

## IEEE ComSoc Distinguished Lecture Tour Experience in Asia

This is my second DLT during my distinguished lectureship. On May 16, 2013, I embarked on the journey to the east. Unfortunately, my flight was severely delayed from Atlanta to Tokyo, I had to stay in Tokyo for one night and missed my first lecture in Shenzhen. So, I spent my weekend with some IEEE ComSoc members at Shenzhen Institute of Advanced Technologies (SIAT) and assured them that I would make it up at later time. My host, Dr. Xiaoxia Huang from SIAT, took me out for a wonderful dinner with food close to the taste of the food in my hometown in Shandong.

On May 19, I flew to my second tour stop Shanghai. My host Dr. Xinwan Li, the Chair of IEEE ComSoc Shanghai Chapter and Professor in the Department of Electronic Engineering at Shanghai Jiao Tong University (SJTU), picked me up at the airport and treated me with a very nice dinner. In the early morning on May 20, Dr. Li picked me up from the hotel and led me to the lecture room to deliver my first lecture entitled “Capacity in Multirate and Multihop Wireless Networks”. My co-host, Dr. Xinbin Wang, a professor in the Institute of Wireless Communication and Technology (IWCT) and the Department of Electronic Engineering at Shanghai Jiao Tong University, introduced me and offered the opening remarks about the IEEE activities and the lecture. The lecture was well attended with over 40 people.



Fig.1: (From right to left) Xinwan Li, Yuguang Fang, Xinbin Wang, Cailian Chen, Haojin Zhu and Xiaohua Tian

After the lecture, the leaders of the local chapter attended the lunch meeting, followed with a tour to IWCT and its research facilities. Dr. Hui Liu, a former professor in the

Department of Electrical Engineering at University of Washington and now the Center director, told us that in collaboration with Huawei, the center had designed an innovative testing network via integrated wireless technologies including cellular (UMTS/3G/4G/5G) and wireless local area networks (WiFi), to provide seamless coverage over the whole campus, the first of its kind in China, which was indeed impressive. Through this network, researchers could test any transmission schemes and network protocols for future wireless technologies using practically operable communications systems.

