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# THE CHINESE UNIVERSITY OF HONG KONG

Department of Information Engineering

*Seminar*

## Intelligent Fog/Edge Platform: The key Enablers to Uberizing IoT for the Era of Current 5G and Future 6G


**by**

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**Date : 13th November, 2019 (Wednesday)**

**Time : 11:00am – 12:00pm**

**Venue : Room 801, Ho Sin Hang Engineering Building**
**The Chinese University of Hong Kong**


*Abstract*

It has been almost 50 years since ARPANET adopted TCP/IP as a standard, marking the era of Internet to govern our daily life related to shop, personal communications, and even social media communications as well. Now we are in a stage of another disruptive paradigm shift for both of technology innovation and business model. During this coming digital transformation era, Intelligent Fog/Edge Platform, a technology disrupter with a business model abrupter, will be key enablers to uberizing the Internet of Things in the era of current 5G and future 6G. For mobile systems, there are four key pillars; Communications, Caching, Computing and Energy (e.g. Battery). The goal of starting the Fog Computing & Networking research is to investigate the optimization of resources that are virtualized, pooled, and shared unpredictably. Fog Networking revisits the role of clients in network architectures, more than just an end-user device, but also as an integral part of the control plane that monitors, measures, and manages the network. This is rewriting the traditional practice of using heavy-duty and dedicated network elements for network measurement and management Fog Computing & Networking combine the study of mobile communications, fogbased radio access network (F-RAN) in 5G, distributed systems, and big data analytics into an exciting new area. Based on our preliminary research, it shows that new emerging services (such as V2V in Vehicular Telematics Services, Manufacturing 4.0 and Mobile Healthcare Services) could be realized and implemented easily and economically. It could be also served as core engine to enable many Services in Internet of Things (IoT) applications in 5G environment. In this proposed talk, we will first define Intelligent Fog/Edge Platform, and discuss its enablement, innovation and creation. Some of open research topics, current R&D initiatives (such as AR/VR, which is widely considered as a killer applications for Fog/Edge Computing enabled mobile communication networks, and V2V in Vehicular Telematics Services in car safety), and few vertical services will be discussed with students.


*Biography*

T. Russell Hsing is IEEE Life Fellow and Fellow for the British Computer Society and SPIE. He received his B.S. from National Chiao Tung University (Taiwan) in 1970, and his PhD in Electrical Engineering from University of Rhode Island (US) in 1977. He accumulated rich R&D experience of 40+ years as technical staff, engineer director and executive director through affiliations with Burroughs, Xerox, GTE Labs, TASC and Bellcore/Telcordia/Ericsson as Technical Staff, Research Director and Executive Director since 1977. He is currently Chair Professor with the National Chiao Tung University in Taiwan, and Advisory Council Member for Harvard Business Review (HBS). During his tenure at Telcordia, he has established two significant R&D centers, one in Taipei, Taiwan, and the other in Poznan, Poland. Both centers focused on advanced technologies for Telecommunication and Information Sciences partnering with local institutions to win significant contract funding from both commercial and local government sources.

**** ALL ARE WELCOME ****


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