

Invited Talk III

13:00–14:00, Tuesday, October 25, 2022

Challenges and Opportunities for New Radio New Type Communications for 5G and Beyond

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Abstract

The next-generation wireless communications will address the demands not only for cellular networks but also internet of everything. Varieties of new type applications would be inspired by the communications capabilities in high data rate, low latency, massive connections, and ubiquitous coverage. In this talk, we will discuss the challenges and the opportunities for new type communications in B5G/6G, especially in the areas of intelligent vehicle-to-everything (V2X) and the non-terrestrial network (NTN) communications. In particular, we will provide comprehensive coverage of challenges of autonomous driving and how intelligent V2X can help to cover the vulnerability. We will also discuss the emerging NTN over low earth orbit (LEO) satellite communications and how the NTN could help to facilitate the intelligent V2X.

Biography

Dr. Jen-Ming Wu is currently jointly appointed as the Director of the Next-Generation Communications Research Center, Hon Hai Research Institute, Taipei, Taiwan as well as Professor of the Institute of Communications Engineering Institute. He also serves as the BoG of IEEE Taipei Section since 2021. He has served the Chapter Chair of IEEE Vehicular Technologies Society Taipei Chapter (2020–2022) and BoG of the Taiwan Association of Intelligent Information and Communication Technology (TAIICT) (2019–2021). He has served as the TPC Chair of IEEE APWCS 2018 and General Co-Chair of APWCS 2019. He has also served as the TPC member for IEEE VTC, Globecom, and ICC, etc for many years. He received B.S. in Electrical Engineering from National Taiwan University, and Ph.D. in Electrical and Computer Engineering from University of Southern California (USC). His research interests include coding and modulation for B5G/6G PHY, MIMO beamforming and signal processing, space-time signal processing for MIMO radar, and LEO satellite platform and payload design. He holds 8 US patents in the field of communications, 14 technical contributions in 3GPP 5G New Radio and IEEE 802.16m standards meetings, and has published more than 100 technical articles in IEEE journals and conference proceedings.