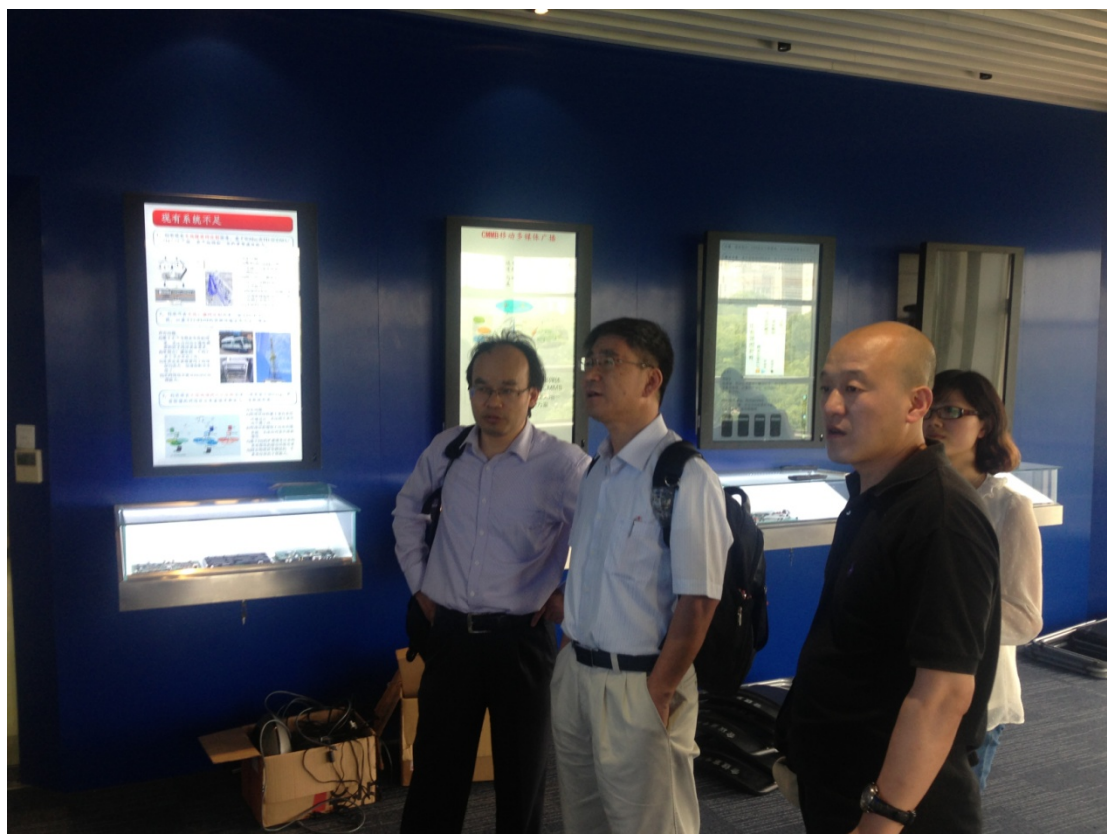


Fig.2. (From right to left) Cailian Chen, Xinbin Wang, Yuguang Fang and Xinwan Li in the tour to IWCT

On May 21, I delivered my second scheduled lecture entitled “Small World Phenomena in Wireless Ad Hoc Networks” at the Shanghai Research Center for Wireless Communications (SHRCWC), Chinese Academy of Sciences (CAS), a research center jointly organized by CAS, Shanghai city government, university partners and industrial participants, investigating innovative technologies for next generation wireless communications. Dr. Yang Yang, the Center director, hosted my lecture. He opened the lecture with remarks about the Center and introduced me and Dr. Xinwan Li to an audience of over 20 people. The lecture went well with active discussions on topic matter. Afterward, Dr. Yang showed us the research facilities and gave an overview on the testbed on vehicular networks they had been building along a long strip of road for research experiments, the largest testing site for vehicular communications and networking in China. It was amazing how progress had been

made on theoretical research and practical experiments in China. China had invested a great deal of funding in attracting excellent overseas Chinese researchers in the last decade to reshape the research and technology innovation and boosted its economic development and Dr. Yang was one of those who returned to China after leading a successful career outside China.

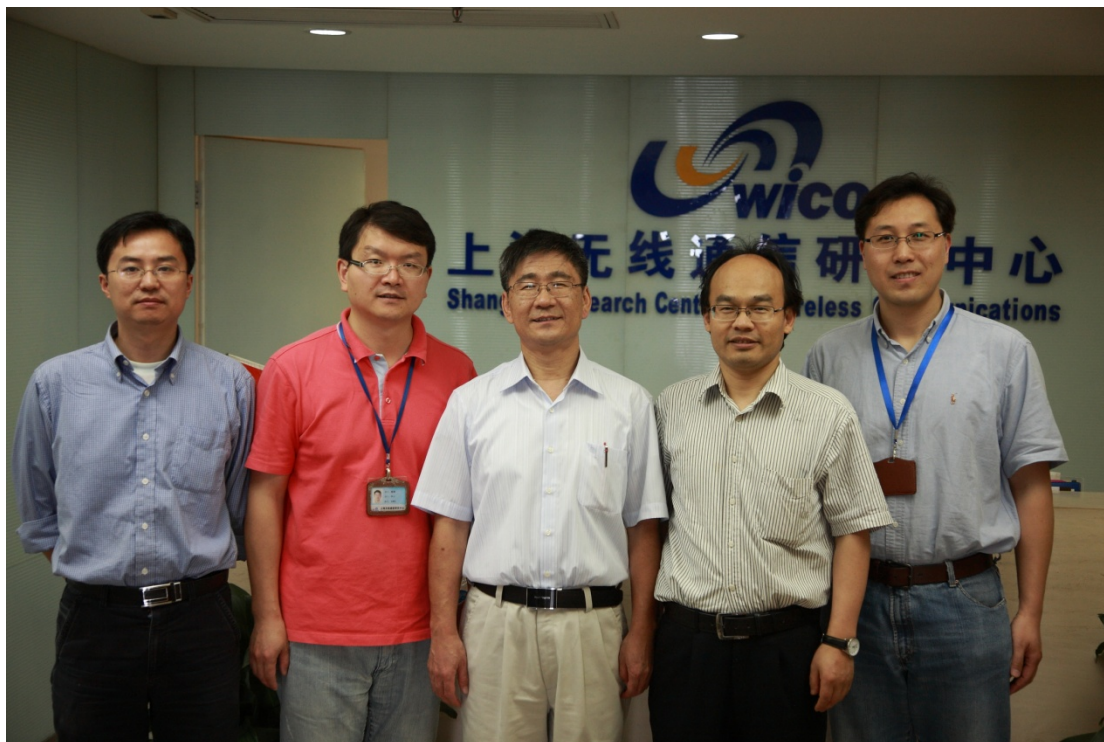


Fig.3. (From right to left) Hua Qian (SHRCWC), Xinwan Li (SJTU), Yuguang Fang, Yang Yang (SHRCWC) and Xiaohu Ge (Huazhong University of Science and Technology)

A lunch was arranged with Dr. Yang, his team, including Dr. Hua Qian, and Dr. Xiaohu Ge, a professor with Huazhong University of Science and Technology, who happened to visit the center, to continue our discussion on research of common interest. It was indeed a learning experience for me.

