

# GaTech SPIE Student Chapter Report

Georgia Institute of Technology

November 2013

## 1. Chapter Officers

President: Farshid Ghasemi ([farshid.ghasemi@gatech.edu](mailto:farshid.ghasemi@gatech.edu))

Vice President: Domenic Carr ([dcarr30@gatech.edu](mailto:dcarr30@gatech.edu))

Secretary: Allison Mercer ([Allison.Mercer@gtri.gatech.edu](mailto:Allison.Mercer@gtri.gatech.edu))

Treasurer: Kendra Albers ([Kendra.Albers@gtri.gatech.edu](mailto:Kendra.Albers@gtri.gatech.edu))

## 2. Current Members

Currently the Chapter has 24 members and 2 alumni on its Roster.

FirstName	LastName
Kendra	Albers
Shantonio	Birch
Domenic	Carr
Matteo	Carrara
Jing	Cheng
Ameneh	Cheshmehkani
Razi	Dehghannasiri
Xue	Dong
Farshid	Ghasemi
Larry	Hartman
Steven	Hayden
Nathan	Jarnagin
Xiaohang	Li
Kavin	Manickaraj
Louis	McLane
Allison	Mercer
Hesam	Moradinejad
Carlos	Nieto-Granda
Andrew	Peters
Reza	Pourabolghasem
Paul	Robinette
William	Wahby
Tsz Chun	Wong
Yu	Zhang

### 3. Chapter Activities

The new cabinet held its first meeting on June 19, 2013 for introduction of the officers and planning for the next term. Further meetings of the Chapter included two on-demand lunch meetings for the cabinet to discuss and organize Chapter activities. Numerous emails were exchanged among cabinet on matters of organization and decision-making.

#### 3a. Outreach: Photonics+MEMS Lab Tours for K-12 students

The tour, conducted in collaboration with BBUGS student group, comprised of a tour on five labs for Drew Charter school students. The arrangement with the school was conducted through CEISMC office at GaTech. The goal of the lab tours was for the K-12 students to have a better appreciation and understanding of Optics and MEMS, by focusing on science, technology and engineering with an emphasis on various engineering disciplines in nanotechnology. Hosts in each lab were asked to explain simple concepts of their works with examples of real world the students see in their surroundings. The labs organized by GaTech-SPIE Chapter were:

1. Photonics Research Group Lab-on-chip (Dr. Adibi)
2. Dupuis Labs for III-V semiconductors and epitaxial growth (Dr. Dupuis)
3. Semiconductor Research Laboratory cleanroom facility (Dr. Shen)
4. Micro-Electro-Mechanical Sensors Lab (Dr. Brand)
5. MicroSensors and MicroActuators Lab (Dr. Allen)

#### 3b. New Look for the Chapter

A Facebook page was created for the Chapter in order to make the Chapter reach out its members and also GaTech optics and photonics community easier.

**SPIE Student Chapter - Georgia Tech**  
September 12

Mark your calendars for SPIE fall welcome event on Sep 20.

11-12pm: panel discussion on careers in optics and photonics  
1-2pm: invited talk by Dr. Marc Himel

(for further details please see the flyer)

Date: Friday, September 20, 2013  
Location: Whitaker 1214

11 AM – 12 PM: Panel discussion on optics and photonics careers panelists:  
Dr. Marc Himel (Jenoptik),  
Dr. Gisele Bennett (GTRI),  
Ken Little (GT Division of Professional Practice),  
Dr. Amir Atabaki (Sinoora, a photonics start-up at GT incubator).

1 PM – 2 PM: "Harnessing Light for a Better World" Presentation by Dr. Marc Himel.

**Dr. Marc Himel**  
Dr. Himel, an SPIE fellow since 2005, received his BS degree in Physics from the California Polytechnic State University in 1984, his PhD in Optical Sciences from the University of Arizona in 1988, and an MBA from the University of Connecticut in 1998.

For 14 years, he worked in the design and development of advanced lithography systems starting with three years at IBM Bell Laboratories working on the development of Extreme Ultraviolet Lithography, followed by five years at SWS Lithography Systems working on extreme UV.

What do you think about this place?

**SPIE Student Chapter - Georgia Tech**  
September 10

Join us for a special presentation by Dr. Ronald Driggers on Naval Research Lab's imaging technologies.

Monday, September 16, 2013  
Van Leer 218, 3:15 PM – 4:00 PM

**Georgia Institute of Technology**  
A part of the Georgia Institute of Technology

Join us for a Special Presentation

**Optical Sciences Division**  
presented by  
**Dr. Ronald Driggers,**  
Naval Research Laboratory  
Monday, September 16, 2013  
Van Leer 218, 3:15 PM – 4:00 PM

**BIO SKETCH**  
Ronald G. Driggers received a doctorate in electrical engineering from the University of Missouri in 1990. He was appointed to the Senior Executive Service as the head of the Optical Sciences Division at the Naval Research Laboratory in 2008. Previous Director of the Modeling and Simulation Division at the U.S. Army's Night Vision Sensor Directorate (NVS&D) and a brief period as the Chief of the Electro-Optics Division at the Army Research Laboratory.

