



# 5th Arizona Photonics Days Agenda

January 19-21, 2022

Location: Event Center at UA Tech Park at Rita Road, Tucson



## Wednesday, January 19

12:30-1:00 Registration

**Opening Session** chaired by Robert Walker, Leonardo Electronics US and Jack Schumann, Optics Valley

1:00 – 1:30 Welcome and VIP Introductions

**Quantum Information Science Session** chaired by Stephen Fleming, Center for Quantum Networks, University of Arizona

1:30 - 2:00 **Keynote: The Quantum Internet — Why Should We Care?**

Saikat Guha, PhD, Director and Principal Investigator, Center for Quantum Networks (CQN) and Professor of Optical Sciences, University of Arizona

2:00 - 2:30 **Decoding of Quantum Low-Density Parity Check (QLDPC) Codes**

Bane Vasić, PhD, Professor of Electrical and Computer Engineering and Mathematics at the University of Arizona and a director of the Error Correction Laboratory, University of Arizona

Authors: Bane Vasić, Nithin Raveendran and Narayanan Rengaswamy

2:30 - 3:00 Company Pitches

3:00 - 3:30 *Networking & Coffee Break hosted by Control Vision*

3:30 - 4:00 **Advances in photonic quantum information processing**

Matt Eichenfield, Distinguished Member of Technical Staff and Group Leader for MEMS-Enabled Quantum Photonics, Sandia National Laboratories

4:00 - 4:30 **Entanglement Routing in a Quantum Network and its Applications**

Emily Van Milligen, PhD student, CQN, College of Optical Sciences, University of Arizona and

Ashlesha Patil, PhD student, CQN, College of Optical Sciences, University of Arizona

4:30 - 5:00 Company Pitches

**Welcome Reception hosted by Edmund Optics**

5:00 - 6:30 pm Welcome reception

## Thursday, January 20

7:30-8:00 Registration & Coffee hosted by Control Vision

**Opening Session** chaired by Robert Walker, Leonardo Electronics US and Jack Schumann, Optics Valley

8:00 - 8:30 Welcome and VIP Introductions

**Biomedical Technology Session** chaired by Edward Dotherow, DrPH, Mel and Enid Zuckerman College of Public Health, University of Arizona

8:30 - 9:00 **Keynote: Advanced Photonics for Miniature Endoscopes**

Jennifer Kehlet Barton, PhD, Director BIO5 Institute, University of Arizona



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- 9:00 - 9:30            **Unique Cloud-based Medical Laser Platform for Phototherapy and Treatment Monitoring Glioblastoma**  
Jari Ovaskainen, Business Development Director, Modulight Corp.
- 9:30 – 10:00        Company Pitches
- 10:00 - 10:30       *Networking & Coffee Break hosted by Control Vision*
- 10:30 - 11:00        Curtis Thorne, PhD, Assistant Professor, BIO5 Institute and Assistant Professor, Cellular and Molecular Medicine, University of Arizona
- 11:00 - 11:30        **Imaging Through Hair-Thin Optical Fibers Using Nanostructured Metasurfaces**  
George S. D. Gordon, PhD, Associate Professor and UKRI Future Leaders Fellow, Faculty of Engineering University of Nottingham
- 11:30 - 12:00        Company Pitches
- 12:00 - 12:30        Industry Organization Presentations by APOMA, GPA, Optica and SPIE
- 12:30 - 1:30         *Lunch & Networking hosted by Tech Launch Arizona*

**Laser Technology Session** chaired by Lukas Gruber, PhD, Leonardo Electronics US

- 1:30 - 2:00            **Keynote: Multi-Joule Diode-Pumped Tm: YLF Laser**  
Issa Tamer, PhD, Advanced Photon Technologies, NIF and Photon Science, Lawrence Livermore National Laboratory
- 2:00 - 2:30            **Single Frequency Fiber Lasers with Several Millijoules Energy and Tens Kilowatts Peak Power**  
Dr. Shibin Jiang, President and CEO, AdValue Photonics Inc.
- 2:30 - 3:00            Company Pitches
- 3:00 - 3:30            *Networking & Coffee Break hosted by Control Vision*
- 3:30 - 4:00            **Compact High Power Fiber Laser Systems**  
Jenna Bergevin, Sr. Project Engineer–Fiber Systems, Leonardo Electronics US Inc.
- 4:00 - 4:30            **Fiber Laser Pump Modules: Review and Outlook**  
Dr. Hans-Georg Treusch, Owner, GTSolution
- 4:30 - 5:00            Company Pitches

