

IEEE Sensors Council Distinguished Lecturer, 2025-2027
Beibei Wang Talk Title & Abstract

Title: Wi-Fi Can Do More: Towards Ubiquitous Wireless Sensing

Abstract: The next big deal for Wi-Fi is not about communication and networking, but sensing. Wireless Sensing technology is turning a Wi-Fi device into a ubiquitous sensor, which not only adds a brand new dimension to the functions, capabilities, and applications of all Wi-Fi systems, but also revolutionizes how sensing, especially human-centric sensing, is practiced. Wi-Fi Sensing utilizes ambient Wi-Fi signals to analyze and interpret human and object movements, underpinning many sensing applications such as motion sensing, sleep monitoring, fall detection, etc. These new sensing functionalities can benefit the global Wi-Fi ecosystem including integrated circuit manufacturers, device manufacturers, system integrators, application developers, and ultimately end users. In this talk, we introduce the concepts, principles of Wi-Fi Sensing, and share our unique technologies that have been deployed for real-world applications. We foresee that Wi-Fi Sensing will enter billions of devices and millions of homes, creating a smarter space for a smarter life.