

# Report of Activities of the SPIE-PSU (January through June 2007)

Michael Stinger : *Webmaster*, SPIE-PSU

## Person Completing Report

Michael Stinger ([mvs115@psu.edu](mailto:mvs115@psu.edu))

## Name of Chapter

The Pennsylvania State University Student Chapter of the SPIE (SPIE-PSU)

**Member Count** 23 members (6/14/2007)

## Chapter Leadership

Dr. Andres Diaz	Chapter Faculty Advisor	<a href="mailto:adiaz@psu.edu">adiaz@psu.edu</a>
Justin Liou	<i>President</i>	<a href="mailto:liou@psu.edu">liou@psu.edu</a>
Eftihia Vlahos	<i>Vice-President</i>	<a href="mailto:euv104@psu.edu">euv104@psu.edu</a>
Qian Xu	<i>Treasurer</i>	<a href="mailto:qzx105@psu.edu">qzx105@psu.edu</a>
Peng Li	<i>Secretary</i>	<a href="mailto:pxl205@psu.edu">pxl205@psu.edu</a>
Michael Stinger	<i>Webmaster</i>	<a href="mailto:mvs115@psu.edu">mvs115@psu.edu</a>

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## Abbreviated SPIE-PSU Expense/Income Report

Description	Date	Amount
First semester meeting: (Dr. Zhiwen Liu) Pizza, Soda, &c.	5/16/2007	\$ 60.00

## Events from Jan 2007 – May 2007

The events of the spring semester are listed here in chronological order. Officer-only (planning, &c.) meetings are not listed.

### **Jan – May:** Collaboration with the EGSC and CERS:

Throughout the semester, Michael Stinger has worked with the Engineering Graduate Student Council (EGSC) regarding the College of Engineering Research Symposium (CERS) to develop a relationship with the club. The EGSC met every week to discuss successes and failures of last year's symposium and also to begin planning the next year's event. Currently, plans for an SPIE-PSU sponsored, optics-based section are underway. Pending success of this initiative, the SPIE-PSU would utilize the previously established infrastructure of the CERS conference, thereby having the equivalent of a full-featured SPIE-PSU conference, without a wasteful expenditure of resources.

### **May 8th:** Talk sponsored by the Western PA OSA Chapter and IEEE Pittsburgh:

On May 8<sup>th</sup>, Michael Stinger traveled to the Freeport campus of the Indiana University of Pennsylvania to attend a talk given by Dr. Xi-Cheng Zhang. This talk was sponsored by the Western PA OSA Chapter whose membership base originates predominantly from the

Pennsylvania State University Electro-optics Center (PSU-EOC), both of which the SPIE-PSU is working to fortify a relationship with.

**May 9<sup>th</sup>:** Collaborative outreach with Dr. Zhiwen Liu at the Nittany Valley Charter School: On the 9<sup>th</sup> of May, six SPIE-PSU members (Dr. Andres Diaz, Haifeng Li, Dr. Zhiwen Liu, Michael Stinger, Eftihia Vlahos, and Qian Xu) visited the 2<sup>nd</sup> grade class of the Nittany Valley Charter School to provide an optics demo including demos on microscopy, refractive index, and holograms and lenses.

The demo began with Dr. Liu showing the students the difference between incoherent light from a flashlight and coherent light from a laser pointer. This then led to the exhibition of an array of diffraction gratings on a plastic card. After this point, Qian and Haifeng showed the students a microscope which had its imaging directed onto a white board via a projector. The youth looked at salt and pepper, as well as at a ladybug and some tissue paper under the microscope, and were afforded a view of the crystalline structure of salt and the fibrous texture of the tissue paper, amongst other details. At this point, Mike showed the glass the “Magic Test Tubing Fixing Solution” demo, where the pieces of a broken test tube are placed into a “magic solution” whereupon the (now intact) test tube is removed. While the minutia of index matching were not revealed to students, they quite accurately (and quite immediately) surmised that there was in fact a whole test tube initially hidden in the solution, and that the broken test tube merely remained in the vessel. Following the test tube demo, the students were given plastic lenses with which they could experiment (they were given an example on how to make a telescope with two lenses) and then were also given white-light holograms with which to experiment.

**May 16<sup>th</sup>:** Invited Talk “The White Light Laser and Its Applications in Single Particle Spectroscopy” given by Dr. Zhiwen Liu, Assistant Professor from Penn State University. The talk was open to all the publics and not only is meaningful itself but also served as a buzz to catch the attention while we delivered this talk message to everyone via email lists, posters and word of mouth.

Right after the Dr. Liu’s talk, we announced our preliminary O+P 2007 travel plan and estimated the number of attendees and budgets, followed by the new officer election.

**Future Directions:** O+P 2007, and new leadership:

The SPIE-PSU is currently (mid-June) operating in the funds-acquisition phase of the annual trip to the SPIE’s Optics+Photonics 2007 conference in San Diego, CA. This year’s travel is being orchestrated by our new president, Justin Liou. We look forward to having the same pleasant learning / networking experience from the previous year in San Diego. Upon return from San Diego the chapter will follow his direction, and will most likely continue to work towards completion of previously instated initiatives, such as collaboration with the EGSC on CERS.