Zhejiang University Club of SPIE Student Chapter Annual Report August 2015

2015 Chapter Officer

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Roster of Current Student Members

Hangyu Bai  Wen Liu
Hongzhi Chen  Yang Lou
Zhefeng Chen  Jiamei Lu
Yujian Ding  Jun Ma
Yongjiang Dong  Keqi Ma
Xu Fang  Guoyong Mao
Xianglian Feng  Qinxu Pan
Jichao Fu  Wei Pan
Yu Gong  Xiaoman Shen
Yuanyuan Hong  Guangyi Song
Kai Hu  Yamin Song
Lingchen Huang  Xianhe Sun
Li Jiang  Dawei Wang
Wei Jiang  Heng Wang
Li Jingwei  Xiaoayan Wang
Chuan King  Hao Wu
Bucan Lee  Shengnan Wu
Borui Li  Peng Yan
Dongyu Li  Qiang Yan
Xibin Li  Xiong Yang
Ying Li  Zhengdong Yong
Hongze Lin  Senlin Zhang
Jiao Lin  Qirui Zhou
Bin Liu  Jianfei Zhu
Hongyan Liu  Zhenfeng Zhu
Chapter Activities since Last Report

1. Outreach Activity

(1) Annual summer program with KTH students

The program has come to its fourth consecutive year. This summer 14 undergraduate students from KTH (Royal Institute of Technology, Sweden) visited our research institute, COER (Centre for Optical and Electromagnetic Research of Zhejiang University) for a three-week stay. 12 chapter members, Shengnan Wu, Hongze Lin, Xibin Li, etc., worked as their training supervisor, helping them throughout the program from principle learning, experimental exercise, problem solving to the final presentation. During the process, every two students worked as a team and participated in training programs with various research topics, covering optical sensing, optical network communication, fiber amplifiers and lasers, bio-photonics, integrated photonics and optical spectroscopy. After checking their final presentation, we found that they did have a better understanding of the topics and realised our efforts paid off.

Traveling on the West Lake  Hiking in Meijiawu

KTH students with laser group in the fiber laser experiment
(2) Annual Youth Outreach Activity with Change High School

This year, the outreach activity became a whole year project. Firstly on January 4th, we went to Changhe High School to help the students prepare for the upcoming college entrance examinations in June. 7 chapter members together with one member of OSA student chapter volunteered to give their own opinion on how to be physically and mentally prepared, based on their own successful experiences. As one of the eight students who were responsible for eight classes, I was warmly welcomed by the students and the teacher. Because of the same family name, the class teacher even played a joke on me by saying ‘Teacher Yang’s suggestions are really good’, which made both of us laughing for a while. Watching them taking notes and smiling during my speech, I thought my work helped in some way. Meanwhile, another two members together with OSA student chapter members were playing games on optics and photonics with a group of students. We had prepared many optical devices and experiments to show how our daily life are related to optics and how that changes the way we live. When it came to the end, we did a survey on how they feel about the current study and the activity we held. Most of them said they had really huge pressure on study, but had more confidence since that afternoon.
Secondly, through last three years’ cooperation, the summer camping activity between our research institute and the Changhe High School received more recognition from both sides. This year 10 chapter members as well as other students took part in the activity and started the preparation three weeks before their arrival. A welcome lunch was ready for them on Jun 8th. In the afternoon, first we had a welcome address, followed by the introduction of the program outlines and a speech about light. By replacing the industry tour with experimental demonstrations, we aimed to make the activity more divergent and available. 50 visitors were assigned into 6 groups, and joined our chapter members in the small experiments including the operation and construction of a telescope, Kinect based games, 3D vision, Newton’s rings, and so on. The high school students showed great passion and interest in the experiment, and discussed lively about the principles behind the phenomena.
Designing experiment based on polarizers

Designing experiment based on electrical boards
The famous and popular ‘toy’

‘Playing’ the telescope
Kinect based games

3D vision
2. Academic Trip
Researching always attracts our chapter members. On August 31th to September 1st 2014, 26 members of our chapter, visited several top universities in Hong Kong, sponsored by the chapter. We met with Prof. Chester SHU and Prof. Jian Bin XU, and were warmly welcomed in Department of Electronic Engineering, The Chinese University of Hong Kong. Prof. SHU gave a brief talk about his research interest as well as recent progress. Prof. XU encouraged the students of both universities to exchange ideas with each other, which would be of great help and importance for research work. Yaoran Sun represented our chapter to give an introduction of our institute. After the meeting we visited Prof. SHU’s labs and discussed a lot on fiber optics with their group members. Next day we paced forward to City University of Hong Kong and Hong Kong University of Science and Technology, and had excellent experiences communicating with their group members about nearly all the optics and photonics fields we are interested in. We felt inspired and learned a lot from this trip.
3. Team Building

Since built in 2011, our SPIE soccer team keeps growing for a long time, especially this year. More freshmen joined in our team and the cheerleading. Though we stopped in the final four during the department competition, some of our team members were recruited to represent our department to compete in Sanhao Cup, a university competition among different departments. And they played well to help the team come out first from the group phase. It really encouraged all the team members as well as other members of our chapter.