On May 22, I had presented one additional lecture to the research team of Dr. Xinping Guan, a professor in the Department of Automation at SJTU. His team has been working on cross domain of wireless communications, networking and control, which is probably more appropriately called cyber-physical systems. Chinese universities seem to adopt the European research infrastructure and a research team usually consists of a senior faculty member and a few senior and/or junior faculty members, working together on various kinds of research projects. Dr. Guan's team consists of himself and multiple junior faculty members including some junior faculty members I have known before: Drs. Cailian Chen, Fan Wu and Bo Yang. Upon the request of his team, I delivered the talk entitled "Cloud-assisted Mobile Health Systems: Security and Privacy". Dr. Guan introduced me to the audience of over 40 people

consisting of faculty members and students with very nice introductory words. The question session was hosted by Dr. Cailian Chen, who initiated the visit to this team. The lecture went very well and was well received with intriguing questions.



Fig.4. Question session during the lecture at Shanghai Jiao Tong University

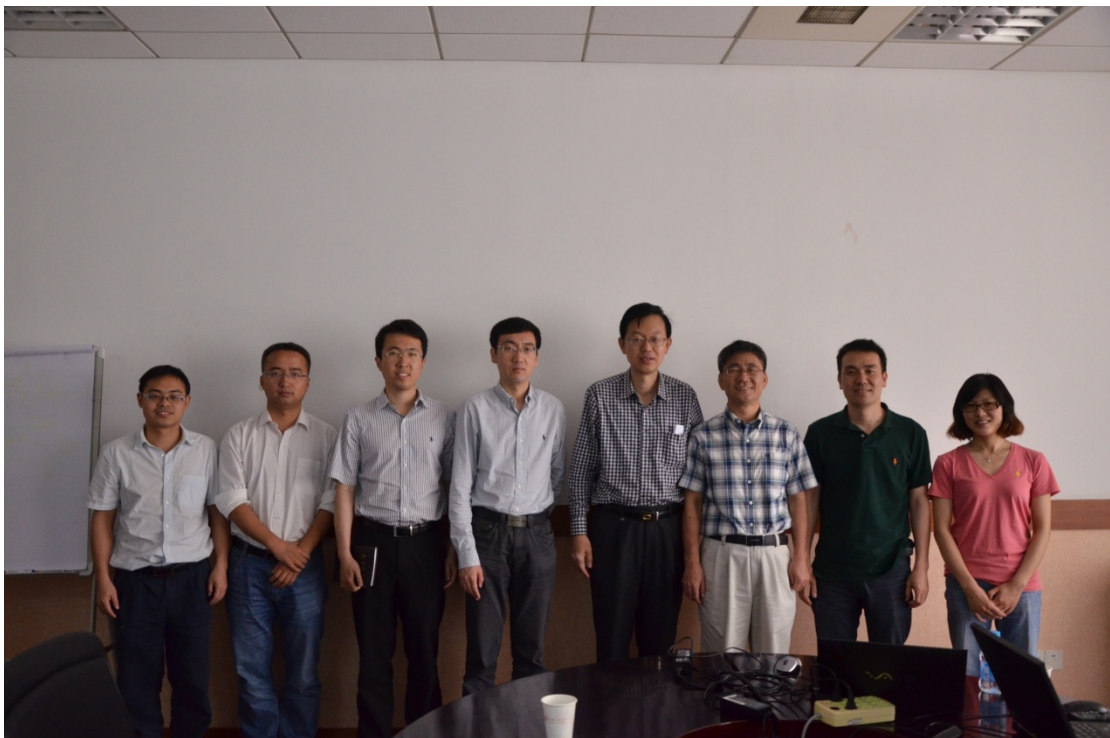


Fig.5. (From right to left) Cailian Chen, Cunqing Hua, Yuguang Fang, Xinping Guan, Bo Yang, Fan Wu, Haojin Zhu, and Chengnian Long

After lunch, Dr. Cailian Chen hosted a research meeting with Dr. Guan's team including Drs. Fan Wu and Bo Yang, presenting their selective research projects and allowing me to learn more about this team for possible future research collaborations. Thus, this DLT offered me an opportunity to know more about my colleagues' research efforts and built a bridge for international exchange and future collaboration.

