

## RESEARCH SEMINAR

# Towards Low-latency Computing Services in Heterogeneous Edge Environments



**Mr Yu LIU**

PhD Candidate

Department of Electrical and Computer Engineering

Stony Brook University

USA

**Date : 14 August 2024 (Wed)**

**Time : 11:00 am - 12:00 pm**

**Venue : PQ703 / Online via Zoom**

## Abstract

The development of information technologies has facilitated many novel real-time applications, such as autopilot, smart home, and telemedicine. These applications require real-time processing and handling of high-volume data. Cloud computing, which involves transmitting high-volume data between end users and the cloud, can result in high latency. Edge computing, which pushes computing power closer to end users, is a promising solution to support such applications. However, providing low-latency computing services in edge environments presents new challenges due to the inherent nature of edge networks, such as resource/energy limitations and device/network heterogeneity. In this seminar, we will discuss service placement and resource management mechanisms aimed at minimizing service latency for heterogeneous edge systems with various requirements, such as task dependence, rapid decision-making, and energy constraints.

## About the Speaker

Mr Yu LIU is a PhD candidate in the Department of Electrical and Computer Engineering at Stony Brook University, expected to graduate in August 2024. He earned his B.Eng. degree in Telecommunications Engineering from the School of Telecommunications Engineering at Xidian University, China, in 2016. Mr Liu's research interests include edge computing and networks, with a particular focus on service placement and resource allocation to minimize latency. Additionally, he is interested in orbital-edge computing and distributed quantum computing.