

# SPIE



# Student Chapter

The Pennsylvania State University

## Report of Activities of SPIE The Penn State Univ. Chapter (September 2015 through August 2016)

Chenji Zhang, Chapter President

Name of Chapter

SPIE The Pennsylvania State University Chapter

<http://spie.ee.psu.edu/>

### Chapter Leadership:

<u>Name</u>	<u>Position</u>	<u>Contact Information</u>
Chenji Zhang	President	<a href="mailto:cxz167@psu.edu">cxz167@psu.edu</a>
Juhung Chao	Vice-President	<a href="mailto:joc5336@psu.edu">joc5336@psu.edu</a>
Xuexue Guo	Secretary	<a href="mailto:xxg115@psu.edu">xxg115@psu.edu</a>
Alexander Cocking	Treasurer	<a href="mailto:asc5097@psu.edu">asc5097@psu.edu</a>
Rijul Dhanker	Webmaster	<a href="mailto:rx257@psu.edu">rx257@psu.edu</a>
Atriya Ghosh	Webmaster	<a href="mailto:axg407@psu.edu">axg407@psu.edu</a>
Chang-Jiang Chen	Outreach Coordinator	
Zhiwen Liu	Chapter Advisor	<a href="mailto:zliu@engr.psu.edu">zliu@engr.psu.edu</a>

Member Count: 19 (As of 8/31/2016)

### Abbreviated SPIE-PSU Expense/Income Report

<u>Description</u>	<u>Date</u>	<u>Amount</u>
Current Chapter Balance	September 2016	\$661.18
O+P 2016 Trip Expenses	September 2016	\$4100
SPIE Officer Travel Grant	September 2016	\$1100
Travel Subsidy from University	September 2016	\$3000

Expenses of printing poster for exhibitions or advertising, treat for regular SPIE member and preparatory meetings, and team building activities are not listed above.

## **Chapter Activities From September 1st 2014 - August 31st 2015**

The events listed here are in chronological order. Regular, officer only, and event meetings are not listed

### **September 11<sup>th</sup>, 2015: Industry tour to Edmund Optics**

Six student members from chapter participated industry tour to Edmund Optics located in Barrington, New Jersey. Officers initially contacted with Edmund and figured out all the paper work needed. During the tour, Edmund Optics has their technical engineer and HR held a sit down talk with students to discuss about their companies' history, culture and current research. Also, company's engineers have a quick demo of majority of the equipment that currently used in their facility. It's an interesting trip for all attended member.



### **November 10<sup>th</sup>, 2015, Social events: Lasertag**

Seven members of the chapter attended this lasertag social event. Members relax themselves after a whole day intensive laboratory work. It's a good events that everyone have a break after work and also enjoy the favor from advance in optical technology.



### **March 23<sup>rd</sup>, 2016 Exploration-U outreach events**

Six students from the chapter participated at the local science event for local elementary and middle schoolers. Event was designed for young local students to learn about science and to demonstrate why learning science is important to understand their environment. Our chapter booth had a wide variety of demonstrations to instruct the children about optical effects in their life, and the young students were drawn in by our wide variety of demonstrations.



### **May 10<sup>th</sup>, 2016 SPIE officer election meeting**

For the upcoming year, we kept our officer number to be same as last year since we found that works well in the past year. We have a new faculty member from Electrical Engineering department, Dr. Xingjie Ni, become one of the new chapter co-advisor aside with Dr.Zhiwen Liu. Dr. Xingjie Ni was one of the founders of SPIE student chapter in Purdue. He is willing to share and guide the student chapter with the coming year's events. Also, his students have joined our chapter and one them becomes an officer of the chapter. During the meeting, we planned for next year's events including outreach, social events and invited talks.

### **July 28<sup>th</sup>, 2016 Visiting from National Sun Yat-sen University SPIE student chapter**

We held a social event with SPIE student chapter from National Sun Yat-sen University. During the social event, student representative from both chapters gave a short presentation about their student chapter. As student chapter with long history, we shared our experience of running chapter with them. It's a great social events as students with different cultures all share thoughts.



The following is a list of proceeding papers and poster developed by students, post-doctorate scholars, and faculty members affiliated with SPIE PSU chapter.

