

UCR SPIE Student Chapter Annual Report 2013-2014

1. Names and email addresses of elected Officers

President: Jason Crovisier	jcrov001@ucr.edu
Vice-president: Atena Zahedi	azahe001@ucr.edu
Secretary: Jack Tang	jtang014@ucr.edu
Treasurer: Atta Zahedi	azahe002@ucr.edu

2. List of current student chapter members

Yasaman Damestani	8 February 2015
Melissa Eberle	8 January 2015
Md. Rezuanul Haque	9 January 2015
Md. Monirul Hasan	14 January 2015
Fariborz Kargar	3 August 2015
Mahesh Neupane	4 August 2015
Christian Oh	2 January 2015
Michael Oliveira	5 January 2015
Rameez Samnakay	9 March 2015
Atena Zahedi	6 May 2015
Jack C. Tang	Not shown on website
Atta Zahedi	Not shown on website

Alumni

Maziar Ghazinejad	December 2011
Nima Khatibzadeh	September 2012
Shirui Guo	September 2012
Baharak Bahmani	September 2013
Qian Gao	June 2014
Jason Crovisier	June 2014

3. Details of chapter activities

3.1 UCR SPIE Lecture Series- Dr. David Giltner

This event was held on April 15th, 2014. The title of Dr. Giltner's talk was "Can a Scientist Find a Rewarding Career in Industry". This talk exposed attendees to the unique opportunities present for optics and photonics-related technology in the industry. Also, Dr. Giltner gave an excellent dialogue discussion, where he answered various questions from the students about tips landing a rewarding position in industry, while still being able to achieve optics scientific research goals. The total number of attendee was 65.



Dr. Giltner with the chapter officers. From left to right, Atena Zahedi (Vice-President), Atta Zahedi (Treasurer), Dr. Giltner, Rameez Samnakay, Mahesh (Website Coordinator), Jack Tang (Secretary), and Jason Crovisier (President).

3.2 UCR SPIE Chapter Meeting, Seminar, and Outreach Event

This event was organized to encourage students who are interested in optics and photonics to join the group. This event was held on December 3rd, 2014 and was followed by a seminar by Professor Hyle Park from University of California, Riverside. The total number of attendee was 77. At the event, it was announced that we are hosting a Photo/Video contest, in honor of Year of Light, where student (one undergraduate and one graduate student) will be awarded \$50 gift

card each. The winners of the contest will be announced at the beginning of January 2015.



Also at the seminar, we advertised our upcoming event for an optics-related industry event with TruTouch technologies in Riverside, CA. Below, one of the officers is introducing one of the company's technologies, a self-calibrating, biometric alcohol sensor which is designed for detection of elevated alcohol level.



