

**ANNUAL REPORT**  
**SPIE STUDENT CHAPTER**  
**UNIVERSITY OF HOUSTON**  
**September 2017**

## **Member List**

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### **Member Roster**

Raksha Raghunathan

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Achuth Nair

Chih-Hao Liu

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Hongqiu Zhang

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Andrew Lopez

Nathaniel Fredette

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Hoang Nguyen

Kaveh Shervin

**Alumni Roster**

Shang Wang

Zhaolong Han

Jiasong Li

Susobhan Das

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- Chevron Girls Engineering the Future (Optical Experiments demo session)
- March for Science 2017

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## ➤ **Activities**

### 1) Community Outreach

As a community outreach initiative, our UH chapter arranged an optics demonstration at the local University of Houston Charter School in August of 2016. We had the opportunity to educate an audience of students from the 1<sup>st</sup> to 5<sup>th</sup> grades basic optics principles and applications. To entertain and capture the students' attention, our demonstrators donned lab coats and spoke about the basic physics of color, light diffraction, total internal reflection, with accompanying live demonstrations. Our goal was to excite and interest both the younger and older students in our audience, and explanations coupled with demonstrations were able to achieve that goal.



## 2) “Girls Engineering the Future!”

In March of 2017, our UH chapter participated in the second annual “Girls Engineering the Future” event by Chevron at the University of Houston. The chapter members broke out into small stations each with its own optics demonstration. Each station demonstrated a principle of optics that was more complex than the previous (color, then reflection, then TIR); the final station consisted of a commercial OCT system that applied all the concepts previously demonstrated. Girls participating in the event were taken through each station in small groups, allowing individual attention to each attendee throughout the length of the event.

One of the most popular demonstrations during the event was the “balloon popping” station. Students were challenged to determine how color played a role in popping a balloon using a focused laser of the color it absorbs. Girls were taught laser safety, as well as principles of reflection, such as why a red laser would not pop a red balloon. They were awarded for participating in the thought exercise by popping balloons using a focused laser pointer.

We would like to thank Dr. Larin for providing valuable lab resources for this event.



### 3) March for Science!

In April of 2017, the UH chapter took to the streets to participate in the March for Science event that took place in front of city hall in Houston Texas. The UH chapter represented its solidarity in support of scientific research as they marched around downtown. Our chapter acquired a booth to provide optics demonstrations at the march as well, and educated fellow marchers and supporters about optics and the importance of research in the field. The “balloon popping” demonstration that we had used to

great effect in previous events was another hit; marchers were excited to learn about color and reflection.



### ➤ Future Events

- 1) Invite guest speaker for the month of September, potential candidates have been selected.
- 2) Organize intra-university level poster to spread awareness of our chapter and its activities. Such an event would promote STEM research and participation in our student chapter.
- 3) We will participate again in the “Girls Engineering the Future” event, which is quickly becoming a chapter tradition, and is an amazing way to promote interest in optics and advertise our local chapter.
- 4) Our outreach events the past year have been met with great praise by our audiences and participants. We intend to establish additional more frequent activities across our community.

## ➤ Chapter Finances

<b>Previous Year Balance: 43</b>			
<b>Received</b>		<b>Spent</b>	
Other funds	600	Community Outreach	250
Activity grant	0	Girls Engineering the Future	200
		March for Science	120
<b>Total Current balance: 73</b>			