Harbin Institute of Technology SPIE student Chapter

Annual Report January 2015

2014 Chapter Officers
President: Ran Wei  hitweiran@sina.com
Vice President: Qing Yan Wang
Secretary: Nan Su
Treasurer: Yu Hang Zhang
Advisor: Ye Zhang zhye@hit.edu.cn

List of Members in 2014

Amedeton Simplice Alissou  Yiming Yan
Zhenxu Bai  Teng Yidan
Fengjiao Gao  Jia Yu
Guoming Gao  Guilu Zhang
Shan Gao  Longjia Zhang
Bin Liu  Meng Zhang
Donghua Liu  Yingying Zhang
Jiang Liu  Yuhang Zhang
Xuan Liu  Xing Zhao
Xiaochen Lu  Zongran Zhao
Yu Meng  He Zheng
MingJie Qiu  Shengwei Zhong
Haicheng Qu  Xin Zhong
Lin Sang  Hong Wang
Cuiping Shi  Jiabin Wang
Nan Su  Qingwang Wang
Hongwei Sun  Qingyan Wang
Ke Sun  Yun Wang
Li Ti  Yuting Wang
Shu Tian  Ran Wei
Di Wu  Beifen Wu
Di Wu  Longwen Wu
Bingqian Xie
Activities outline since foundation of Chapter (2014)

In this year, the chapter organized plentiful activities, which is briefly listed as follows:

1. Attending Leadership Workshop and Conference of SPIE;
2. Organized an Unmanned Aerial Vehicle flight experiments.
3. Invited Dr. Bormin Huang, Fellow of SPIE, to give us a one-week course to students in our department.
4. Organized members’ Skiing on the behalf of SPIE;
Details of Activities

1. Attending Leadership Workshop and Conference of SPIE:

During 16 to 21 August 2014, two of our members attended the conference of SPIE Optics + Photonics 2014 on behalf of our Harbin Institute of Technology chapter of SPIE. This annual conference was held by SPIE, at a very beautiful sea-side city, San Diego, California. Every year SPIE strive to create a fun and informative series of events for over 100 student attendees from all over the world. As representatives of our chapter, Shupei Deng and Donghua Liu, who are members of our club, are entitled to attend this conference.

On 16 August 2014, they joined the annual Student Chapter Leadership Workshop. Dr. Jean-Iuc Doumont facilitated a highly interactive all-day session with SPIE Student Chapter leaders from around the world. In the morning, with help from 25 veteran student and professional facilitators, they discussed what being a leader is all about (and what it is not about) with their group members from different countries. Then one of their group members wrote down the main idea of their group and gave a presentation to other groups. In the afternoon, they listened to a lecture about how to communicate across cultures given by Dr. Jean-Iuc Doumont. Then they had another discuss which is about how to go from ideas to achievements for your chapter with their group members who are different from the members in the morning.

In this whole day Student Chapter Leadership Workshop, they experienced an excellent brainstorm, they communicated and shared different ideas with students from all over the world and built relationship with other chapter leaders. This activity connected all the SPIE Student Chapters together.
The SPIE Optics + Photonics 2014 began after the Student Chapter Leadership Workshop. During the conference they listened to presentations which they are interested in given by different professors and students and communicated with other students. Through this conference, they learned lots of knowledge from each other and broadened their horizon.

What’s more, after they came back, they gave us a presentation in order to share their experience with the rest students of our chapter. They brought much knowledge and information back to our chapter. This is undoubtedly benefit to advertise SPIE and chapter. In a word, their experience is very meaningful.
2. Organized an Unmanned Aerial Vehicle flight experiments.

In this year, our research group purchased an Unmanned Aerial Vehicle (UAV), which is greatly improved the ability to acquire actual air-borne remote sensing data. It consists of eight propellers, shown as the following pictures. The maximum height it can reach is nearly 1000m. The pay-load of this platform is a Digital Single Lens Reflex.
The UAV is needed to assemble prior to flying test, and the driving of a plane is not easy task. So we organized a training course for the assembling and operation of the UAV, on the behalf SPIE student chapter. The training is held the meeting room of lab and the stadium in our campus. The seller of the UAV taught us how to assemble it in the meeting room, and then it is taken to the stadium to make its maiden flight. The trainers told us the key points to drive the UAV, and give us a demonstration. The following photo on the left, depicts the UAV’s first flight. After the demo, our members began to operate it in person.