Due to the special request from Dr. Limin Sun, a professor with the Institute of Information Engineering at CAS in Beijing, I left Shanghai early in the morning of May 23 and delivered the talk "Cloud-assisted Mobile Health Systems: Security and Privacy" to his research team in the later afternoon of the same day. Although I was a little tired after the flight, I did enjoy the talk and had a chance to know his team better. Dr. Zhiqiang Shi, the team member, used to visit my group before as a research visiting scholar and he had made all arrangement to this team, which really made me feel at home. It was nice to see old friends (including Dr. Sun, an old friend since 2004) during this visit.



Fig.6. Kicking off the lecture at the Institute of Information Engineering, CAS (Dr. Limin Sun on the most right while Dr. Zhiqiang Shi on the most left)

May 24 was a busy day for me. In the morning, I delivered my scheduled lecture at Beijing University of Posts and Telecommunications (BUPT) with the title "Secure Network Performance for Large-Scale Wireless Ad Hoc Networks". I gave a talk here in last year's DLT. This time, Mr. Han Jiang and Mr. Waheed ur Rehman, members of the research team of Dr. Xiaofeng Tao, the Chair of IEEE ComSoc Beijing Chapter, made all arrangements. The lecture was well attended with attendance of over 40 people and with many interesting questions, which took more than two and a half hours to complete this lecture. The most satisfying thing I had received from this lecture was a message from Dr. Tianbo Lu, an associate professor at BUPT, who

expressed his appreciation. In this message, he said, “(You) delivered the lecture, standing, for two and a half hours, yes, very passionate two and a half hours! I was deeply moved. From you, I observed the charm of a professor who showed his great passion for doing research! There are many many things I can learn from you on how to conduct oneself in society, how to do business, and how to carry out scholarly work.” It is really nice to see that whatever I have been doing could benefit our community for the greater good.