Dr. Driggers is the author of four books on Infrared and Electro-Optics Systems and published over 100 research papers. He was Editor-in-Chief of the Encyclopedia of Engineering (Taylor and Francis). He was selected as the 2002 Army Meritorious Civil Engineer of the Year, 2001 CROCEL Technical Employee of the Year, and 2001 NRE Employee of the Year. He is a U.S. Naval Reserve Officer and was selected as the Engineering Duty Officer of the Year (William Keiser Award). He is also a Fellow International Society for Optical Engineering, the Optical Society of America, and a Senior Sponsor. In January 2010, he took over duties as Editor-in-Chief of SPIE journal, Optical Engineering.

**ABSTRACT**  
Unique compared to other services, the Navy is responsible for more severe light such as ships, submarines, aircraft, ground vehicles, and dismounted Marine platforms is provided. Examples of materials, components, and systems in development and describe some of the challenges for the future Navy imaging is provided.

### **3c. Invited Talk by Dr. Ronald Driggers**

This invited talk was arranged by Dr. Gisele Bennett, and attracted a wide audience.

Optical Sciences Division

*Presented by*

Dr. Ronald Driggers, Naval Research Laboratory

When: Monday, September 16, 2013, 3:15 PM – 4:00 PM

Where: Van Leer, Room 218

### **3d. GaTech-SPIE welcome event: Visiting Lecturer, Networking Lunch, Panel Discussion**

Facilitating better communication and relation of chapter members with each other was identified as one of the important goals for the Chapter in the executive board meeting. In order to make best of the opportunity of having our visiting lecturer, the board decided to organize a networking lunch on the same day as the VLP lecture to provide the Chapter members a networking opportunities with our guests. In addition a panel discussion on careers in Optics and Photonics was arranged with four panelists before the lunch. Chapter funding was used for advertising (posters), small gifts for the panelists, refreshments, and the sponsored lunch.

The schedule of the day was as follows:

#### **3d-A: Panel discussion 11am-12pm**

The members also used this opportunity to discuss local concerns of optics community at GaTech with the panelists. Panelists included:

Marc Himel (Jenoptik)

Gisele Bennett (GTRI)

Ken Little (GT Division of Professional Practice)

Amir Atabaki (Sinoora, a photonics start-up at GT incubator)



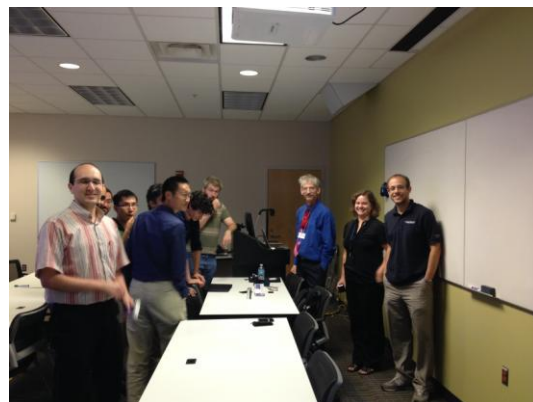
### 3d-B: Networking Lunch 12-1pm

The panelists, the members of the chapter and other potential future students from GaTech optics community were invited to this event, where different issues including local topics of interest were brought up.



### 3d-C: Visiting Lecturer Talk

Dr. Marc Himel gave an interesting talk on “Harnessing Light for a Better World” with demonstration of some new optical gadgets after the talk. The students were so excited with both parts!



### 3e. Communications with ECE and GT career Fairs

In order to pursue the interests of GaTech optics community in terms of jobs opportunities, the Chapter contacted ECE office of Development, and Careereco Inc. (GaTech virtual career liaison) providing them with short list of Optics and Photonics companies . This list was created with the feedback of Chapter members to be invited to the next career fairs in GaTech.

### 4. Planned Activities

The executive board discussed and pursued possibility of a second Visiting lecturer invited talk with SPIE headquarters. The event is planned for the Spring semester. In addition possibility of K-12 laser show at GTRI LaserFest exhibit was considered. Currently we are communicating with the manager of the exhibit on their available times. Furthermore, during Leadership Workshop for Chapter officers in SPIE Optics and Photonics Conference, the Chapter talked to Newport representative for possibility of a Lunch-and-Learn event at GaTech, and also talked to representatives of Synopsis for possibility of providing trial licenses of RSoft software to GT optics community. Communication with the representatives of both companies is ongoing.

### 5. Financial Report

<b>Starting Balance (Oct. 2013):</b>	<b>\$900</b>
<b>Major Expenses (Fall 2013):</b>	
Panel Discussion:	
Advertising	\$12.03
Gifts for Panelists	\$113.55
Refreshments	\$31.87
SPIE Member Lunch	\$161.84
<b>Income:</b>	
N/A	
<b>Current Balance (Nov. 2013):</b>	<b>\$580.71</b>