

UCR SPIE Student Chapter Annual Report 2012-2013

1. Names, email addresses and SPIE membership numbers of elected Officers

President: Baharak Bahmani, bbahm001@ucr.edu, 03294152
Vice-president: Mahesh Neupane, mneup001@ucr.edu, 899088
Secretary: Atena Zahedi, azahe001@ucr.edu, 03473351
Treasurer: Hamed Hosseini Bay, hoss001@ucr.edu, 03459835
Outreach Coordinator: Melissa Eberle, meber002@ucr.edu, 03426738

2. List of current student chapter members

Baharak Bahmani	24 December 2013
Darren Banks	12 February 2014
Jason Crovisier	24 May 2013
Yasaman Damestani	8 February 2014
Natalie De Howitt Rivera	5 June 2013
Melissa Eberle	8 January 2014
Hamed Hosseini Bay	10 February 2014
Zafer Mutlu	17 July 2013
Michael Oliveira	5 January 2014
Carissa Reynolds	22 July 2013
Srigokul Upadhyayula	5 June 2013
Atena Zahedi	6 May 2014
Atta Zahedi	6 May 2014
Andrew Reimer	8 May 2014
Md. Haque	Missing on Roster
Shahidul Islam	Missing on Roster
Yadir Guerrero	Missing on Roster
Mahesh Neupane	Missing on Roster

Alumni

Nima Khatibzadeh	September 2012
Maziar Ghazinejad	September 2012
Shirui Guo	September 2012

3. Details of chapter activities

3.1 UCR SPIE Lecture Series- Prof. Andrea Armani, USC

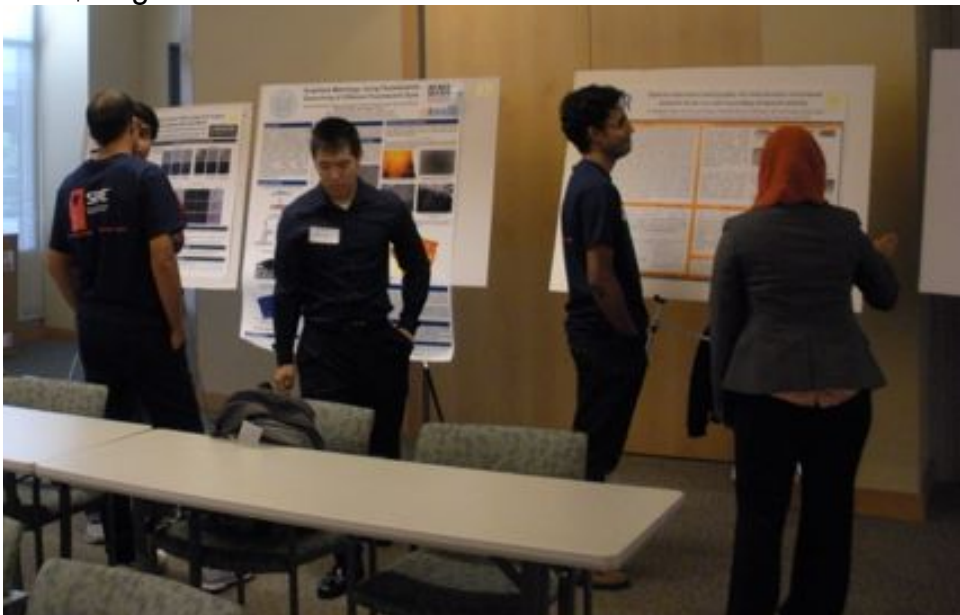
This event was held on October 3rd, 2012. The title of Dr. Armani's talk was "Integrated Photonics for Exploring Biological Systems". The total number of attendee of our first SPIE lecture series was 70.



3.2 UCR SPIE Lecture Series + Student Poster Competition

This event was organized to encourage students from various backgrounds to participate in poster competition with the emphasis on optics and photonics. This event was held on December 4th, 2012 and was followed by a seminar by Prof. Ian M. Kennedy from University of California, Davis. The total number of attendee of the poster competition and seminar was 30.

We received 14 abstracts and Prof. Kennedy and Prof. Anvari refereed poster presentations. Two students, one undergraduate student and one graduate student, were awarded at the end of the day the best poster presentation along with \$50 gift card.





