National Academy of Engineering Regional Meeting at The University of Arizona

Innovations in High Contrast, High Resolution Imaging Technologies

Wednesday, March 30, 2022

Registration Required by Monday, March 21st. Click here to RSVP

This meeting will explore the latest advances in high contrast, high resolution imaging technologies enabling unprecedented breakthroughs in scientific exploration, ranging from new coronagraphs and techniques for exoplanet discovery to deep tissue in-vivo brain imaging.

For NAE members and speakers, the morning will include a special lab tour. Following the NAE Business Meeting, there will be a lunch for NAE members and speakers, with the open Scientific Meeting starting at 1:00 pm.

NAE MEMBER BUSINESS MEETING

Wyant College of Optical Sciences, 1630 E. University Blvd., Tucson, AZ 85721

8:30 – 9:00 am	NAE Member Registration	Meinel Bldg - 3rd Floor Lobby
9:00 – 10:00 am	Special Tour for NAE Members & Executive Team	Private Lab Tour
10:15 – 11:45 am	NAE Member Business Meeting	Meinel Bldg - Conf. Rm 821
11:45 am – 12:30 pm	NAE Member and Speaker's Lunch	Meinel Bldg - Breakout Rm 829

SCIENTIFIC MEETING – PUBLIC

INNOVATIONS IN HIGH CONTRAST, HIGH RESOLUTION IMAGING TECHNOLOGIES

Kuiper Building – Auditorium 308, 1629 E. University Blvd., Tucson, AZ 85721

1:00 – 1:10 pm **Welcome**
John L. Anderson, President, National Academy of Engineering

1:10 – 1:20 pm **Program Introduction**
Thomas L. Koch, Dean and Professor, Wyant College of Optical Sciences, University of Arizona

Session 1: Advances in Imaging for Life Sciences

1:20 – 2:00 pm ***Keynote***
"High-speed Optical Imaging of Biology at the Speed of Light"
Elizabeth M.C. Hillman
Herbert and Florence Irving Professor, Zuckerman Mind Brain Behavior Institute, Departments of Biomedical engineering and Radiology, Columbia University

2:00 – 2:20 pm
"Multiscale Optical and Acoustic Imaging Technologies to Characterize Disease States from the Single Cell to the Organ."
Barbara Smith, Associate Professor, Biomedical Engineering, School of Biological and Health Systems Engineering, Arizona State University

2:20 – 2:40 pm
"Advanced Endoscopic Imaging for Early Cancer Detection"
Jennifer Barton, Thomas R. Brown Distinguished Professor, Biomedical Engineering; Professor, Wyant College of Optical Sciences; Director, BIO5 Institute, University of Arizona

2:40 – 3:00 pm
"Development of compact ultrafast fiber lasers for nonlinear optical imaging"
Khanh Kieu, Associate Professor, Wyant College of Optical Sciences, University of Arizona

3:00 – 3:20 pm ***Break – Refreshments***

Session 2: Astronomy & Exoplanets

3:20 – 4:00 pm ***Keynote***
"A Challenge for 21st Century Telescopes: Finding and Characterizing Earth 2.0"
Charles A. Beichman
Executive Director, NASA ExoPlanet Science Institute, California Institute of Technology

4:00 – 4:20 pm
"Adaptive Optics & the Exoplanet Imaging Challenge"
Olivier Guyon, Astronomer, Steward Observatory; Professor, Wyant College of Optical Sciences, University of Arizona

4:20 – 4:40 pm
"Technology Demonstrations for Exoplanet Imaging with Space Coronagraphy"
Ewan S. Douglas, Assistant Professor, Astronomy; Assistant Astronomer, Steward Observatory, University of Arizona

4:40 – 5:00 pm
"Search for Life with Ground-based Telescopes"
Jared R. Males, Assistant Astronomer, Steward Observatory, University of Arizona

5:00 – 6:00 pm ***Reception, Kuiper Building, 3rd Floor Atrium***

For those unable to travel, we have established a non-interactive meeting webinar link: https://arizona.zoom.us/j/83867757852