

Schedule – Optics and Photonics Winter School 2017

Wednesday, Jan. 4, 2017

(All sessions at Optical Sciences 307)

8:50	Welcome	Dean Tom Koch
9:00	<i>Introduction to Optical Engineering</i>	Prof. Jim Schwiegerling
10:00	Break	
10:20	<i>Astronomical Optics</i>	Prof. Dae Wook Kim
10:50	Break	
11:00	<i>Optics and the Human Eye</i>	Prof. John Greivenkamp
11:30	Lunch	
1:00	Lab Tours	
3:00	<i>Introduction to Photonics</i>	Dean Tom Koch
4:00	Break	
4:20	<i>Nanophotonics</i>	Prof. Euan McLeod
4:50	Break	
5:00	<i>Optics, Photonics, and Solar Energy</i>	Prof. Roger Angel
5:30	Lab Tours (Including the Richard F. Caris Mirror Lab)	
7:00	Dinner	

Thursday, Jan. 5, 2017

(All sessions at Optical Sciences 307)

9:00	<i>Introduction to Imaging Science</i>	Prof. Lars Furenlid
10:00	Break	
10:20	<i>Polarization</i>	Prof. Russell Chipman
10:50	Break	
11:00	<i>Optics in Biology and Medicine</i>	Prof. Jennifer Barton
11:30	Lunch	
1:00	Lab Tours	
3:00	<i>Introduction to Optical Physics</i>	Prof. R. Jason Jones
4:00	Break	
4:20	<i>Quantum Optics</i>	Prof. Theresa Lynn
4:50	Break	
5:00	<i>Biosensing with Optical Resonators</i>	Dr. Judith Su
5:30	Lab Tours/Free Time	
6:00	Dinner	
7:00	Poster Session and Workshop Welcome Reception	

Schedule- Optics and Photonics Workshop 2017

FRIDAY, JAN. 6, 2017 (CAREER DAY)

Keynote Morning Session (ILC 130)

- 8:15 Tom Koch, University of Arizona
Welcome to the Optics and Photonics Workshop
- 8:30 David Reitze, Executive Director of LIGO, Caltech
The Final Ballet of Binary Black Holes: LIGO and the Dawn of Gravitational Wave Astronomy
- 9:45 **Break**
- 10:15 John Hayes, co-founder of 4D Technology (UA Optics Alumnus)
Light, Passion, and Getting a Life
- 11:00 Eugene Arthurs, SPIE
How Optics and Photonics Continues to Change Our World
- 11:45 **Lunch** (Optical Sciences)

(Afternoon sessions at Optical Sciences 307)

- 1:30 David Hagan, University of Central Florida, CREOL
Programs in Optics and Photonics at CREOL
- 2:00 Laura Coyle, Ball Aerospace (UA Optics alumnus)
Observations of an Early Career Optical Engineer
- 2:20 Souma Chaudhury, Intel (UA Optics alumnus)
What I did with my PhD in Optics
- 2:40 Panel Discussion on Careers in Optics
- 3:40 **Break**
- 4:00 Andrew Berger, University of Rochester, The Institute of Optics
Flipping the Electromagnetic Theory Classroom - Lessons Learned
- 4:30 Selim Unlu, Boston University
New Frontier in Diagnostics: Digital Protein Microarrays
- 5:00 Peter Smith, University of Arizona
The Joy of Space Exploration
- 5:30 **Lab Tours** (Including the Richard F. Caris Mirror Lab)
- 7:00 **Banquet** (Silver and Sage Room, UA campus)
Banquet Speaker: Michael Hart, University of Arizona

SATURDAY, JAN. 7, 2017

(All sessions at Optical Sciences 307)

- 8:30 **Keynote:** Elizabeth McCormack, Bryn Mawr College
*The Creation and Deployment of Computational Learning Modules and Phys21:
Preparing Physics Students for 21st Century Careers*
- 9:15 James Clemens, Miami University
Optics at Miami University
- 9:45 Gary Bernstein, University of Notre Dame
*A Modern Introduction to Electrical Engineering Laboratory Course at the University of
Notre Dame*
- 10:15 **Break**
- 10:45 Katharina Gillen, California Polytechnic State University, San Luis Obispo
Quantum Computing with Atoms and Light
- 11:15 Steven Olmschenk, Denison University
Ions and Photons for Quantum Information
- 11:45 Michaela Kleinert, Willamette University
Ultracold and Ultrafast. AMO Research at Willamette
- 12:15 **Lunch**
- 1:30 Charles Falco, University of Arizona
Optics & Art History
- 2:00 Ana Oprisan, College of Charleston
Optical Methods Used to Investigate Nanocolloids
- 2:30 Jenny Magnes, Vassar College
Women in the Sciences
- Panel Discussion* (Laura Coyle, Enrique Galvez, Theresa Lynn, Elizabeth McCormack, Will Williams)
- 3:30 **Break**
- 4:00 Nathan Lindquist, Bethel University
Plasmonic Nano-Imaging and Nano-Tweezing
- 4:30 Travis Gould, Bates College
Biological Imaging Beyond the Diffraction Limit Using STED Nanoscopy
- 5:00 Caroline Boudoux, Polytechnique Montreal
Dedicated Fiber Optics for Biomedical Imaging: Translation and Commercialization
- 5:30 **Lab Tours/Free Time**
- 7:00 **Dinner** (Reforma, next to Homewood Suites)

Sunday, JAN. 8, 2017

(Morning session at Optical Sciences 307)

- 8:30 **Keynote:** Gabriel Spalding, Illinois Wesleyan University
Just another day at the office: faster-than-light imaging and violations of local realism
- 9:15 Joe Shaw, Montana State University
Optics Education and Research in Montana
- 9:45 Enrique Galvez, Colgate University
Spatially Variable Polarization
- 10:15 **Break**
- 10:45 Will Williams, Smith College
Testing Quantum Electrodynamics with the Beryllium Atom
- 11:15 Gregory Ogin, Whitman College
Measuring the Thermo-Optic Properties of Dielectric Stack Mirror
- 11:45 Poul Jessen, University of Arizona
Quantum Control versus Chaos
- 12:15 Lunch**
- 2:00 Trip to **Arizona-Sonora Desert Museum**
- 5:00 Dinner at the Arizona-Sonora Desert Museum