

**Women in Science, Technology, Engineering and Entrepreneurship (WiSTEE)  
August event “WiSTEE Going Global”**

*WiSTEE Connect* (Women in Science, Technology, Engineering and Entrepreneurship) hosted a special global event on August 6 during the 2013 OSA-CIOMP International Summer Session on Optical Design, Engineering, and Fabrications, co-organized by Optical Society of America (OSA) and Changchun Institute of Optics, Fine Mechanics and Physics (CIOMP) in Changchun China. Over 80 international attendees attended the event including faculties, post-doc, graduate and undergraduate students from USA, China, Iran, South Africa and some other countries in Europe.

*WiSTEE Connect* Founder and Chairperson Dr. Jie Qiao, recently appointed associate professor at the Chester F. Carlson Center for Imaging Science, Rochester Institute of Technology, introduced *WiSTEE Connect*, an organization providing cross-disciplinary and cross-university mentorship, connectivity, and leadership opportunities to women interested and aspired to succeed in science and entrepreneurship. It aims to help women faculties, students, and engineers to gain regional connections and global impact in the STEM field. Dr. Qiao also led a discussion on what it means to be a woman in STEM, the specific challenges to face, and the possible paths to overcome obstacles.



Dr. Jie Qiao introduced *WiSTEE Connect*'s vision and its activities in Rochester, NY to over 80 international attendees at the 2013 OSA-CIOMP International Summer Session. *WiSTEE Connect* horizontally or locally connects regional WiSTEE groups across universities and industries. It also vertically or globally connects with different professional societies to identify and provide opportunities for WiSTEE members.

During the discussion on “What it means to be a woman in Science, Technology, Engineering, and Entrepreneurship”, the attendees first introduced their names, current career stages and research areas. The research fields of the international attendees spanned across optical design, testing, adaptive optics, photoelectronics, mechanical design, manufacturing and etc. Although for some of the Chinese female students, it was their very first time introducing themselves to so many people, they still bravely spoke up and actively and warmly welcomed everyone to this WiSTEE event.



The international student, faculty attendees at the WiSTEE session engaged active discussions on what it means to be a woman in STEM and the challenges they face during the pursuit of their academic and professional careers.

A number of female attendees described the specific challenges female graduate students face in China, such as having fewer internship and job opportunities available to them and finding it seemingly challenging to balance life and career. One female student instead commented that we cannot say that girls are not as good as boys in

scientific and engineering field, since girls are often more careful so they could be better than boys on solving complex engineering problems. Xin Zhang, a graduate student at CIOMP, also commented that there should not be any gender boundary in science and engineering. Everyone should be able to pursue his/her dreams with full capacity.

Some invited speakers of the CIOMP-OSA summer session also attended this event, which included Professor James C. Wyant, Dr. Pierre Chavel, Professor Jannick P. Rolland, Dr. Kevin P. Thompson, and Ms. Kristin Mirabal. The event was supported by Mr. Lingtong Zhang, Professor Laiming Zhang, and Ms. Hui Wang of CIOMP of the Department of International Cooperation at CIOMP. Some student members of WiSTEE from Rochester, NY also attended this special August event in Changchun, China, including Jianing Yao, Jinxin Huang, Xiang Liu (recipient of the 1<sup>st</sup> WiSTEE-Boni travel grant) and Yingxing Qian.

When asked by students how to stay energetic and be successful in multiple areas such as research, technical entrepreneurship, Professor Jie Qiao of Rochester Institute of Technology emphasized the importance of pursuing one’s true passions, building innate confidence, believing in oneself, and networking with fellow professional colleagues . “Working hard in the lab is not enough to have a successful career. You have to go out to understand what others are doing and see how you can add value,” and “Only after one demonstrates that she believes in a cause, seriously invests her own energy and intelligence, and shows her determination to be successful, others who share the same vision will be willing to enroll and help.