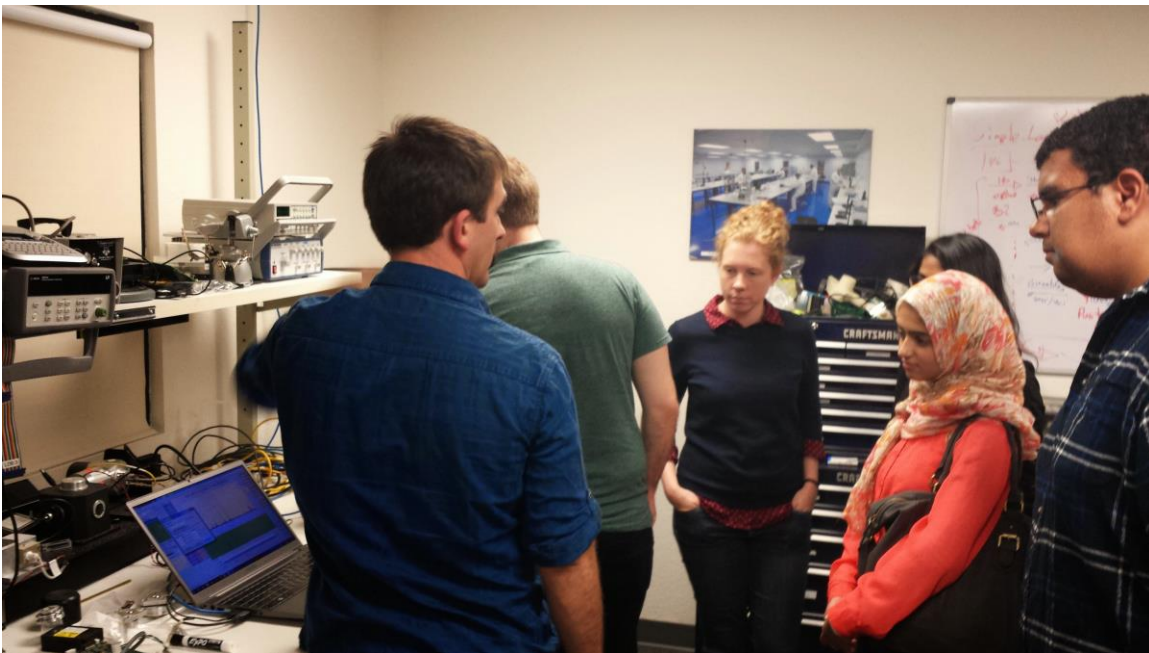
Lastly, after the general meeting updates and announcement of upcoming events, Dr. Hyle Park delivered an excellent talk title "Development of label-free

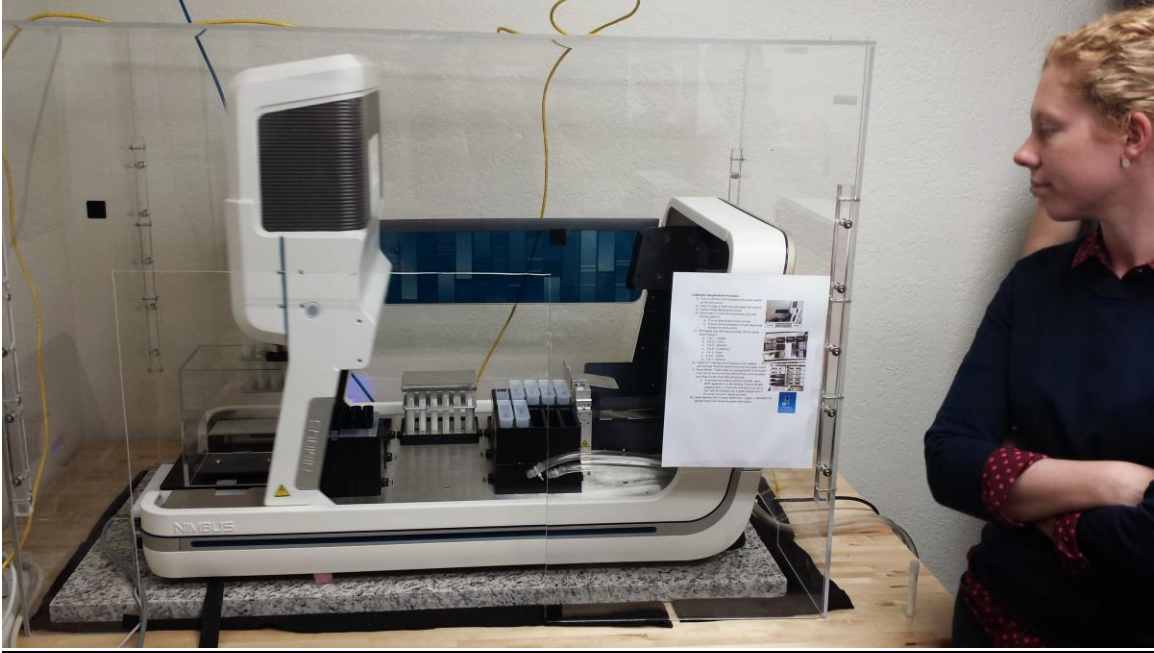
optical imaging of neural activity'. His talk introduced students to non-invasive imaging of neural activity in the brain at cellular resolution. Using a combination of OCT-derived measures of changes in local attenuation coefficient and optical phase, his lab has been able to directly detect neural activity with micrometer 3D spatial resolution on a millisecond time scale. Light refreshments were provided.



