RAPID
RESEARCH AND APPLICATIONS OF PHOTONICS IN DEFENSE

2020 Program-at-a-Glance

*ALL TIMES ARE IN CENTRAL DAYLIGHT TIME	Monday, 10 August
8:00 am-10:15 am	**Keynote/Plenary Session** **Session Chair:** John Henry Williams, *Air Force Research Laboratory*, USA
	8:00 am-8:15 am **Welcome Remarks:** David Lambert, *Air Force Research Laboratory, Munitions Directorate*, USA
	8:15 am-8:45 am **Keynote Speaker:** Gen. Arnold W. Bunch Jr., *Commander, Air Force Materiel Command, Wright-Patterson Air Force Base*, USA
	8:45 am-9:15 am **Plenary Speaker:** Alexandra Boltasseva, *Purdue University*, USA
	9:15 am -9:45 am **Plenary Speaker:** Nicholas Kotov, *University of Michigan*, USA
	9:45 am-10:15 am **Plenary Speaker:** Tobias Kippenberg, *École polytechnique fédérale de Lausanne*, Switzerland
10:15 am-10:45 am	**Break**
10:45 am-11:30 am	**Women in Photonics / Women in Science and Engineering Session** **Session Chair:** Adriane Moura, PhD., *Applied Research Associates, Inc*, USA
	Plenary Speaker: Michelle Ewy, *Air Force Research Laboratory*, USA
11:30 am-12:00 pm	**Break**
12:00 pm-12:30 pm	**STEM Session** **Session Chair:** Brian Mitchell, *Eglin Air Force Base*, USA
	STEM Speaker: Ralph Tillinghast, *U.S. Army, Picatinny Arsenal*, USA
	STEM Speaker: Natalia Canas-Estrada, *Associate Vice President of STEM Outreach, IEEE Photonics Society*, USA

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Tuesday, 11 August

	ANP - Advanced Nanophotonics Platform	ETP - Enabling Technologies in Photonics	HPLSET - High Power Laser Science and Engineering Technology	MMAP - Materials and Manufacturing for Advanced Photonics	OEDDIP - Optical Emitter/Detector Devices and Integrated Photonics	OPM - Organic Photonic Materials	PDS - Photonics for Defense Systems
8:00 am-10:00 am	**TuA1:** Ultrafast and Nonlinear Nanophotonics **Session Chairs:** H. Harutyunyan & M. Allen	**TuB1:** Optical MEMS/NEMS **Session Chairs:** L. Starman & H. Hall	**8:00 am-9:30 am TuC1:** Nonlinear Optical and Photonic Materials for High Power Lasers and Applications **Session Chair:** S. Guha & C. Liebig	**8:00 am-9:30 am TuD1:** Novel Materials for Photonics **Session Chairs:** J. Boeckl & T. Back	**TuE1:** Lasers/Emitters **Session Chairs:** S. Dev & D. Wasserman	**TuF1:** Hybrid Organic-Inorganic Materials & Devices **Session Chairs:** A. Mohite & M. Sfeier	**8:00 am-9:30 am TuG1:** Instrumentation and Control for Test and Evaluation **Session Chair:** R. Orgusaar
10:00 am-10:30 am	**Break**						
10:30 am-12:30 pm	**10:30 am-12:00 pm TuA2**: Active Plasmonics and Nanophotonics **Session Chairs:** A. Agraval & P. Bharadwaj	**TuB2:** Microwave Optics and RF Photonics **Session Chairs:** B. Braaten & J. Deroba	**10:30 am-11:30 am TuC2:** High Peak and Average Power Laser Technology Solid State **Session Chairs:** E. Chowdhury & A. Valenzuela	**TuD2:** Semiconductor Materials and Quantum Nanoscience **Session Chairs:** K. Eyink & P. Deotare	**TuE2:** Epitaxial Growth, Fabrication and Characterization **Session Chairs:** S. Arafin & E. Shaner	**10:30 am-11:30 am TuF2:** Infrared Organic Materials and Properties **Session Chairs:** J. Vella & J. Azoulay	**10:30 am-12:00 pm TuG2:** Special Ops Interests **Session Chairs:** M. Schmitt & A. Gracia
12:30 pm-1:30 pm	**Break**						
1:30 pm-3:30 pm	**TuA3:** Machine Learning/AI for Photonics **Session Chairs:** A. Boltasseva & E. Doucette	**1:30 pm-2:30 pm TuB3:** Signal Processing, Machine Learning, and Large-scale Data Science **Session Chairs:** J. Murray-Bruce & B. Minnehan	**TuC3:** Secondary Source Development from USPL (GHz-THz to x/gamma Rays to MeV Electrons and Protons) **Session Chairs:** J. Pigeon & E. Rosenthal	**TuD3:** Scalable Manufacturing and Rapid Prototyping for Photonics **Session Chairs:** E. Kinzel & H. Sigmarsson	**TuE3:** Integrated Photonics and Optical Devices **Session Chairs:** W. Zhou & A. Mazumdar	**1:30 pm-2:30 pm TuF3:** Nonlinear Organic Materials **Session Chairs:** R. O'Donnell & T. Grusenmeyer	**1:30 pm-3:30 pm TuG3:** EO/IR/LADAR (Part 1) **Session Chairs:** B. Stadler & D. Rabb **4:00 pm-5:00 pm TuG3:** EO/IR/LADAR (Part 2) **Session Chairs:** B. Stadler & D. Rabb
3:30 pm-4:00 pm	**Break**						
4:00 pm-5:30 pm	**TuA4:** Emerging Material Platforms for Plasmonics **Session Chairs:** A. Hoffman & S. Law			**TuD4:** Liquid Crystal Technology **Session Chairs:** M. McConney & N. Tabiryan	**4:30 pm-6:00 pm TuE4:** UV Optoelectronics **Session Chairs:** B. Nikoobakht & N. Tansu	**4:00 pm-4:30 pm TuF4:** Charge Transport in Organic Materials **Session Chairs:** J. Cahoon & S. Roberts	**5:30 pm-6:30 pm TuG4:** Blast/Shock Wave Imaging and Spectroscopic Techniques **Session Chairs:** M. Schmidt, S. Vasu & W. Lewis

