SPIE Student Chapter Annual Report

Changchun Institute of Optics, Fine Mechanics and Physics,
Chinese Academy of Sciences

September, 2011

2011 Chapter Officers

President           De-tian Huang
Vice President      Jing Shao
Secretary           Cong-jun Wu
Treasurer           Da-wei Ji
Chapter Activities

- Time: September 17th, 2010

  Place: Graduate Teaching Building, Room 307

  Activity: Prepared to Recruitment

On the evening of September 17th, 2010, the main officials of our Student Chapter held a meeting in Graduate Teaching Building. On this important meeting, the existing problems about recruitment were solved through a heated discussion. We prepared to attract some new students who was good at English and had passion in activities joining in our SPIE Chapter. We hope that our Student Chapter will be better and better. At the same time, our members would be more responsible for the chapter.
On the evening of September 23rd, 2010, CIOMP SPIE Student Chapter took the fifth election of chapter president. De-tian Huang was nominated as the president of SPIE. Through a heated discussion, he was successfully elected to be the president of SPIE. After the election, he talked about some ideas and suggestions for the development in the future with all the members present. What’s more, other chapter officers are as follows:

Vice president: Jing Shao
Secretary: Cong-jun Wu
Treasurer: Dai-wei Ji

On September 28th, 2010, our recruitment presentation was performed at the Graduate Teaching Building, in which most new students attended. The President of SPIE Student Chapter De-tian Huang and the President of OSA Zhijun Zhang introduced SPIE and OSA Student Chapter respectively as
well as the student member benefits. On the meeting, the Student Chapters review of our activities in 2009-2010 and plans activities of the coming year were also discussed. The former President of SPIE Student Chapter Wei Wang introduced two groups of our association, including the Group of Secretary and the Group of Network Advocacy. What’s more, he gave us about the association incentives. Some students who had performance well in their study work and had dedicated to the Chapter greatly were praised. On the meeting, we selected 30 students, who were good at English, from more than 60 candidates.

Here is a part of the list of the SPIE members:
Time: October 5th, 2010

Place: Graduate Teaching Building

Activity: The first meeting of our new members

Our chapter held our first meeting of all the members in the Graduate Teaching Building, room 307.

All of the new members joined in our chapter were presented at the meeting. They made self introduction to each other, and filled out a form about the registration of the association, then surrendered the membership dues of next year. The total enrolled number of this year is 46, 34 among them were the members of SPIE, 18 among them were the members of OSA. The SPIE president De-tian Huang announced the main officials and chapter responsibilities, and looked back to the activities of former year. He
suggested our members to join the activities as much as they could. Our members realized that we could not only improve our ability and knowledge during the process, but also enlarged our chapter’s reputation and upgrade their qualities. As a member in this chapter, we should benefit ourselves of knowledge and strengthen our chapter as well. At last he introduced the plan of next year. We enhanced the academic atmosphere in our institute, such as academic lectures, academic Salon. So it included seminar report, SPIE conference in China, SPIE travelling lecture, domestic travelling lecture, regular party, and educational outreach to help primary scholar education in the countryside and so on.

- Time: October 20th, 2010
- Place: Graduate Teaching Building, Room 512
- Activity: SPIE Traveling Lecture:

In the afternoon of October 20th, 2010, Prof. Anand Asundi we invited gave us a wonderful lecture, which was our SPIE annual traveling lecture. He is a professor of School of Mechanical and Aerospace Engineering of Nanyang Technological University. His research includes solid mechanics, micro, nano, and bio mechanics, online health monitoring, fiber optics bio-chemical sensors.
First, Prof. Anand Asundi gave us the introduction of Nanyang Technological University and its advanced development concept. Then, he gave us the lecture about Optics and Lasers in Precision Metrology. Optical methods can provide fast, non-contacting and non-invasive characterization, detection, monitoring and manufacturing in a variety of fields ranging from large structures to micro and nano engineering to bio-medical and life science applications. In his talk, some of these developments in labs were discussed and demonstrated. Topics covered included a novel optical diffraction strain sensor with applications in microelectronics and biomechanics, 3D profilometers and their applications, Digital Holography and applications and Spectroscopic based chemical sensors. Some examples of converting research into products were also discussed.

After the lecture, some students discussed the questions with the Prof. Asundi in this topic, and Prof. Asundi gave his detailed answers to the questions one by one.
Time: November 15th, 2010

Place: Graduate Teaching Building

Activity: The Third English Lecture Competition

On the evening of November 15th, 2010, our CIOMP OSA/SPIE Student Chapter held a meaningful English Lecture Competition. We invited five important guests: Zhuang Sun and Jie Zhao, both of them are best English Teachers in Jilin University, Siming Zhou, the chairman of students union in Northeast Normal University, Laigang Zhang, the chairman of our Students Union, Xiaoxi Chen, who got the first prize of the competition last year. Twelve new students took part in the competition. After their wonderful lectures, Jia-de Li got the first prize of the competition. All the speakers have got an exquisite gift.
Time: December 1st, 2010

Place: Graduate Teaching Building

Activity: Seminar Report

On the evening of December 1st, 2010, our chapter held a seminar report in the Graduate Teaching Building room 307. Not only our chapter members attended the meeting, but some other students also came to join in the meaningful seminar.

The leading role we invented is Detian Huang, the president of CIOMP SPIE Student Chapter. He is an excellent PhD student in CIOMP. The topic of his report is The Optimization Methods of DSP Algorithm. He introduced several optimization methods in the practice application.

After his report, we have an interaction between the speaker and students. Detian Huang explained the key points again according to the members’ questions. It should be the core of the learning process.