[Proceeding paper number] authors, title

[98510D] Meghan N. Graham, Jacob L. Graham, Training the next generation analyst using red cell analytics

[96010B] Christopher V. Griffith, Abraham D. Falcone, Zachary R. Prieskorn, David N. Burrows, Recent progress and development of a speedster-EXD: a new event-triggered hybrid CMOS x-ray detector

[9822-4] Kathleen A. Richardson, Charmayne E. Smith, Andy Buff, Laura Sicken, David Musgraves, Peter Wachtel, Theresa Mayer, Andrew Swisher, Alexej Pogrebnyakov, Myungkoo Kang, Carlo Pantano, Douglas H. Werner, Andrew Kirk, Stephen Aiken, Clara Rivero-Baleine, Engineering novel infrared glass ceramics for advanced optical solutions

[9822-20] Sawyer D. Campbell, Donovan E. Brocker, Jogender Nagar, John A. Easum, Jeremiah P. Turpin, Douglas H. Werner, Advanced gradient-index lens design tools to maximize system performance and reduce SWaP

[9829-4] Sean A. Kaiser, Ram M. Narayanan, Andrew J. Christianson, Multistatic passive coherent location using multi-lateration

[9829-12] Philip J. Saponaro Jr., Kyle A. Gallagher, Kelly D. Sherbondy, Chandra Kambhamettu, Alignment of visible, thermal infrared, harmonic radar, and linear radar for hidden object detection

[9829-15] Huiyuan Zhou, Ram M. Narayanan, Ilangko Balasingham, Microwave image reconstruction method using a circular antenna array cooperating with a transmitter inside a capsule

[9829-19] Joshua M. Allebach, Ram M. Narayanan, Braham Himed, Investigation of target and ground clutter reflections on the correlation between transmitted and received noise signals

[9940-21] Tsung-Hsien Lin, Chun-Wei Chen, Ching-Lang Hong, Hung-Chang Jau, Chien-Tsung Hou, lam-Choon Khoo, Timothy J. Bunning, Single crystal growing of 3D blue-phase photonic crystal

[9940-55] Tsung-Jui Ho, Chun-Wei Chen, lam-Choon Khoo, Picosecond ultrafast optical nonlinearity of blue-phase liquid crystal

[9940-56] Duan-Yi Guo, Chun-Wei Chen, Hung-Chang Jau, Cheng-Chang Li, LuChun Yu, Fang-Yu Liu, Tsung-Hsien Lin, Anomalous electro-optic effects in polymer-stabilized distorted blue phase liquid crystals

[9940-48] lam-Choon Khoo, Liquid crystals photonics in the next decades?

[9956-8] Corey Janisch, Ana Laura-Elias, Mauricio Terrones, Zhiwen Liu, Second order nonlinear characterization of two dimensional materials

[9956-12] Xiaobo Xue, Corey Janisch, Yizhu Chen, Zhiwen Liu, Jingbiao Chen, Sub-wavenumber Raman spectroscopy using atomic filters

[9956-13] Alexander Cocking, Corey Janisch, Steven H. Huang, Lan Yang, Zhiwen Liu, Raman sensing in optical microresonators

[9956-23] Chenji Zhang, Surge Kalaba, Dingying Shan, Kaitian Xu, Jian Yang, Zhiwen Liu, Biodegradable polymer optical fiber

[9958-27] Shizhuo Yin, Wenbin Zhu, Juhung Chao, Robert C. Hoffman, Multi-scanning mechanisms enabled rapid non-mechanical multidimensional KTN beam deflector

[9958-28] Shizhuo Yin, Juhung Chao, Wenbin Zhu, Robert C. Hoffman, Dynamic behavior of non-uniform space charge controlled KTN beam deflector

[9958-29] Shizhuo Yin, Chang-Jiang Chen, Juhung Chao, Wenbin Zhu, Oblique composite nanostructure enabled high extraction efficiency LED

### **Future direction**

Our chapter is working towards expanding member numbers, and build strong bond between university and local community. We would like to have more invited talks in the next year to increase communications between different groups. Our goal is to help all our student members have not only a rich study in research, communication and knowledge, but also an enjoyable life.