

RESEARCH SEMINAR

Breaking Technology Barriers in Wireless and Sensing



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Date: 10 July 2023 (Mon)

Time: 2:30 - 3:30 pm

Venue: HJ303

Abstract

With the forthcoming boom in Internet of Things (IoT) rich settings, everyday ordinary applications are implanted with sensing and control capabilities. It becomes even more critical to ensure that authentication procedures to such services remain secure and user-friendly. In this talk, I will present our recent research in millimeter wave radar sensing and acoustic sensing to monitor vital signs. Millimeter wave has strong directivity and changeable operating frequency, and it provides a higher sensing resolution to capture the millimeter-level chest displacements and skin vibrations due to breathing and heartbeat. These systems can be deployed in a clinic setting or an age care facility to provide 24/7 monitoring of vital signs. In this talk, I will also introduce our recent work in developing an edge AI framework to push AI capabilities to edge devices.

About the Speaker

Tao Gu is currently a Professor in School of Computing at Macquarie University, Sydney, and Chief Scientist of Critical Supply Chain Cooperative Research Center. His current research interests include Internet of Things, Edge / Embedded AI, Mobile Computing, Ubiquitous Computing, Wireless Sensor Networks, and Digital Health. He has been served as an Editor of Proc. of the ACM on Interactive, Mobile, Wearable and Ubiquitous Technologies (IMWUT), an Associate Editor of IEEE Transactions on Mobile Computing (TMC) and IEEE Internet of Things Journal (IoT-J). The long-term goal of his research aims to discover innovative ways of sensing and connecting the physical world and embedding AI intelligence to facilitate the building of new applications. Please visit <https://taogu.site/> for more information.