



Spring 2015 Industrial Affiliates – International Year of Light

Workshop Agenda

Pre-Events

Monday, March 2

4-6 p.m.	Corporate Showcase and Career Fair	SUMC South Ballroom
6-8 p.m.	Dinner *RSVP Required	

Tuesday, March 3

7:45 a.m.	Welcome Breakfast (*By Invitation Only)	8th Floor Breakout Area
8:45 a.m.	Group Photo	3rd Floor Lobby
9 a.m.	Workshop Overview John Koshel, Associate Dean of Academics	Meinel 307
9:05 a.m.	Keynote Presentation Charles M. Falco, OSC Faculty & Physics Faculty - Chair, Condensed Matter Physics "International Year of Light"	Meinel 307
9:30 a.m.	Faculty and Student Presentations	Meinel 307
9:30-9:45 a.m.	Christine Bradley, Ph.D. Candidate (Advised by Russell Chipman) "Multispectral Polarimetric Imager: polarization scenes in outdoor environments"	
9:45-10:00 a.m.	Russell Chipman, OSC Faculty "Space-based Polarimetry, Beginning of a New Era"	
10:00-10:15 a.m.	Stanley Pau, OSC Faculty and ECE Faculty "Research in microsystem and imaging"	
10:15-10:30 a.m.	Jeff Davis, Ph.D. Candidate (Advised by Stanley Pau) "Achromatic elliptical polarizer design for full-Stokes division of focal plane polarimeter"	
10:30-10:45 a.m.	Sean McCafferty, Ph.D. Candidate (Advised by Jim Schwiegerling) "Variable hyper-focal Intraocular lens design to aid macular degeneration patients" "Corneal Thickness Correcting Goldmann Applanation Prism Surface"	
10:45 a.m.	Refreshment Break	3rd Floor Lobby
11:05 a.m.	Senior Design Presentations	Meinel 307
11:05-11:15 a.m.	Ara Arabyan, Associate Professor, Aerospace-Mechanical Engineering, Associate Head, Undergraduate Studies UA Senior Capstone overview and introductions	
11:15-11:35 a.m.	Benjamin Cromey (B.S. in OSE), Rafael Haro (B.S. in MEE), Shabeeb Shah (B.S. in ECE) "Automated Optical Surface Defect Detection Tool"	
11:35-11:55 a.m.	Jacob Segal (B.S. in OSE) "Optical Fabrication of Lightweight 3D Printed Mirrors"	

12:15 p.m.	Lunch and Industrial Affiliate Elevator Speeches	South Ballroom, Student Union Memorial Center
1:00 p.m.	Poster Session	South Ballroom, Student Union Memorial Center
	Roopa Gowda (M.S. in OSE) – “All-fiber bidirectional optical parametric oscillator for precision sensing” Fabian Wildenstein (B.S. in OSE)– “Optical Modeling of the Wide-Field Imaging Interferometry Testbed (WIIT)” Cory Boone, Kaitlyn Williams (B.S. in OSE) – “Pit Viper Infrared Sensing ” Feibien Cheah (B.S. in OSE) – “Novel use of Holograms in Heads-Up Display”	
1:45 p.m.	Return to Meinel Building	
2:15 p.m.	Future Trends in Optics Education	Meinel 307
2:15-2:45 p.m.	Justin Walker, Associate Dean, Administration and Business Development “Industrial MS degree – program overview and survey results”	
2:45-2:55 p.m.	Dae Wook Kim, OSC Assistant Research Professor “Practical Optics Workshop”	
2:55-3:05 p.m.	Tom Milster, OSC Faculty & ECE Faculty “Computer Generated Holography, Lithography and Adaptive Optics Workshops”	
3:05-3:15 p.m.	Isela Howlett, Ph.D. Student (Advised by Raymond Kostuk) “Optics workshop with Girl Scouts of Southern Arizona”	
3:15 p.m.	Refreshment Break	3rd Floor Lobby
3:35 p.m.	Research Presentations	Meinel 307
3:35-4:20 p.m.	Roger Angel, OSC Regents Professor, Astronomy Faculty “Optics for Solar Energy”	
4:20- 4:35 p.m.	Brian Wheelwright, Ph.D. Candidate (Advised by Roger Angel) “Beyond Zernikes: Non-Smooth Freeform Optics”	
4:40 p.m.	Lab Tours	3rd Floor Lobby

***Tuesday welcome breakfast is for all Industrial Affiliates and invited guests.**

Wednesday, March 4

8 a.m.	Continental Breakfast	3rd Floor Lobby
8:30 a.m.	Faculty and Student Presentations	Meinel 307
8:30-8:45 a.m.	Run Huang, Ph.D. Candidate (Advised by Jim Burge) "High Precision Optical Surface Metrology using Deflectometry"	
8:45-9:00 a.m.	Dmitriy Churin, Ph.D. Candidate (Advised by Khanh Kieu) "Development of the Ultrafast Fiber Lasers at Novel Wavelengths"	
9:00-9:15 a.m.	R. Jason Jones , OSC Faculty "Femtosecond frequency combs from the IR to the XUV "	
9:15-9:30 a.m.	Weibo Cheng, Ph.D. Candidate (Advised by Jerome Moloney) "Laser micromachining with femtosecond higher-order Bessel beams"	
9:30-9:45 a.m.	William Duncan, Ph.D. Candidate (Advised by Jim Schwiegerling) " Simulating optical system performance with multifocal elements and three dimensional scenes "	
9:45-10:00 a.m.	Alexander Miles, Ph.D. Candidate (Advised by Robert Norwood) "Hybrid solar electric "	
10:00 a.m.	Refreshments	3rd Floor Lobby
10:30 a.m.	Student Research Presentations Cont.	Meinel 307
10:30-10:50 a.m.	Israel Vaughn, Ph.D. Candidate (Advised by Scott Tyo) "Bandwidth in Modulated Polarimeters"	
10:50-11:05 a.m.	Hui-Min Leung, PhD. Candidate (Advised by Arthur Gmitro) " <i>In Vivo</i> Cancer Imaging: Optical, Nuclear and Magnetic Resonance Imaging in Mice"	
11:05-11:20 a.m.	Donglin Ma. Ph.D. Candidate (Advised by Ron Liang) "Ray Mapping Method in Freeform Optics Design for LED Illumination"	
11:25 a.m.	Student Five-Minute Presentations	Meinel 307
11:25-11:30 a.m.	Shelby Vorndran, Ph.D. Candidate (Advised by Ray Kostuk) "Design and Fabrication of a Freeform Surface Relief Diffractive Optic for Spectrum Splitting Photovoltaics"	
11:30-11:35 a.m.	Colton Bigler, Ph.D. Candidate (Advised by Pierre Blanche) "Next Gen Heads-Up Displays: Waveguide Optics"	
11:35-11:40 a.m.	Brian Herrera (B.S. in OSE) "Developing Clothing Integrated Skin Spectroscopy System for Real Time Performance Monitoring"	
11:45 a.m.	Workshop Evaluation and Feedback Session	Meinel 307
Noon	Pizza Party Lunch and Farewell	3rd Floor Lobby
1 p.m.	Individual Company Interviews and End of Formal Workshop	