Professor Jannick Rolland of the University of Rochester stressed that the most important thing is to find your own path and keep with it. "no all jobs are good" and one must give careful thoughts before accepting a job that is in line with one's vision. When one student asked about how to balance the life and face all the difficulties as a woman in science, she

suggested that we should always remember not to take it personally and keep on with your own dream. She also pointed out that there does exist potential isolation between the male researchers and female researchers in science, so the male scholars could also be more active to help their female colleagues and break the isolation. She agreed that networking is very important, especially for women in science, and WiSTEE is definitely a perfect platform to communicate, co-mentor and build-up the network.

Professor Pierre Chavel of Inst. d'Optique Lab Fabry, France said that the female students group is slightly larger in the optics institute in France, but he also has noticed that the female scholars usually did not advance too far in their career in scientific and engineering fields. He hopes *WiSTEE Connect* can not only motivate more female students to enter STEM field, but also help solve the puzzle why there are so few women professors or senior scientists in the scientific or engineering fields.

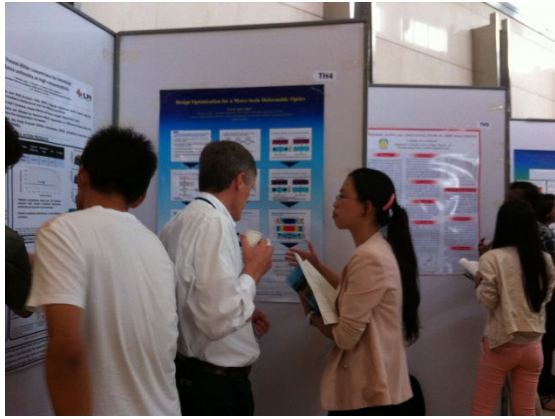


Professor James C. Wyant of the College of Optical Sciences, University of Arizona and former OSA president said that there are approximately 20-25% of female students at the College of Optical Sciences at the University of Arizona. He was very positive about the female scholars working in the scientific and engineering field, whose number is growing every year. He also pointed out that the CEO of OSA and the present chair of OSA are both female.

Jinxin Huang, a Ph.D. student at the Department of Physics and Astronomy, University of Rochester who grew up in China commented there were so few female students in his class in college and he recognizes that it is hard for female students to obtain the same level of opportunities and success as the male students either in China or in the US.



Thanks to the WiSTEE-Boni travel grant sponsored by Mr. Bob Boni and Ms. Diane Boni, the first recipient Xiang Liu, a rising undergraduate senior at the University of Rochester attended the OSA-CIOMP International Summer Session on Optical Design, Engineering, and Fabrications. Xiang gave her very first research presentation in an international conference, embarking on her exciting career in optics! She also had engaging interactions with her international peer students and invited speakers.



Xiang Liu (on the right) presented to Dr. Greg Forbes on “*Design Optimization for a Meter-Scale Deformable Optics*” at the OSA-CIOMP International Summer Session.



Xiang Liu expressed her appreciation for the networking, mentorship, and the special travel grant opportunity that WiSTEE has offered to her as an undergraduate student.



All the female attendees at the OSA-CIOMP Summer Session took a photo together to celebrate the successful WiSTEE session.

Ms. Kristin Mirabal, Director of OSA Global Programs (Front row, 1st on the right)  
 Ms Hui Wang, Deputy Director, Department of International Cooperation, CIOMP (Front row, 1st on the left)  
 Dr. Jie Qiao, *WiSTEE Connect* Founder and Chairperson (Front row, 7th on the left)  
 Dr. Jannick Rolland, member of WiSTEE Advisory Board (Front row, 8th on the left)

There has not been any similar activity or group like WiSTEE in China. After the WiSTEE session, close to a dozen students enthusiastically raised their hands to express the desire of establishing a *WiSTEE Connect* chapter in China!

We gratefully thank the sponsorship from the Global Programs of Optical Society of America, Changchun Institute of Optics, Fine Mechanics and Physics. We thank the honorable generosity from Mr and Mrs Robert and Diane Boni for sponsoring the WiSTEE-Boni Travel Grant which allowed Xiang Liu to present her first research paper in an international conference. Lastly we thank Jonathan Papa for capturing the moments of WiSTEE sharing professional aspiration and experience in a global setting.

Sincerely,

Xiang Liu, WiSTEE Member

Jie Qiao, WiSTEE Chair

<http://www.wisteeconnect.org/>