

Lehigh SPIE Student Chapter

Annual Report

Dec 28, 2008



2008 Overview

- 1 SPIE Conference
- 1 Field trip
- 1 School Club Expo booth
- 1 SPIE Invited Lecture
- 2 SPIE Webcast Talk
- 2 Team Lunch
- 2 member gathering party
- 1 Outreach program
- Member Receive Accolades



Chapter Logistics

Guan Sun	Qiaoqiang Gan	Hongping Zhao
Chee-Loon Tan	Jeffery Kauffman	Vitchanetra Hongpinyo "Dew"
Clara Dimas	Inthira Saengprachathannarak	Yun-Hsiang Ding "Alison"
Meng-ling Lee	John McElhenny	Nattakan Puttarak
Qiaoqiang Gan	Ronald Arif	Yik Khoon Ee

Total Members: 15

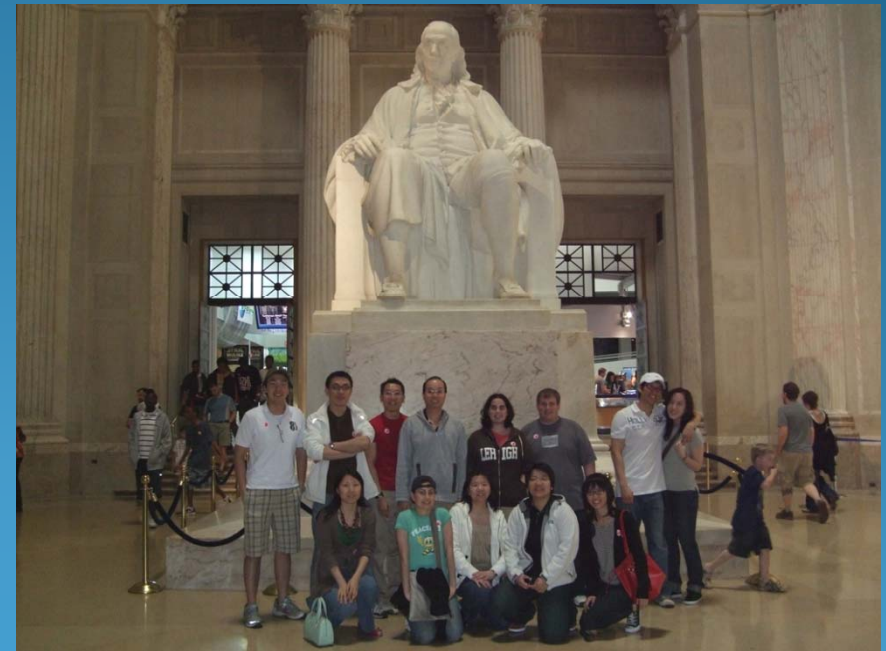
Advisor	Professor Boon Ooi	bsooi@lehigh.edu
President	Yun-Hsiang Ding "Allison"	yud205@lehigh.edu
Vice President	Yik Khoon Ee	yke205@lehigh.edu
Secretary	Hongping Zhao	hoz207@lehigh.edu
Treasurer	Vitchanetra Hongpinyo "Dew"	vh205@Lehigh.edu
Librarian	Qiaoqiang Gan	qig206@lehigh.edu
Senior student advisor	Clara Dimas	ced204@lehigh.edu

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 Lehigh University
 Bethlehem, PA 18015

Spring 2008 Chapter Activities

Date	Description
21-Jan	Photonics West
1-Feb	Nature Photonics Subscription & New Books in Library
27-Feb	Webcast Talk Lunch : "Negotiation Skills for Scientists "
24-March	Officer Meeting
28-March	Asa Paker Team Lunch
19-April	Franklin Institute (Tickets / Transportation)
14-May	End of Semester (Lunch / Raffle Prizes)



Fall 2008 Chapter Activities

Date	Description
10-14-Aug	SPIE Optics+Photonics Conference
20-Aug	Webcast Talk Lunch : "Fundamentals of Photonics "
25-Aug	Club Expo
10-Oct	SPIE invited talk
24-Oct	Asa Paker Team Lunch
17-Nov	Outreach program



