

DLT Report by Prof. Tony Quek

Prof Tony Quek delivered a lecture series at the following locations:

- 1. Shanghai, China – 18 April 2018**
Lecture Venue: ShanghaiTech University
- 2. Shanghai, China – 18 April 2018**
Lecture Venue: Donghua University
- 3. Hsinchu, Taiwan – 23 April 2018**
Lecture Venue: National Tsing Hua University
- 4. Hsinchu, Taiwan – 24 April 2018**
Lecture Venue: National Taiwan University

Shanghai, China

My first stop of this tour was ShanghaiTech University. My host was Prof. Xiliang Luo of ShanghaiTech. The title of my lecture was “Massive, Ultra-Dense, Delay, and Intelligence.” In the future wireless systems, new services, applications and devices will drive requirements on data rate, ubiquity of data services, latency, cost, and reliability and further drive data traffic growth. To meet the above challenges, new technologies have been developed and investigated all around the world. Furthermore, the recent breakthrough in artificial intelligence and machine learning are providing us with technologies to perform tasks that once seemed impossible. In this talk, I discussed a few key characteristics in future wireless networks and investigate related research problems to enhance our understanding of such networks. Furthermore, I shared some interesting research trends related to future wireless networks. There were about 30 people attending the talk, including postgraduate students and faculty members. Following my talk, we had an excellent Q&A session and lunch with some faculty members.



I gave my second DL talk at Donghua University in the same afternoon of April 18. My host was Prof. Xueqin Jiang of Donghua University. The title of my lecture was “Massive, Ultra-Dense, Delay, and Intelligence.” There were about 40 people attending the talk, including postgraduate students and faculty members. Following my talk, we had lots of discussions after the talk. In the evening, Prof. Jiang hosted a simple dinner together with other faculty members.



Hsinchu, Taiwan

I gave my third DL talk at National Tsing Hua University (NTHU). My host was Prof. Che Lin and Prof. Peter Hong of NTHU. The title of my lecture was “Fog Computing & Networking – A New Paradigm for Future IoT.” A recent trend during the past decade is to push various capabilities, such as computation, control, and storage, to the cloud. Such an over-dependence on the cloud, however, indicates that availability and fault tolerance issues in the cloud would directly impact millions of end-users. Such a cloud-centric architecture is not suitable for satisfying the demands of many delay-sensitive applications in future IoT. In viewing of these challenges, the cloud is now "descending" to the network edge and diffuses among the client devices in both mobile and wired networks. Such transition leads to the new paradigm of fog computing and networking. In this talk, I provided an overview of fog computing and networking and discussed some recent work related to this research area. There were about 20 people attending the talk, including postgraduate students and faculty members. Following my talk, there were interesting discussions related to the content of the talk and a lunch with NTHU faculty members.



My last stop of this tour was National Taiwan University and my host was Prof. Ai-Chun Pang. The title of my lecture was “Fog Computing & Networking – A New Paradigm for Future IoT.” In this talk, I provided an overview of fog computing and networking and discussed some recent work related to this research area. There were about 30 people attending the talk, including postgraduate students and faculty members. Following my talk, there were interesting discussions related to the content of the talk and a lunch with Prof. Pang.