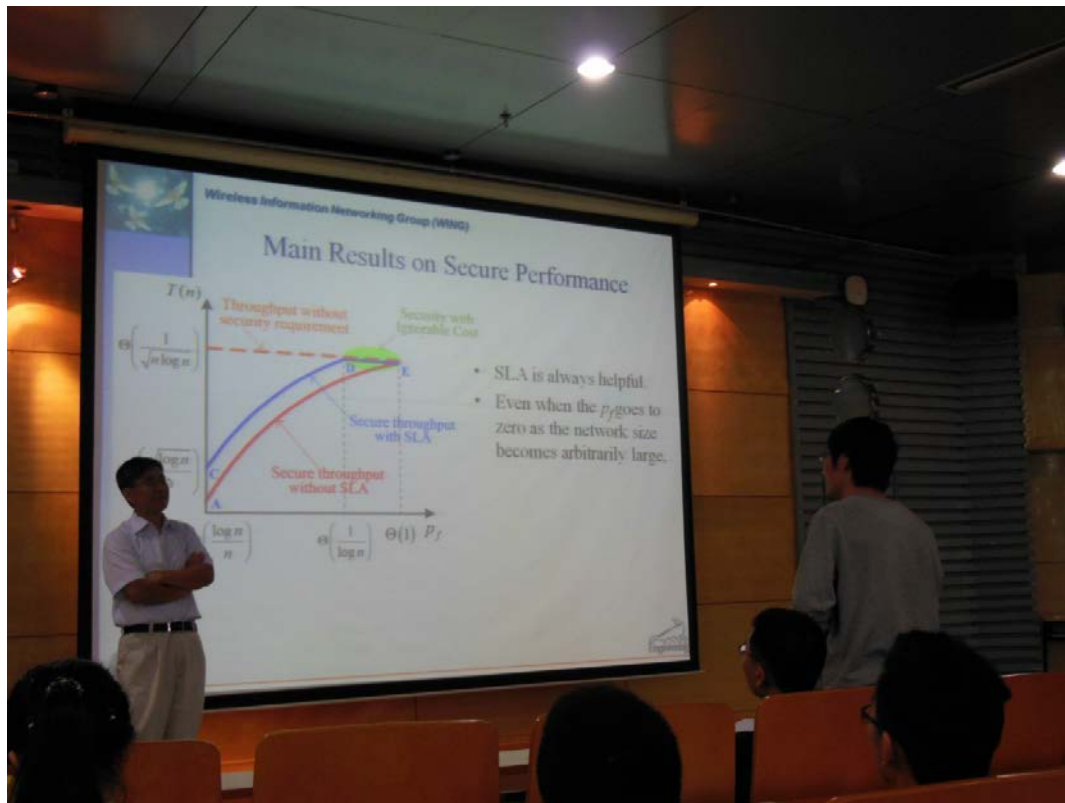


Fig.7. Question session at BUPT



Fig.8. Lecture at Institute of Computing, Chinese Academy of Sciences, Beijing

To make up my missed lecture in IEEE ComSoc Shenzhen chapter, I returned to Shenzhen and delivered my final scheduled lecture entitled “How to Effectively Utilize the Harvested Resource in Cognitive Radio Networks” (a revised title for “A Novel Architecture for Cognitive Radio Networks”). Dr. Xiaoxia Huang, my local host and my former Ph.D. student, presided my lecture. She is also one of those researchers who returned to China due to the attractive job opportunity and is currently the Deputy Director of the Center for Real-time Monitoring and Communications Technology at SIAT. Since her team’s research interest was on cognitive radio networks as well, we had great discussion during this lecture, from which I had benefited greatly.



Fig.9. Lecture at Shengzhen Institute of Advanced Technologies

My last stop in Asia (not on the scheduled list of this tour) was Sendai, Japan. When Dr. Nei Kato, the Chair of IEEE ComSoc Sendai Chapter and a Professor with the Graduate School of Information Sciences at Tohoku University, Sendai, Japan, heard my DLT to Asia, he urged me to visit his Chapter. So, on May 25, I flew to Japan and re-routed my return trip to Sendai. I visited Sendai before 2011 and really enjoyed the scenery Matsushima. On my way to Sendai this time, I was wondering how 2011 Tohoku earthquake followed by Tsunami had done to Matsushima. Although I was anxious to pay my visit to Matsushima, my host Kato Sensi took me to an inland mountain first. “To calm me down?” I was wondering. On June 26, Kato Sensi took me to Mt. Zao to see Lake Okama, a green lake on Mt. Zao. It was said that the lake was formed after volcano, no wonder there are not much trees around the lake. On the mountaintop, frequent fog came and went with moisture, and sometimes it was hard to see anything within ten feet. Thus, when you walked on the trail, you tended to

have the feeling of immersing yourself into the nature and could feel the breath of the universe. Now I understood why Kato Sensi took me here to calm me down so that I would not be scared of what brought to the Sendai city by the earthquake. Kato Sensi gave me the second day (June 27) off so that I could revisit Matsushima. To my surprise, there was not much damage to this beautiful island! I recalled what I had visited before, traced the places I stopped for photographing, kept nodding with “yes, it is still there!” When I stepped onto the Fukuura Island, I could still smell the aroma from the roads made of pine sawdusts and hear the thunders of the tides. It was still beautiful as before, which was why I spent more than three hours on the small island and enjoyed what nature offered us!



Fig.10. Lake Okama on Mt. Zao in Japan

Back to business on June 28, I delivered my final lecture for this DLT with title “Cloud-assisted Mobile Health Systems: Security and Privacy”. Kato Sensi’s research group had also tremendous research experience on mobile healthcare and we had intensive discussions on the topic during my visit to his group and on the way to Mt. Zao. During the lecture, faculty and students raised quite a few interesting questions. Most of 22 attendees were from Kato-Nishiyama Laboratory and showed great interest in my work. It seemed Japan had adopted European academic structure as well and a research group would consist of one senior faculty and a few junior faculty members plus industrial researchers and students. The only difference was that a junior faculty member became senior, the lab name would add his/her name. For example, last time I visited Kato Sensi, his lab was Kato Lab, and now it became

Kato-Nishiyama Lab. This seems to be a better system and a junior faculty member could grow into an equal leader in a lab.

At night, Kato Sensi and his senior team members, including Drs. Zubair Md. Fadlullah, Mostafa Fouda, Jiajia Liu, Kawamoto Yuichi and Dr. Hiroki Nishiyama, had a wonderful dinner together. What a great treat with real Japanese food!



Fig.11. (Front row, from right to left) Wei Chao, Ahmed Abdullar, Zubair Md. Fadlullah, Nei Kato, Yuguang Fang, Mostafa Fouda, and Jiajia Liu

This is another successful lecture tour for me. I met many people and learned many new things, thanks to the Comsoc Distinguished Lecture Program, which could really brought members closers. It would not be possible without the help from a few volunteers. Ms. Ewell Tan, executive of IEEE Asian Pacific Region, had done a fantastic job in shepherding and coordinating this lecture tour again. My appreciation is also extended to those people from local chapters for their arrangements and hospitality.