Webcast Talk

Fundamentals of Photonics: Photovoltaics

Originally Broadcast: 2008/08/20

Speakers: Jeff Hecht, Contributing Editor, Laser Focus World

Overview:

JEFF HECHT, author of "Understanding Lasers" and long-time contributing editor to Laser Focus World presents a series of Webcasts based on his popular Back-to-Basics feature articles that cover photonics fundamentals. Designed to provide scientists, researchers, and engineers with an overview of lasers and other photonics technologies, these Webcasts will also offer additional insight into how photonics can offer solutions to a solving system design challenges in a variety of different areas of photonics.

At first glance, photovoltaic cells look like nearly ideal energy sources because they can convert sunlight into electricity with no emissions. In practice, however, the high cost of making solar cells and their low efficiency limit the range of potential applications. In the first Fundamentals of Photonics Webcast, Hecht introduces photovoltaics (PV) technology and details the various types of PV cells and underlying technologies before going on to explain some of the considerations central to their use in the real world.

The scene is set for a discussion of major research activities currently underway to improve cell efficiency, reduce costs, and lead to the next generation of PV cells.

About the Presenters:

Jeff Hecht

Contributing Editor

Laser Focus World

SPIE Invited Talk

SPIE Invited Talk by Robert E. Fischer (CEO of Optics 1, Inc.)

**10/10/2008 – Friday 1 pm
Rauch Business Center 091**

This talk will be a fast paced journey through many interesting and revealing aspects of optical system design. You will be introduced you to some of the many fascinating and important subtleties of the field, and you will learn why optical design is in many cases both a science and an art. Some of the topics to be discussed:

- § Image degradations or aberrations
- § Optical configurations and design tradeoffs
- § Optical design for different spectral bands
- § High performance for optical systems
- § Off the shelf versus custom optics

Biography

Prior to founding OPTICS 1, Mr. **Robert E. Fischer Fischer** served as Chief Scientist at Hughes Aircraft company. In addition to this position, he chaired the Missile Systems Group Patent Evaluation Committee and the Hughes Corporate Advisory Committee on Optical Systems Production. In 1986, he won the SPIE Albert M. Pezzuto Award for exceptional leadership and service to the society.

Mr. Fischer was awarded the SPIE Gold Medal for the year 2000, the society's highest technical honor. He is a Past President of SPIE (1984) and a Fellow of both SPIE and OSA.



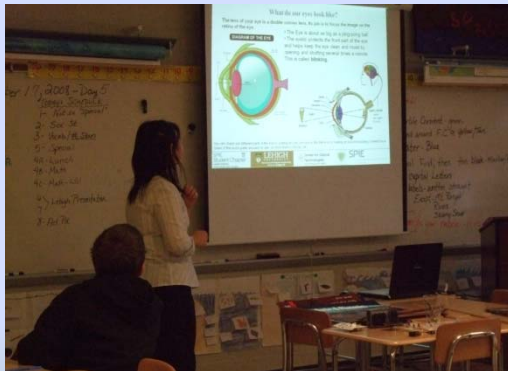
Middle school outreach program



Date: 11/17/2008 at **Springhouse middle school**

- 1.5 hours optics presentation to 52 Grade-6 students at Springhouse Middle School.
- 4 main demo / hands-on stations each with 5 setups / components allowing students to work in groups of 5-8 for 20 minutes.
- All Volunteers were from Chapter : Yun-Hsiang Ding, Vitchanetra Hongpinyo, Chee-loon Tan, Kangbaek Kim, Clara Dimas, Honping Zhao, and Yik Khoo Ee.
- Co-Sponsors / Demos from COT OPTOCamp, ECE Dept., III-V Photonics Lab.
- SPIE Posters and CDs distributed to students and teachers.
- Slides on background info were handed out and are available online :

http://www.lehigh.edu/~inspie/optics_demo.html



Website News

We continue to promote our chapter's activities, our programs' excellent milestones and events and highlight news for our members.



