Zhejiang University Club of SPIE Student Chapter Annual Report August 2018

2018 Chapter Officer

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Roster of Current Student Members

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Wang He Zewei He
Hongwei He Siqi Hu
Hexin Jiang Jingwei Li
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Huaye Li Jiang Li
Dongyu Li Wen Liu
Bin Liu Kezhang Shi
Guangyi Song Yufu Song
Ying Tan Zhihua Tu
Yu Wang Chunzhou Wu
Hao Wu Xiong Yang
Taoce Yin Zhaoxin Yu
Wenbin Yu Guowu Zhang
Dan Zhang Yi Zhou
Chapter Activities since Last Report

1. Outreach Activity

(1) Annual Youth Outreach Activity with Change High School

Through last five years’ cooperation, the outreach activity between our student club and the Changhe High School received more recognition from both sides. This year, the summer camping activity was held on July 5th and nearly 60 high school students were invited to attend the camp. Ten chapter members together with other two students from our research institute took part in the activity and started the preparation two weeks before their arrival.
After the visitors’ arrival in the morning, they were assigned into 4 groups and went sightseeing in the campus. The beautiful scenery of Zijingang Campus attracted them a lot and a number of students were curious about the buildings and statues all around. After the tour of campus, we led them to the university history museum, which is the window of a university to show its own history and spirit. They were deeply impressed by the University’s motto ‘Seeking Truth’, inspiring generations of students. Then a welcome lunch was ready for them at noon.

In the afternoon, we had a welcome address, followed by the experience sharing of how to be physically and mentally prepared for the upcoming college entrance
examinations. Then we delivered a speech about optics and used many optical devices and experiments to show how our daily life are related to optics and how that changes the way we live. We demonstrated and discussed many optical phenomena, such as rainbow phenomenon by the prism, light propagating in the fiber and so on. Besides, the basic principle of laser and its application were also introduced. At last, they were led by our chapter members to a visit to COER’s state-of-the-art facilities, including the Clean Room, Network Lab, Grating Lab, Laser Lab, Bio-photonics Lab and Laser Spectroscopy Lab. The high school students showed much interest during the visit.

Experience sharing Salon and Speech

Chapter members introducing our lab and research

2. Academic Lecture

(1) Inviting Assistant Professor Alex M. H. Wong to hold a lecture

In order to promote the dissemination of innovative ideas better and interdisciplinary exchange, our chapter organized a lecture given by assistant professor Alex M. H. Wong from the department of Electronic Engineering at the City University of Hong Kong on super resolution microscopic imaging. Imaging beyond the diffraction limit as an emerging discipline in the field of optics is showing strong prospects for the application. Professor Wong has advanced multiple projects on superoscillation-based imaging, “smart train” radar, and next-generation RF,
infrared and optical metasurfaces. His current research is in the areas of metasurfaces, metamaterials and super-resolution systems.

(2) Inviting Dr. Yongmin Liu to hold a lecture

On May 21st, Dr. Yongmin Liu, an associate professor of Northeastern University at Boston, was invited by us (collaborated with OSA student chapter) to give a series talk about harnessing light by metasurfaces. Metamaterials, artificial composite structures with exotic material properties, have emerged as a new frontier of science involving physics, material science, engineering and chemistry. Dr. Yongmin Liu delivered an introduction to metamaterials followed by a detailed elaboration on how to design unprecedented electromagnetic properties of metamaterials. A number of intriguing phenomena and applications associated with metamaterials were discussed, including negative refraction, sub-diffraction-limited imaging, strong optical activities in chiral metamaterials, interaction of meta-atoms and transformation optics. Through the lecture, we all had a better understanding of optical metamaterials.
3. Team Building

(1) Happy Hour Salon

In order to promote the creative thoughts, to strengthen the communication between different scientific subjects, the Happy Hour Salon was held at every Friday night, which was organized by our chapter member and attended by students of COER. We would invite students from diverse fields in optics to share their research progress and life experience. Various kind of events, including group discussion and lecturer speech, made the salon funny and interesting. Besides, we encouraged undergraduate students to participate in our activities by providing them with a platform to have a deeper understanding of optics and cultivating their consciousness and interests in scientific research. In this way, we could also advertise our chapter by holding lecture series. More students would know about SPIE, and no matter the lectures were interesting or boring, refreshments could always refresh people.
(2) Outside Activity

In order to bond the chapter members tightly, our chapter arranged outside activities for our members. To keep our body in shape, our chapter organized a hiking by the Longjing Village on May 20th. We preferred to keep health in a relaxing way such as going hiking rather than to be drowned in the work. After over 4 hours’ hiking, we were almost exhausted but saw a great view, tightly connected with nature. The water we drank in the hostel couldn’t be sweeter. The road ahead was tough but if we never gave up, we would get paid. Shaping body and cultivating strong will are as important as pursuing academic achievements. This was one of the lessons we learned.
Besides, in consideration of the time conflict between the members, we organized another trip to the Dongji island. Walking by the seaside always makes people feel relaxed and peaceful, setting us free from fussy and complicated research work. The splash of pieces of seashells lay scattered on the beach and small holes covered the sand where the crabs had dug in. Beauty is essentially a form of energy, something that radiates from a fine example of absolutely anything, whether a delightful taste or a gorgeous sight.

Going to the Dongji island by ship

Walking by the seaside

Group photo
Planned Activity in the Future

1. Elect new chapter officers and recruit new members.

2. Organize new exciting activities.
   
a) We are going to hold some activities among high school students about optics and electronics, sharing science with them, helping them build interests in science and nature. This is also a tradition for our chapters activity, which will not only benefit the high school students but also our chapter members. Therefore, we will keep this event in the following year.

   b) In order to broaden the vision of current members and attract the potential new members, we are going to invite lecturers to give a presentation in our research institute.

   c) The chapter will organize a visit to LASER World of PHOTONICS CHINA, which is the leading photonics exhibition in China held in Shanghai. It will give us an opportunity to gain insights into the latest technologies and applications in industry.

3. Team building
   
a) Happy hour salon got good valuation this year and is expected to be continued in the following year. By combining academic lecture and hot topic discussion with refreshments and snacks, more members would like to participate in the activity, especially after a-long-week work time at every Friday night. The environment is harmonious and cozy, which is enjoyable.

   b) In order to bond the chapter members tightly and keep our body in shape, our chapter will keep on organizing outdoor activities for members.

4. Publicity

   Maintaining our website. Keep it updated with events and activities we host to attract more people’s attention and participation. As the Wechat in China is prevalent, we have built a Wechat official account to propagandize our COER, and some of the chapter activity notifications are also pushed on the Wechat official account. We have combined our publicity with our whole COER, so as to attract more students, especially the undergraduate students.
Financial Information

1. Beginning balance
   $-645 + $1500

2. Summer outreach activity with Changhe High School students
   a) Ground traffic $180
   b) Welcome lunch $200
   c) Snacks and beverages $70
   d) Giveaways $80

3. Team building outdoor activity
   a) Ground traffic $150
   b) Snacks $50

4. Refreshments and snacks at Happy Hour
   a) Snacks $180
   b) Propaganda materials $30

5. Academic lecture
   a) Snacks $80
   b) Propaganda materials $20
   c) Giveaways $70

6. Chapter web page maintaining
   Maintenance cost $80

7. Ending balance: $-335