Here are some images taken by the UAV
A group members photo taken by UAV, from the sky.

The second day of training course is not merely a demonstration. We did acquired some useful data for the study of our group. One of the study interesting is binocular imaging. By using the UAV, we are able to image one at various angle, which is quite benefit to promote our study. Here are some images taken on the second day. Some of them have been collected to a database.
3. Invited Dr. Bormin Huang, Fellow of SPIE, to give us a one-week course to students in our department.

In this year, Dr. Huang came to visit us again. The department of electronic and information engineering has employed him as a part-time teacher. During June 2014, he came to HIT to lecture. The name of the course is “Satellite Data Compression”. Sophomores and juniors in our department attended this course.

Dr. Huang’s course is quite impressive. As a famous scholar, his teaching style is
very different from the teachers’ in China. For example, he pays attention to the foundation very much and he often encourages the students to think independently, tell them not to be stuck in other person’s thoughts. And he likes to exchange with students and attaches attention to the communication in class very much. In his class, the students are all very active. He also emphasizes the importance of the interest and encourages the students to do what they’re really interesting. This is very different from the so-called professors in our country who occupy the students’ holiday only for working for them.

Dr. Huang also has solid mathematics ability. During his class, students can feel the beauty of the mathematics and lose myself in it. They can also feel Dr.Huang ‘s love to the mathematics.

Although the course only last for a week, the rigor and professionalism of Dr. Huang deeply affected us, expanded our international perspective. I believe the other students also have a lot of harvest.

4. Organized members’ Skiing on the behalf of SPIE:

In addition to academic activity, in this year, our chapter also organized some excursions. On January 19th & 20th 2015, we organized a two-day skiing and tea party at Yuquan, Hei Long Jiang Province. Our members come from across the country, few of them have the opportunity to enjoy the amazing beauty of ice and snow in Harbin. The intention is to promote friendship of chapter members and publicize SPIE.

We arrived the ski field in the middle of 19th. After launch, members wear skis and began to skiing. Here are some photos of skiing.

A group photos taken on the gate of ski field. The poster is provided by SPIE. The background is the typical snow forest scene in Hei Long Jiang province.
We were waiting for the ski equipment in a hall.

Several members who just rush from the hill. Most of them experience skiing for the first time.
Members who are climbing the hill near the skiing field.

During the skiing and climbing on the first day, our members helped and encouraged each other. Whenever there was someone falling down, there was always a hand extended to help them out.

We got accommodated near skiing field on 19th. Here is the hotel we lived.

At evening, we held a tea part. The topic of the party is to introduce our research interesting and advertise SPIE. Although our members are in the same department, our
research interests are of great difference. We shared the experiences and personal thoughts gained from research or project. The second day of this activity is free time. This activity is definitely of great success.

**Plan in Future**

**Activity Plan 1:** Promote the remote sensing academic program within the university  
Details:  
Supplies:  
The poster printing. 60 USD  
Printing of promotional materials. 150 USD  
Rent of audio equipment. 80 USD  
Rent of presentation hall. 60 USD

**Activity Plan 2:** Invite famous professor or scholar in optics to give lectures;  
Details:  
Transportation fee:  
Extra payment for airplane tickets: 350 USD  
Intra city fee 50 USD  
Taxi fares between airport and urban area: 60 USD  
Supplies:  
One-week accommodation fare 350 USD  
Rent of presentation hall. 60 USD  
Food  
Welcome dinner 80 USD  
Other meals for one week visiting. 80 USD

**Activity Plan 3:** Communication meeting on Image processing of all members in our chapter.  
Details:  
Supplies:  
Rent of meeting room. 60 USD  
Fare of using equipment in meeting room. 60 USD
Financial information

1. Beginning Balance:
   1100 USD.

2. Spend on allowance of Dr. Huang.
   - Taxi from urban to Airport for two times: 100 USD
   - Banner of welcoming: 50 USD
   - Rental Charge of classroom, meeting room: 50 USD
   - Water and Food for students who attend his lecture: 50 USD
   - Transportation subsidy for lower grade students: 50 USD
   - Accommodation: 400 USD

3. Skiing
   - Fields: 300 USD
   - Dinner: 200 USD

Ending Balance: -100 USD