WELCOME ! - Light Your Future with us !

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What's New

- "Lehigh News about SPIE student chapter outreach program"(11/17)
- COT Open House : Tutorials, Guest Speakers, Poster Session (10/13-10/14)
- SPIE Invited talk : How to improve your image, It Aint's Magic...Or is it?"(10/10)
- New IEEE LEOS Chapter Founded (8/1)
- Chapter Members Get Presitgious Honors and Exciting Jobs (4/1)
- New Chapter SPIE Books and Nature Photonics Subscription (1/15)
- COT Talk by Professor Abdallah Ougazzaden (12/10)
- Ooi garners international honor and an NSF contract (11/27)
- Edmund Optics works with Lehigh to win DOE Energy Saving Award (11/14)
- Professor Yujie Ding named OSA Fellow (10/26)
- Prof. Hwang wins IBM award for MEMS-semiconductor integration (10/25)
- ECE Talk on Solar Cells by Prof. Pritpal Singh (10/12)
- Center for Optical Technology (COT) Open House (10/8-9)
- "Semiconductor Nanophotonic Devices", Talk by Prof. Seng-Tiong Ho (9/27)
- "My Space Voyage", Invited Talk by Dr. Greg H. Olsen (9/20)

[Read more news ...](#)

About us

The SPIE Lehigh University Student Chapter was formed to promote interdisciplinary networking, technical discussion, outreach, lectures and opportunity information in optics. To learn more about joining, sponsoring, or collaborating click [here](#).

Sponsored by

SPIE
Department of Electrical and Computer Engineering
Graduate Sudent Senate



Optics at Lehigh

- III-V Photonics Lab
- Center for Optical Technologies
- Center for Advanced Materials and Nanotechnology
- International Materials Institute for New Functionality in Glass
- Bioimaging Collaboration

Outreach

- Chapter Events
- COT OPTO Camp

External Optics Links

- Conference sponsors and funding for travel
- Reference links, news, webcast, tutorials

Member Receive Accolades

Vitchanetra Hongpinyo was awarded a Sherman Fairchild Fellowship & SPIE Officer Travel Grant to attend "SPIE Optics & Photonics 08"

Hongping Zhao received an SPIE Academic Scholarship

Qiaoqiang Gan is a new Rossin Doctoral Fellows

Catherine Vishton will be joining the Schepens Eye Research Institute (Affiliated with Harvard Medical School) as a Research Engineer

Dr. Yang Wang, Former President and Co-founder secured a position as Optoelectronic Device Engineer at Opticomp Corporation



Spring 2008 Financial Report

Date	Income / Deposit	Expense	Description
15-Decr	\$861.72		Balance from Last Report
		(\$152.00)	Nature Photonics
27-Feb		(\$110.79)	Webcast Talk (Lunch)
24-March		(\$28.62)	Event Planning Meeting (Lunch)
28-March		(\$133.00)	Asa Paker Meeting (Team Lunch)
19-April		(\$408.00)	Franklin Institute (Tickets / Transportation)
14-May		(\$165.58)	End of Semester (Lunch / Raffle Prizes)
1-June	\$900.00		SPIE Activity Grant
Subtotals	\$1761.72	(\$997.99)	
Balance	\$763.73		

Fall 2008 Financial Report

Date	Income / Deposit	Expense	Description
1-June-08	\$763.73		Balance from Last Report
		(\$152.00)	Nature Photonics
2-Oct-08		(\$222.65)	SPIE Logo Souvenirs
10-Oct-08		(\$50.58)	SPIE Invited Talk Refreshment
		(\$73.50)	SPIE Invited Talk Lunch (Officers & speaker)
27-Oct-08		(\$55.00)	Asa Paker Meeting (Team Lunch)
31-Oct-08	\$360.00		Graduate Student Senate Funding
Subtotals			
	\$1123.73	(\$553.73)	
Balance			
	\$570.00		