3.3 SPIE Sponsored Optical Illusion- Outreach event

On May 21, 2013 SPIE hosted an outreach event for undergraduate awareness in optics. We had 80 attendees and the event lasted for an hour and included refreshments. During this event our SPIE members ran four optics stations:

- The KHET kit donated by SPIE was used for a station and we used the layouts to demonstrate different optical principles such as dispersion, beam splitting and filtering.
- We demonstrated chemo-luminescence phenomenon through dissecting unopened glow sticks and showing how the chemical mixtures produce light.
- We demonstrated light bending with a laser pointer and flowing water with the water acting as a fiber optic and talked about index of refraction.
- We demonstrated a simple microscope using a droplet of solution containing microscopic beads and a laser pointer.





4. Budget

- Starting Balance: \$700
- Detailed expenses
 - UCR SPIE Student Chapter Banner: \$131.92
 - Lunch with Prof. Armani: \$56.29
 - Advertising, Lunch and gift card for the student poster competition: \$403.68
 - Advertising, snack and equipment for Optical Illusion: \$94.43
- Ending Balance: \$13.68

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 the campus. We plan to achieve these goals by:

- Organizing field trips to optics and photonics-related local companies.
- Hosting quarterly seminar series by inviting SPIE-affiliated speakers.
- Expanding our membership program
- Organizing quarterly SPIE Student Chapter Meetings
- Holding annual meeting for electing new officers of the chapter and to plan next year's activities.
- Promoting and attending SPIE-sponsored leadership conferences
- Promoting and attending/presenting at SPIE-organized conferences and workshops
- Hosting annual student symposium.
- Updating the Student Chapter website with current activities, and news.
- Collaborating with other student chapters (OSA, MRS and IEEE) to broaden the outreach in optics in the greater Los Angeles area.

6. List of SPIE award and travel grants recipients

Baharak Bahmani - SPIE Scholarship in Optics and Photonics
Melissa Eberle - Officer Travel Grant
Atena Zahedi - Newport Travel Grant
Shahidul Islam - SPIE Travel Grant

7. List of Optics and Photonics related Publications

Journals:

- Baharak Bahmani, Christian Y. Lytle, Ameae M. Walker, Sharad Gupta, Valentine I. Vullev, and Bahman Anvari, "Effects of nanoencapsulation and PEGylation on biodistribution of indocyanine green in healthy mice: quantitative

fluorescence imaging and analysis of organs", *International Journal of Nanomedicine*, 2013:8 1609–1620. DOI:[10.2147/IJN.S42511](https://doi.org/10.2147/IJN.S42511)

- Melissa M. Eberle, Carissa L. Reynolds, Jenny I. Szu, Yan Wang, Anne M. Hansen, Mike S. Hsu, M. Shahidul Islam, Devin K. Binder and B. Hyle Park, "In vivo detection of cortical optical changes associated with seizure activity with optical coherence tomography", *Biomed Opt Express*. 2012 November 1; 3(11): 2700–2706. doi: [10.1364/BOE.3.002700](https://doi.org/10.1364/BOE.3.002700)

SPIE Conference Proceedings:

- Baharak Bahmani, Yadir Guerrero, Valentine Vullev, Sheela P. Singh, Vikas Kundra and Bahman Anvari, "ICG-loaded polymeric nanocapsules functionalized with anti-HER2 for targeted fluorescence imaging and photodestruction of ovarian cancer cells", *Proc. SPIE* 8596, Reporters, Markers, Dyes, Nanoparticles, and Molecular Probes for Biomedical Applications V, 859602 (March 15, 2013); doi:10.1117/12.2003453

- Yadir Guerrero, Baharak Bahmani, Bongsu Jung, Valentine Vullev, Vikas Kundra and Bahman Anvari, "Targeted imaging of ovarian cancer cells using viral nanoparticles doped with indocyanine green", *Proc. SPIE* 8568, Optical Methods for Tumor Treatment and Detection: Mechanisms and Techniques in Photodynamic Therapy XXII, 856819 (March 13, 2013); doi:10.1117/12.2006278

- Atena Zahedi, Kathryn DeFea and Iryna Ethell, "Optogenetics to target actin-mediated synaptic loss in Alzheimer's", *Proc. SPIE*. 8586, Optogenetics: Optical Methods for Cellular Control 85860S (March 8, 2013) doi: 10.1117/12.2000480