**Industry Panel and Reception hosted by University of Arizona Wyant College of Optical Sciences**

- 5:00 - 6:30            Supply Chain Industry Panel followed by reception

### Friday, January 21

- 7:30-8:00            Registration & Coffee hosted by Control Vision

**Opening Session** chaired by Jack Schumann, Optics Valley

- 8:00 - 8:30            Photonics Cluster Presentations by OptoNet, Optec BB, Optics Valley



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## **Sensing and Metrology Session** chaired by Shelby Ament, PhD, Arizona Optical Metrology

- 8:30 - 9:00           **Keynote: Silicon Photonics as a Mainstream Technology: Time to Get Real**  
Scott Jordan, Head of Photonics; Sr. Director, NanoAutomation; PI Fellow, PI (Physik Instrumente) LP
- 9:00 - 9:30           **Microfabrication and Dielectric Characterization of DLaTGS Based Pyroelectric Infrared Detectors**  
Motasim Alomari, PhD, Senior Scientist, Laser Components Detector Group
- 9:30 – 10:00        Company Pitches
- 10:00 - 10:30        *Networking & Coffee Break hosted by Control Vision*
- 10:30 - 11:00        **Manufacturing Metrology for Alternative-reality Optical Displays**  
Peter de Groot, PhD, Chief Scientist, Zygo Corporation
- 11:00 - 11:30        **Instrumentation of Laser Linewidth and Relative Intensity Noise Measurement**  
Emily Rodriguez, Photonics Engineer, Optilab LLC
- 11:30 - 12:00        Company Pitches
- 12:00 - 12:30        SBIR Opportunities hosted by the Arizona Commerce Authority
- 12:30 - 1:30         *Lunch & Networking hosted by Leonardo*

## **Astronomy Session** chaired by Richard Green, PhD, Steward Observatory, University of Arizona

- 1:30 - 2:00           **Aspera: The Far-ultraviolet SmallSat Mission to Unveil the Missing Universe**  
Dr. Carlos J. Vargas, Aspera Mission Principal Investigator, Assistant Professor & Assistant Astronomer, University of Arizona
- 2:00 - 2:30           **High Spectral Resolution Over a Wide Field of View: The Hyperion FUV Spectrograph**  
Dr. Erika Hamden, Hyperion Mission Principal investigator, Assistant Professor, Department of Astronomy, & Assistant Astronomer, Steward Observatory, University of Arizona
- 2:30 - 3:00           Company Pitches
- 3:00 - 3:30           *Networking & Coffee Break hosted by Control Vision*
- 3:30 - 4:00           **Imaging Exoplanets and Searching for Life with the Giant Magellan Telescope**  
Dr. Jared Males, Assistant Astronomer, Steward Observatory, University of Arizona
- 4:00 - 4:30           **The NEID Spectrometer: A Revolution in Radial Velocity Precision to Enable the Search for Earth-Twin Exoplanets**  
Dr. Chad Bender, Associate Astronomer, Steward Observatory, University of Arizona
- 4:30 - 5:00           Company Pitches

## **Closing Session** chaired by Robert Walker, Leonardo Electronics US and Jack Schumann, Optics Valley

- 5:00 - 6:00           Wrap up & Networking

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COVID-19 Protocols

Optics Valley is committed to providing a safe, secure, and enjoyable environment for attendees, staff, and presenters.

- To enter the conference venue, all attendees and staff are required to show proof of full COVID-19 vaccination or a negative COVID-19 test within 72 hours of the event from a medical facility.
- All attendees and staff are required to wear a mask indoors unless actively eating, drinking or presenting.
- Registrants will be notified if there are any updates to these protocols.