Then, we invented Fa-cai Zhao. He is also a PhD student in CIOMP. The topic of his report is The Calibration Method of Imaging Spectrometers. He introduced two kinds of calibration, spectral calibration and radiometric calibration, and how to achieve it. Besides, he gave some advanced calibration method in and out of home to the audience. After his lecture he answered some question of the attendee.
In the afternoon of December 25th, 2010, our CIOMP SPIE Student Chapter members gathered together for dinner to celebrate Christmas in the Eastern Express.

Before our departure, we all had a group photo together. Then we got on the bus, and we chatted with each other, happily. After half an hour, we arrived at the Eastern Express. How exciting! There were plenty of kinds of delicious food and we could not help being ourselves. After we were full, we played many funny games.

According to this activity, many students found the home feeling, which may
enhanced their acquaintanceship and friendship, and also sharing their spirit of dedication with the Chapter members.
On the evening of March 9th, 2011, our chapter held a seminar report in the Graduate Teaching Building room 307. Not only our chapter members attended the meeting, but some other graduate students came to join in the seminar, in total about 30 partners.

The leading roles we invented are Cong-jun Wu and Da-wei Ji. Both of them are excellent Post-Graduate students in CIOMP. The topic of Wu was Optical Design of Imaging Spectromter, he introduced three kinds of imaging spectrometers, Prism, Grating and Fourier transform imaging spectrometers to the 20 audience, and also gave the optics design example of each method, pointing out the advantages and disadvantages of each examples.

Ji’s topic is the brief introduction of development and application of FPGA. He explained the FPGA’s application in the aerospace electronics system, and the main company in the world to supply the FPGA component. Besides, he gave the example of how to choose a proper FPGA component in the reality problem.
After their report, we have an interaction between speakers and students. Each of they explained the key points again according to the members’ questions.

- **Time:** April 15\textsuperscript{th}, 2011
- **Place:** Graduate Teaching Building
- **Activity:** The third Academy Salon

In the evening of March 15\textsuperscript{th}, 2011, at room 307 of the Graduate Teaching Building, our CIOMP OSA/SPIE Student Chapter held an academy salon, whose theme is Optics. The purpose of this academy salon is to solve practical problems during research through heat discussion and to enlarge our knowledge scope. Some Students who is good at Optical Design gave their concept and shared their experience in this filed.
After about two hours’ heat discussion and free communication, we realize the importance of academy salon. We improve our knowledge level, enlarge our thinking scope and learn how to do better research work.

- Time: April 29th, 2011
- Place: Chang Chun Chao-yang Hope Primary School
- Activity: Support Education activities

On the Morning of April 29th, 2011, our chapter held a countryside activity to support education in Chao-yang Primary School. Chao-yang Primary School is founded in 2001, to which every year some university and society union would to support some materials of education, in order to improve the education condition. Our president De-tian Huang and some main officers came to the primary school together, They supported the school with 2
basketballs, 2 footballs and some other PE materials, apart from that, we also provided 25 T-shirts for the different students.

Besides, our members had given fifth and sixth grade students’ lessons respectively. Our purpose is that they could stick to their belief and study hard to improve their living condition in the future. In the noon, we were enthusiastic invited to have meals in the headmaster’s family.

Accoding to this meaningful activity, we hope that we could help the difficulties as more as possible by the chapter, which are our responsibility and our mission.
Time: May 29th, 2011
Place: Graduate Teaching Building
Activity: Seminar Report

On the evening of May 29th, 2011, our chapter held a seminar report in the graduate teaching building room 307. Not only our chapter members attended the meeting, but some other students also came to join the seminar. We invited two students as our speakers. One of them is an excellent PhD student named Xuefeng ZENG in CIOMP. The topic of his report is Large Telescope and its application. He introduced many examples to testify his theory, and told us the update research up-going of this field. Except these, he also portrayed some interesting experience in his graduate time. The other
named Xuechao LIU who made a report with its theme The MCU MSP430 and The PCB design. Among her report she gave some useful application of TI made MCU MSP430. After her report, we have an interaction between two speakers and students, which is a useful way to help some students who study the similar task in their graduate period.

All the members were so lucky to ask the two excellent speakers to give them lectures, which would make them benefit a lot, especially for the postgraduate in the lower degree.
June 11th, 2011, our CIOMP OSA/SPIE Student Chapter organized a very meaningful journey to the Chang Chun Jing-yue Scenic Spot. At 7:30, we got on the bus and chatted with each other happily. After about half hours, we arrived to the Jing-yue Scenic Spot. With our guide’s explication, we visited some places of interest. Then we took part in an interesting game ‘Real Man CS’, which game can greatly enhance our together working ability. The whole members were divided into two groups, the coach gave two groups the same numbers of ‘laser weapons’. One group is the aggressive, the other is defense. After about 30 minutes or more, one team surrendered, then we chose our roles and demesne. After 3 times fighting, with the leading of SPIE presidents, the red team won the game with 2 to 1. About 12 o’clock, all of the members had the meals in a restaurant, what a wonderful day! This was the last SPIE members activity, everyone with a honey smile on their face, we hoped that the SPIE Student Chapter had a resplendent future in the coming year!
Invited by SPIE, our SPIE president De-tian Huang participated in Optics & Photonics 2011, San Diego, CA, US. It is a very important event to our chapter. Detian Huang joined in the SPIE Student Leadership Workshop and shared the experiences with other student leaders from all around the world. The students were warm served by the SPIE and they learn each other and friendship was established. Four free courses were afforded by the SPIE and Detian Huang gains a lot.