

Title :A Look at Federated Learning from Different Perspectives

Date : 2023-12-25 2:00~4:00 pm

Location: 銘珠講堂

Speaker :Tony Q.S. Quek, IEEE Fellow /Singapore University of Technology and Design Hosted by : 阮文齡 助理教授

## **Abstract :**

Machine learning is playing an increasingly crucial role in the field of wireless communications due to its high efficiency in dealing with complex computations and models. In this talk, we provide a comprehensive coverage of a distributed learning paradigm based on federated learning, including the general architecture, model training algorithm, and analytical framework that quantifies the convergence rate. Specifically, we investigate federated learning from different perspectives, namely, wireless federated learning, over-the-air federated learning, data heterogeneity, and learning efficiency. Furthermore, we share some of our recent works in this area to provide different innovative ways of looking at this federated learning and tackling the inherent challenges of this technology.