

IEEE VTS NSW, NZNC and VIC Chapter Co-hosted Distinguished Lecture
GHz Bandwidth Sensing by Sub-Nyquist Signal Processing
by Professor Yue Gao

Tuesday 29 June 2021

07:00-08:00 UK | 16:00-17:00 Sydney | 18:00-19:00 Auckland

Webinar Channel: Join via Zoom, Meeting ID: 861 3504 6924

Abstract:

This presentation will present a new approach to design GHz bandwidth sensing (GBSense) systems to overcome Nyquist-rate sampling's bottleneck by developing sub-Nyquist sampling algorithms repurposing the existing expertise of intelligent antennas and reconfigurable transmission lines. The GBSense offers new creative and implementable possibilities over a real-time experimental platform framework without requiring Nyquist-rate sampling. The GBSense gives users access to a flexible hardware platform and application software that enables real-time over-air GHz bandwidth signal sensing, analysis and communication at both sub-6GHz and mm-wave frequency bands.

Biography:



Yue Gao is a Professor and the Chair of Wireless Communications at the University of Surrey, United Kingdom. He received a PhD degree from the Queen Mary University of London U.K. in 2007. He currently leads the antennas and signal processing lab and develops fundamental research into practice in the interdisciplinary area of smart antennas, signal processing, spectrum sharing, millimetre-wave and Internet of Things technologies in mobile and satellite systems. He has published over 200 peer-reviewed journal and conference papers, 3 patents, 1 book and 5 book chapters and 3 best paper awards. He is an Engineering and Physical Sciences Research Council Fellow from 2017. He was a co-recipient of the EU Horizon Prize Award on Collaborative Spectrum Sharing in 2016. Prof Gao is an elected member of the Board of Governors, the Distinguished Lecturer of the IEEE Vehicular Technology Society, the Vice-Chair of the IEEE ComSoc Technical Committee Wireless Communication, and the past Chair of IEEE Technical Committee on Cognitive Networks. He served as symposia and track chair of various IEEE conferences. He is an Editor for the IEEE INTERNET OF THINGS JOURNAL, IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY and IEEE TRANSACTIONS ON COGNITIVE NETWORKS.