3.3 SPIE Sponsored Optics Industry Visit

On December 2014, our SPIE chapter hosted an outreach event for a tour of the local starter company TruTouch technologies in Riverside, CA. optics. We had 8 attendees and the event lasted for two hour. During this event our SPIE members and other attendees were introduced to





4. Budget

- Starting Balance: \$700
- Detailed expenses
 - Lunch and refreshments with Dr. David Giltner: \$ 250
 - Two Gift card for the photo competition: \$ 50 each
 - Advertising, snack and equipment for seminar, lecture, and tour: \$ 115
- Ending Balance: \$ 235

5. Planned activities for next year

In line with the missions of both SPIE and our chapter, we plan on continuing to organize meetings and outreach activities, which will bring students and industry together. In addition, we plan to promote our chapter within/outside of campus by:

- Organizing additional field trips to optics and photonics-related local companies.
- Hosting Dr. Giselle Bennett for our Guest Lecture series on April 8th.
- Announcing the winners of the SPIE-sponsored Photo/Video contest.
- Continuing to host quarterly seminar series by inviting SPIE-affiliated speakers.
- Organizing SPIE Student Chapter Meetings to promote outreach.
- Holding annual meeting for electing new officers and planning year's activities.
- Promoting and attending SPIE-sponsored leadership conferences.
- Promoting and attending/presenting SPIE-organized conferences.
- Updating the Student Chapter website with current activities, and news.

6. List of SPIE award and travel grants recipients

Jason Crovisier - Officer Travel Grant

7. Other SPIE-related Achievements of chapter

February 2014: SPIE Chapter president, Dr. Anvari was elected as a Fellow of SPIE for his achievements in phototherapy, optical nano-materials, laser trapping methods, and membrane mechanics.



List of Optics and Photonics related Publications

Journals:

Rodriguez et al., “Decreased light attenuation in cerebral cortex during cerebral edema detected using optical coherence tomography,” *Neurophotonics*, 1(2), 025004 September 2014.

SPIE Conference Proceedings, Posters:

Tang et al., “Effect of ICG concentration on the fluorescence characteristics of erythrocyte-derived optical vectors,” *SPIE Photonics West 2014*, Paper 9341-16.

Khatibzadeh et al., “Rate-dependent dynamics of cellular membranes probed by laser tweezers and optical displacement sensing,” *SPIE Photonics West 2014*, Paper 8946-24.

Crovisier et al., “Effects of ICG concentration and particle diameter on photophysical properties of ICG-doped nanoparticles,” *SPIE Photonics West 2014*, Paper 8956-30.

Damestani et al., "Transparent cranial implant for non-invasive, chronic access to brain for optical diagnostics and therapeutics," SPIE Photonics West 2014, Paper 8928-2.

Rodriguez et al., "Detection of cerebral edema in vivo using optical coherence tomography," SPIE Photonics West 2014, Paper 8928-46.

Haque et al., "Backscattered OCT intensity changes during seizure activity," SPIE Photonics West 2014, Paper 8928-50.

Islam et al., "Depth resolved optical detection of nerve activity in Limulus nerve and murine brain slice using common-path OCT," SPIE Photonics West 2014, Paper 8928-78.

Oh et al., "Real-time speckle reduction using wavefront modulation in multifunctional optical coherence tomography image," SPIE Photonics West 2014, Paper 8934-43.

Oh et al., "Speckle reduction using wavefront modulation in optical coherence tomography images," SPIE Photonics West 2014, Paper 8952-22.