On the other hand, our basketball champion team has refreshed its constitution. With last year’s success, more members joined to play basketball every now and then, whether they are skilful or not. We had a lot of fun competing the skills, commenting on the basketball news and playing jokes. Meanwhile people with different research topics inspired each other by exchanging the ideas, which was very helpful for our work. Basketball has already become a new way for the communication among members.

Besides, in order to bond the chapter members tightly and keep our body in shape, our chapter organised to hike on the mountains or to cycle around the city of Hangzhou. Among all the experiences, hiking along the Ancient Path between Anhui and Hangzhou should be the most impressive one for 6 of our members. After over 4 hour’s climbing, we were almost exhausted but saw a great view from top of the mountain,
Lantianao Cove. 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.

At the start of the climbing

Walking through the beautiful scene

Reaching Lantianao Cove

At top of the path
4. Communications

(1) Visiting Lecturer

As one of the planned activities, in November 2014 our chapter invited Prof. Hiroshi Yoshikawa from Nihon University, Japan, to give a lecture on computer-generated holography for 3D-display in the West Lake Photonics Forum, which was held in Hangzhou, China. Xi-Cheng Zhang, director of the University of Rochester’s Institute of Optics, Prof. Sune Svanberg, former chief of Royal Academy of Science, Sweden and many other distinguished professors were also invited to give lectures on the forum. Prof. Yoshikawa started the lecture with the introduction of Nihon University, followed by the classification and fundamentals of hologram. Then he explained how 3D-display could be generated by computers alone. Prof. Yoshikawa showed great patience and knowledge in the Q & A section, which impressed many of us. On the last day of his three-day stay, professor and me visited some famous attractions in Hangzhou, such as the West Lake, Baoshi Mountain, and Chenghuang Temple, which according to the experience of his own 12 years ago had changed a lot since his last visit. Given his age, I was so amazed at the strong body when I saw he climbed the mountain as easy as I did. Besides, his remarkable knowledges of Chinese culture and language just because he had one Chinese girl in his group also shocked me, which made the saying ‘One is never too old to learn’ more persuasive.
(2) Communicating with other chapters around the world

It is so important to communicate and exchange ideas with other SPIE student chapters if one wants to promote its own organization to a higher level. And this year we’d done better than ever. On November 25th 2014, student members from University of Fukui Chapter, Japan, visited our research institute. Since most of the visitors are members of both SPIE Student Chapter and OSA Student Chapter, OSA student chapter of our institute and our chapter worked together to make the visit a success.
With prepared cookies, candies and fruits, as well as a welcome address by Prof. Shiming Gao, we tried to make the visitors feel at home. And they also surprised us with carefully chosen gifts which were very traditional in Japan. On behalf of each chapter, both the presidents introduced their own research interest and progress. We learned not only the chapter management but also the cultures from each other, thinking this meeting of great benefit for both sides. In the end, they invited our chapter members to visit University of Fukui Chapter someday. We hope it comes true.
Planned Activity in the Future

1. Elect new chapter officers and recruit new members.
2. Organize new exciting activities.

   a) With last year’s success in Hong Kong, we are planning visits to several top universities all around the country together with IEEE and OSA chapters of our institute. Around 20 members from our chapter are available to take the visit, sharing their experiences in enormous topics, and discussing about the trends and future of the fields.

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

   c) After four years of successful precedents, the outreach activities with KTH and Changhe High School are a tradition. We will keep this tradition in the following years.

3. Team building
   The soccer team was quite a success but championship is the only target in the next year. More members are joining this year. On the other hand, the foundation of our basketball team means more than just winning the championship. It becomes a new way for inspiration and self-improvement. We’ll sponsor both of the team without doubt. In addition, our outdoor activities were widely accepted and known by more students. If the financial project is always in control, we are ready to hold activities to bring members out of labs for their bodies’ good.

4. Publicity

   Brilliant ideas are worth spreading. We should let more students know our chapter and the enormous advantages they would benefit from. We are going to keep the magazine running in our research center. Besides, other effective ways, including website or social media are still under consideration to attract more students to join in.

Financial Information

1. Beginning balance
   $70 + $1500
2. Sponsorship: soccer team
   a) Clothes, socks, soccer ball $200
   b) Sport drinks $50
3. Sponsorship: basketball team
   a) Sport drinks $60
   b) Ground traffic $50

4. Team building outdoor activity
   a) Drinks and food $30
   b) Ground traffic $120
   c) Lodging $80

5. Summer outreach activity with KTH students
   Ground traffic $80

6. Outreach activity with Changhe High school teenagers
   a) Welcome lunch at Zhejiang University $160
   c) Experiment devices $20

7. Academic tour to Hong Kong
   a) Railway fares $300
   b) Ground traffic $100
   c) Lodging $150

8. Visiting Lecturer
   a) Ground traffic $50
   b) Food $40

9. Administrative expense $40

10. Ending balance: $-10