan Shi, UCSD Bioengineering, USA

Coffee Break @ 10:20-10:40

Plenary Speaker/Virtual	10:40-11:20	Talk: Singularity Engineering by Meta-optics Federico Capasso, Harvard University, USA
Invited Speaker	11:20-11:40	Talk: New Generation Photoacoustic Imaging: From benchtop wholebody imagers to wearable sensors Lei Li, Rice University, USA
Invited Speaker	11:40-12:00	Talk: Synergistic Anticancer Potential of Green Synthesized Nanoparticles and Pheophorbide a-Mediated Photodynamic Therapy in lung cancer Blassan P George, University of Johannesburg, South Africa

Lunch Break @ 12:00-13:00

Keynote Speaker	13:00-13:30	Talk: Modeling and compensating polarization aberrations in optical systems Boris Gramatikov, Wilmer Eye Institute, Johns Hopkins University, USA
Keynote Speaker	13:30-14:00	Talk: Ionizing radiation acoustic imaging (iRAI) for mapping the dose deep in the patient during radiation therapy Xueding Wang, University of Michigan, USA
Keynote Speaker	14:00-14:30	Talk: "Sensors and Micro/Nano-electro-mechanical Systems (MEMS/NEMS). Many sensors are built by micro/nanofabrication techniques and this provides a host of advantages including lower power consumption, small size and light weight." For small scale body optical sensors Peter Hesketh, Georgia Institute of Technology, USA

Coffee Break @ 14:30-14:45

Keynote Speaker	14:45-15:15	Talk: Haishan Zeng, University of British Columbia, Canada
Keynote Speaker	15:15-15:45	Talk: Neuron Counting and Optical Characteristics in Human Brain Tissues: A Noninvasive Study in Visible and Near-Infrared Spectra Jamal H. Ali, CUNY, USA
Keynote Speaker	15:45-16:15	Talk: Unveiling the Depths of Cell Biology Using Multi-Laser Spectral Flow Cytometry Ming Yan, Cytex Biosciences, USA
Keynote Speaker	16:15-16:45	Talk: NeuralRTE: A new photon transport simulation algorithm for assessment of light propagation in biological tissues' Alexander Doronin, Victoria University of Wellington, New Zealand
Keynote Speaker	16:35-17:05	Talk: Multicomponent Photochemotherapeutic drugs for Photodynamic diagnosis and Photodynamic therapy in cancer Heidi Abrahamse, University of Johannesburg, South Africa

Day 2 Closing Ceremony | End of the Session

Day 3 | Sunday | June 09, 2024

Start of Session | 09:00

Welcome Ceremony	09:00-09:10	Session Chairs: Angela B Seddon Lingyan Shi
Plenary Speaker (Virtual)	09:10-09:50	Talk: Longitudinally-Structured Light Fields for Sensing and Dynamic Behavior Alan E. Willner, University of Southern California, USA
Keynote Speaker	09:50-10:20	Talk: The past, present, and future of Quantum Cascade Lasers Technology (QCL-IR) Brock Koren, DRS DAY LIGHT Solutions, USA

Coffee Break @ 10:20-10:40

Plenary Speaker (Virtual)	10:40-11:20	Talk: Paul Corkum, University of Ottawa, Canada
Invited Speaker	11:20-11:40	Talk: Which wavelength of light for photo-biomodulation therapy can penetrate deeper into the spinal canal? Piao, Daching, Oklahoma State University, USA
Invited Speaker	11:40-12:00	Talk: Correlations between intraocular pressure regulation and the biomechanical behaviors of distal aqueous outflow vasculature Guan (Gary) Xu, Univeristy of Michigan, USA

Lunch Break @ 12:00-13:00

Keynote Speaker	13:00-13:30	Talk: Paradigm shift in the operations and applications of volume Bragg gratings Ivan Divliansky, CREOL, USA
Keynote Speaker	13:30-13:50	Talk: Raman-based Noninvasive Continuous Glucose Monitoring (CGM) Jeon Woong Kang, MIT, USA
Invited Speaker	13:50-14:10	Talk: Non- and Minimally-Invasive Optical Monitoring of the Central Nervous System During Critical Care David R. Busch, University of Texas Southwestern, USA
Keynote Speaker	14:10-14:30	Talk: Lateral heterostructures with arbitrary shape and material composition in two-dimensional materials Ali Adibi, Georgia Institute of Technology, USA

Coffee Break @ 14:30-14:45

Keynote Speaker	14:45-15:15	Talk: Advanced Fiber optic Sensing Systems for Aviation and Aerospace Applications Dr. Alex Kazemi, The Boeing Company Fiber Optic Architect PD Advanced Concept, Chairman, LOPS2024
Keynote Speaker	15:15-15:45	Talk: Mid-infrared (MIR) continuous wave, room temperature, first time fibre lasing beyond 5 μm. Angela B Seddon, University of Nottingham, UK
Keynote Speaker	15:45-16:15	Talk: The emergence of Super Resolution Optical Photothermal Infrared Spectroscopy and Imaging Mustafa Kansiz and Craig Prater, Photothermal Spectroscopy Corp., USA
Invited Speaker	16:15-16:35	Talk : Challenges of and developments towards off-contact diffuse reflectance spectroscopy Piao, Daching, Oklahoma State University, USA
Invited Speaker	16:35-16:55	Talk: Emerging Fiber Technologies for Distributed Optical Fiber Sensing Lu, Ping, OFS Fitel LLC, USA

Day 3 Closing Ceremony | End of the Session

Day 4 | Monday | June 10, 2024

Please download Zoom Meeting Application (Free Download)

Session Chairs:
Dr. Alex Kazemi
Bing Yu
Keerthi Rajana

Invited Speaker/ Virtual Talk	09:30-10:00	Talk: Visible Resonance Raman Scattering in Brains. Binlin Wu, Southern Connecticut State University, USA
Pending	10:00-10:30	Talk: Andrei Afanasev, The George Washington University, USA
Student Speaker Talk/ Virtual Talk	10:30-10:50	Talk: Kidney Cancer Classification Model Using Deep Learning Joseph Neumann, Southern Connecticut State University, USA
Invited Speaker/ Virtual Talk	10:50-11:10	Talk: Machine-Learning-based Opening Object Recognition Yang Yue, Xi'an Jiaotong University, China

**Keynote Speaker/
Virtual Talk**

11:10-11:40

Talk:

Jessica Ramella-Roman, Florida International
University, Miami, USA

**Speaker Opportunities Available !
Conference Closing Ceremony**

Time slots including Q&A