Spring 2014 Industrial Affiliates Workshop Agenda

Pre-Program

Monday, March 3

10:30-11:45 a.m.  The University of Arizona Student Optics Chapter Meeting with SPIE  Meinel 821
RSVP required

Noon-1:30 p.m.  Women in Optics Presents: Launching Your Career Panel Discussion  Meinel 821
RSVP required

4-6 p.m.  Corporate Showcase and Career Fair  SUMC North Ballroom

6-7 p.m.  Dinner  By invitation only

Program

Tuesday, March 4

7:45 a.m.  Welcome Breakfast  8th Floor Breakout Area
By invitation only

8:45 a.m.  Group Photo  3rd Floor Lobby

9 a.m.  Workshop Overview  Meinel 307

9:05 a.m.  UA Research Overview  Meinel 307
Jennifer K. Barton, UA Associate Vice President for Research,
UA Interim Vice President for Research and Professor of Biomedical Engineering,
Electrical and Computer Engineering, Optical Sciences,
Agricultural and Biosystems Engineering, and the BIO5 Institute

9:15 a.m.  Faculty and Student Presentations  Meinel 307

9:15-9:30 a.m.  Jennifer K. Barton
“Miniature Optical Endoscopes for Early Detection of Cancer”

9:30-9:45 a.m.  Weston Welge, Ph.D. Student (advised by Jennifer K. Barton)
“Miniature Optical Endoscopes for Colon Imaging”

9:45-10 a.m.  Tyler Tate, Ph.D. Student (advised by Jennifer K. Barton)
“Really Miniature Optical Endoscopes for Ovary Imaging”

10-10:15 a.m.  Nasser Peyghambarian, Chair of Photonics and Lasers, Professor
of Optical Sciences and Material Science and Engineering, and Director
of the NSF Engineering Research Center for Integrated Access Networks
“Photonics Devices and Optical Communication Systems”

10:15-10:30 a.m.  Seyed Mehravar, M.S. Student (advised by Khanh Kieu)
“Label-Free Multiphoton Imaging Using a Compact Femtosecond
Fiber Laser Mode-Locked by Carbon Nanotube Saturable Absorber”
10:30-10:45 a.m. Alexander Miles, Ph.D. Student (advised by Robert A. Norwood)
“Scalable High-Speed Optical Cross Connect”

10:45 a.m. **Refreshment Break** 3rd Floor Lobby

11:05 a.m. **Senior Design Presentations** Meinel 307
11:05-11:20 a.m. Robert G. Lepore, Adjunct Instructor in AME, and Gerald D. Pine,
Adjunct Instructor in SIE
“UA Senior Capstone”
11:20-11:35 a.m. Alexander Felli, B.S. in OSE Student, and Justin Mortara, B.S. in ECE Student
“NASA R.I.S.A. Camera”
11:35-11:50 a.m. Michael Portugal, B.S. in OSE Student, and Patrick Thrasher, B.S. in OSE Student
“Specular Black Baffle Design”

Noon-12:15 p.m. **Transportation to University Marriott Hotel** Meet in 3rd Floor Lobby

12:15 p.m. **Lunch and Industrial Affiliate Elevator Speeches** Marriott Sabino Room
1 p.m. **Poster Session** Marriott Canyon C Room
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. Chih Yu Huang, Ph.D. Student (advised by Rongguang Liang)
“Freeform Optics: Design, Fabrication and Testing”
2:45-3 p.m. Jim H. Burge, Professor of Optical Sciences and Astronomy
“Practical Optics Workshop”
3:35 p.m. R. John Koshel, Associate Dean of Academic Programs
and Professor of Optical Sciences
“A Project-Based Course in Illumination Design”

3:15 p.m. **Refreshment Break** 3rd Floor Lobby

3:35 p.m. **Plenary Talk** Meinel 307
Mark A. Neifeld, Professor of Optical Sciences
and Electrical and Computer Engineering
“Thoughts on Computational Imaging”

4:20 p.m. **Research Presentation** Meinel 307
Nan Zhu, Postdoctoral Research Associate (Primary investigator Rongguang Liang)
“A Wearable Fluorescence Goggle System for Real-Time Image-Guided Surgery”

4:40 p.m. **Job-Seeking 101 Session** 3rd Floor Lobby

5:30 p.m. **Networking Mixer** 3rd Floor Lobby

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**Wednesday, March 5**

8 a.m. **Continental Breakfast** 3rd Floor Lobby

8:30 a.m. **Faculty and Student Presentations** Meinel 307
8:30-8:45 a.m. Raymond K. Kostuk, Professor of Electrical and Computer Engineering
and Optical Sciences
“Challenges and Opportunities for Optics in Photovoltaic Energy Systems”
8:45-9 a.m. Juan Manuel Russo, Ph.D. Student in ECE (advised by Raymond K. Kostuk)
“Grating-Over-Lens Holographic Spectrum Splitting Concentration Photovoltaic Technology”
9-9:15 a.m. Shelby Vorndran, Ph.D. Student (advised by Raymond K. Kostuk)
“Holographic Spectrum Splitting System for Hybrid Solar Electric/Biofuel Operation”
9:15-9:30 a.m.  Tom D. Milster, Professor of Optical Sciences and Electrical and Computer Engineering
“Topics in Physical Optics”
9:30-9:45 a.m.Blake Coughenour, Ph.D. Student (advised by J. Roger P. Angel)
“Concentration Photovoltaic Technology at the Steward Observatory Solar Lab”

9:45 a.m.  **Guided Tour of Steward Observatory Solar Lab**
Meet in 3rd Floor Lobby

10:30 a.m.  **Return to Meinel Building for Refreshments**
3rd Floor Lobby

10:50 a.m.  **Student Five-Minute Presentations**
Meinel 307

10:50-10:55 a.m.  Victoria Chan, Ph.D. Student (advised by Eustace L. Dereniak)
“Design and Application of the Snapshot Hyperspectral Imaging Fourier Transform Spectrometer for Spectropolarimetry and Biomedical Imaging”

10:55-11 a.m.  Han Zhang, Ph.D. Student (advised by Leilei Peng)
“Superresolution Microscopy with Nonlinear Structured Illumination”

11-11:05 a.m.  Alejandro Maldonado, Ph.D. Student (advised by Jim H. Burge)
“SPOTS: The Auxiliary Lens Deflectometry Device for Surface Metrology”

11:05-11:10 a.m.  Vaibhav Bora, Ph.D. Student (advised by Harrison H. Barrett)
“Measurement of Fano Factor in Scintillation Detectors”

11:10-11:15 a.m.  Eric Herman, M.S. Student (advised by José Sasián)
“Aberration Considerations in Lens Tolerancing”

11:15-11:20 a.m.  John Davis, B.S. in OSE
“Optical Fabrication Techniques for 8.4-meter Monolithic Telescope Mirrors”

11:20-11:25 a.m.  Yuhao Wang, Ph.D. Student (advised by José Sasián)
“Advanced Theory of Field Curvature”

11:25-11:30 a.m.  Laura Coyle, Ph.D. Student (advised by Jim H. Burge)
“Higher-Order Calibration of CGH-Based Interferometers”

11:30 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**