

KEYNOTE/PLENARY

Title:

**When Artificial Intelligence Meets the Internet of Things:
Motivations, Challenges, and Applications**

Speaker:

Prof. Wei Xiang

**Cisco Research Chair of AI and IoT, Director & Chief Scientist of the Australian Centre
for AI in Medical Innovation**

Director of the Cisco-La Trobe Centre for AI and IoT at La Trobe University

Abstract

Artificial Intelligence of Things (AIoT) is a newly emerging technology that combines IoT and AI technologies to enable decision making and analytics at IoT devices. IoT enables networks of physical objects that are equipped with sensors, software, and other technologies to exchange data with other devices and systems over the internet, while AI enables data analytics and automated decision making. This talk will start with the motivations of combining AI and IoT technologies as well as the associated challenges. Then Prof. Wei Xiang will talk about his experience in setting up Australia's first accredited IoT Engineering program at James Cook University, as well as establishing Australia's only industry-sponsored research centre that specialises in synergizing between AI and IoT technologies at La Trobe University. Before concluding the talk, Prof. Wei Xiang will talk about a wide range of applications and use cases his AIoT Centre has been working on in Australia.

Biography



Professor Wei Xiang is Cisco Research Chair of AI and IoT, Director & Chief Scientist of the Australian Centre for AI in Medical Innovation, and Director of the Cisco-La Trobe Centre for AI and IoT at La Trobe University. Previously, he was Foundation Chair and Head of Discipline of IoT Engineering at James Cook University, Cairns, Australia. Due to his instrumental leadership in establishing Australia's first accredited Internet of Things Engineering degree program, he was inducted into Pearcy Foundation's Hall of Fame in October 2018. He is an elected Fellow of the IET in UK and Engineers Australia. He received the TNQ Innovation Award in 2016, and Pearcy Entrepreneurship Award in 2017, and Engineers Australia Cairns Engineer of the Year in 2017. He was a co-recipient of four Best Paper Awards at WiSATS'2019, WCSP'2015, IEEE WCNC'2011, and ICWMC'2009. He has been awarded several prestigious fellowship titles. He was named a Queensland International Fellow (2010-2011) by the Queensland Government of Australia, an Endeavour Research Fellow (2012-2013) by the Commonwealth Government of Australia, a Smart Futures Fellow (2012-2015) by the Queensland Government of Australia, and a JSPS Invitational Fellow jointly by the Australian Academy of Science and Japanese Society for Promotion of Science (2014-2015). He was the Vice Chair of the IEEE Northern Australia Section from 2016-2020. He was an Editor for *IEEE Communications Letters* (2015-2017), and is currently an Associate Editor for *IEEE Communications Surveys & Tutorials*, *IEEE Internet of Things Journal*, *IEEE Access*, and Nature journal of *Scientific Reports*. He has published over 350 peer-reviewed papers including 3 books and 300 journal articles. He has severed in a large number of international conferences in the capacity of General Co-Chair, TPC Co-Chair, Symposium Chair, etc. His research interest includes the Internet of Things, wireless communications, machine learning for IoT data analytics, and computer vision.