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Wednesday, 12 August

	AOP - Applications of Photonics	HMB - Humanstate Measurement and Biosensing	LDPM - Low-dimensional Photonic Materials	NPNMAP - Novel Phenomena and New Materials for Advanced Photonics	OIST - Optical Imaging and Sensing Technology	OMPEES - Optical Metamaterials, Plasmonics and Engineered Electromagnectic Structures
8:00 am-10:00 am	**8:00 am-9:30 am** **WA1:** Devices and Systems for Sensors **Session Chairs:** F. Long & G. Fischer	**WB1:** Materials and Devices for Biosensing **Session Chairs:** B. Wenner & I. Lima	**8:00 am-9:30 am** **WC1:** Two Dimensional and Topological Materials **Session Chairs:** A. Reed & G. Moody	**8:00 am-9:30 am** **WD1:** Integrated Quantum Photonics **Session Chairs:** A. Agraval & M. Devanco	**WE1:** RF and Optical Target Imaging, Identification, and Pattern Recognition **Session Chairs:** J. Cuenca & M. Burfeindt	**8:00 am-10:30 am** **WF1:** Resonant Photonic Lattices: Principles and Applications **Session Chairs:** R. Magnusson & I. Avrutsky
10:00 am-10:30 am	**Break**					
10:30 am-12:30 pm	**WA2:** T&E Forum **Session Chairs:** A. Keipert, P. Rozwood, A. Saul & D. Beargie	**10:30 am-11:30 am** **WB2:** Biosensing Methods **Session Chairs:** J. Chavez-Benavides & J. Hagen	**WC2:** Quantum Optics and Low-Dimensional Quantum Materials **Session Chairs:** Y. Abate & N. Stern	**10:30 am-12:00 pm** **WD2:** Chiral and Nonlinear Nano/Meta-Materials **Session Chairs:** A. Govorov & V. Valev	**10:30 am-12:00 pm** **WE2:** Spectral, Polarimetric, and Multimodal Imaging **Session Chairs:** J. Martin & J. Zeibel	**11:00am-12:00 pm** **WF2:** Optical Metamaterials Based Devices and Applications **Session Chairs:** S. Vangala & G. Shvets
12:30 pm-1:30 pm	**Break**					
1:30 pm-3:30 pm	**WA3:** Displays, Holography and Projection - I **Session Chairs:** F. Kiamilev & R. Rapp	**WB3:** Human State Measurement **Session Chairs:** S. Kim & A. Raj		**1:30 pm-2:30 pm** **WD3:** Dynamic Control of Self-assembled Plasmonic Nanostructures **Session Chairs:** S. Bukosky & M. Allen	**1:30 pm-2:30 pm** **WE3:** Optical Detectors and Focal Plane Arrays **Session Chairs:** E. Steenbergen & D. Ting	**WF3:** Active Metasurfaces and Flat-optics **Session Chairs:** J. Valentine & A. Davoyan
3:30 pm-4:00 pm	**Break**					
4:00 pm-5:00 pm	**4:00 pm-5:30 pm** **WA4:** Displays, Holography and Projection - II **Session Chairs:** F. Kiamilev & R. Rapp	**4:00 pm-6:00 pm** **WB4:** Human Analyst Augmentation **Session Chairs:** A. Rice & R. McKinley	**WC4:** Synthesis and Fabrication of 2D Materials **Session Chairs:** N. Glavin & M. Wang	**WD4:** Flexible Photonics and Electronics **Session Chairs:** W. Zhou & A. Roy		