

## SEMINAR ANNOUNCEMENT

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING  
Faculty of Engineering  
Website: <https://www.eng.nus.edu.sg/ece/>

**Area: Microwave & Radio Frequency**

**Host: Prof Chen Zhi Ning**

Technical Seminar Organized by  
National University of Singapore (NUS),  
IEEE Singapore VTS Chapter & IEEE CRFID Singapore Chapter

The seminar is FREE and NO Pre-registration is needed.

<b>TOPIC</b>	:	<b>Enable Artificial Intelligence of Things (AIoT) Service at Edge/Fog Networks</b>
<b>SPEAKER</b>	:	<b>Prof. Ai-Chun Pang National Taiwan University, Taipei</b>
<b>DATE</b>	:	<b>14 January 2020, Tuesday</b>
<b>TIME</b>	:	<b>2.30pm to 3.30pm</b>
<b>VENUE</b>	:	<b>E3-06-05, Engineering Block E3, Faculty of Engineering, NUS</b>

### ABSTRACT

Driven by the visions of the Internet of Things and 5G communications, recent years have seen a paradigm shift in mobile computing, from the centralized cloud computing toward the concept of computing at the edge. This concept pushes the mobile computing, network control and storage to the network edges (e.g., base stations and access points), to enable computation-intensive and latency-critical applications at the resource-limited mobile devices. End devices with high mobility (e.g., smartphones and smart cars), various emerging applications, and heterogeneous wireless network technologies of the edge incurs a critical challenge to the network management and resource allocation in the edge computing platform. With the recent advance in artificial intelligence (AI), many AI methods, like machine learning, not only are the key enablers of emerging applications but also can be utilized to overcome solve the problems mentioned above. The promised gains of computing at the edge and AI have motivated extensive efforts in both academia and industry on developing the technologies. This talk will focus on the orchestration between AI and computing at the edge. It considers AI as both the application of the edge and a technique to solve the issues of network management and resource allocation of the edge. We will firstly discuss current advancement in network management and resource allocation utilizing AI techniques. After that, we will discuss how computing the edge can provide AI service to realize emerging IoT applications. Finally, this talk will elaborate further on open research challenges.

### BIOGRAPHY



**Prof. Ai-Chun Pang** received the B.S., M.S. and Ph.D. degrees in Computer Science and Information Engineering from National Chiao Tung University, Taiwan, in 1996, 1998 and 2002, respectively. She joined the Department of Computer Science and Information Engineering, National Taiwan University (NTU), Taipei, Taiwan in 2002, and is now a Professor and Associate Dean of the College of Electrical Engineering and Computer Science, NTU. She was the director of Graduate Institute of Networking and Multimedia, NTU in 2013-2016. She is also an Adjunct Professor of Graduate Institute of Communication Engineering, NTU, and an Adjunct Research Fellow of Research Center for Information Technology Innovation, Academia Sinica, Taiwan. Her research interests include wireless and mobile networking, 5G communications, software defined networking, ultra-low latency communications and IoT applications, and fog/edge computing.

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