# Schedule – Optics and Photonics Winter School 2017

## Wednesday, Jan. 4, 2017
(All sessions at Optical Sciences 307)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Instructor</th>
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<tbody>
<tr>
<td>8:50</td>
<td><strong>Welcome</strong></td>
<td>Dean Tom Koch</td>
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<tr>
<td>9:00</td>
<td><em>Introduction to Optical Engineering</em></td>
<td>Prof. Jim Schwiegerling</td>
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<tr>
<td>10:00</td>
<td>Break</td>
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<tr>
<td>10:20</td>
<td><em>Astronomical Optics</em></td>
<td>Prof. Dae Wook Kim</td>
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<tr>
<td>10:50</td>
<td>Break</td>
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<tr>
<td>11:00</td>
<td><em>Optics and the Human Eye</em></td>
<td>Prof. John Greivenkamp</td>
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<tr>
<td>11:30</td>
<td>Lunch</td>
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<tr>
<td>1:00</td>
<td><strong>Lab Tours</strong></td>
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<tr>
<td>3:00</td>
<td><em>Introduction to Photonics</em></td>
<td>Dean Tom Koch</td>
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<tr>
<td>4:00</td>
<td>Break</td>
<td></td>
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<tr>
<td>4:20</td>
<td><em>Nanophotonics</em></td>
<td>Prof. Euan McLeod</td>
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<tr>
<td>4:50</td>
<td>Break</td>
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<tr>
<td>5:00</td>
<td><em>Optics, Photonics, and Solar Energy</em></td>
<td>Prof. Roger Angel</td>
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<td>5:30</td>
<td><strong>Lab Tours</strong> (Including the Richard F. Caris Mirror Lab)</td>
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<tr>
<td>7:00</td>
<td>Dinner</td>
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## Thursday, Jan. 5, 2017
(All sessions at Optical Sciences 307)

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

10:15 **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