



THE CHINESE UNIVERSITY OF HONG KONG
Department of Electronic Engineering

Distinguished Visiting Professor Seminar series



**Leaky-Wave Antenna Engineering for
Wireless Systems**

Professor Ke WU
Industrial Research Chair, Dept. of Elec. Engineering,
École Polytechnique (University of Montreal)
Montreal, Canada

Date: 28 Aug 2023 (Monday)

Time: 2:30 p.m.

Place: Rm 222, Ho Sin Hang Engineering Building, CUHK

Abstract

In the diverse and colorful electromagnetic radiation world, leaky-wave antenna (LWA), as a special kind of guiding structures characterized by both wave guidance and wave radiation, has received much attention since its inception in 1940s, thanks to its many appealing features such as high directivity, narrow directive beam, easy feeding mechanism, simple configuration, and particular frequency-driven beam-scanning (or space-frequency mapping) capability. Recent mainstream academic and industrial activities in this connection are well manifested in the development of various kinds of LWAs featuring multifarious functionalities/electrical characteristics and the exploration of possible system-level applications. This talk presents several novel concepts and techniques to develop a series of LWAs with elegant functionalities and electrical behaviors. Besides, this presentation also discusses a possible antenna front-end solution enabling LWAs to be used for wideband operation in radar sensing systems.

Biography

Dr. Ke Wu is the Industrial Research Chair in Future Wireless Technologies and Professor of Electrical Engineering with the Polytechnique Montréal (University of Montreal), where he is also the Director of the Poly-Grames Research Center. He was the Canada Research Chair in RF and millimeter-wave engineering, the NSERC-Huawei Endowed Chair, and the Founding Director of the Center for Radiofrequency Electronics Research of Quebec. He has authored/co-authored over 1400 referred technical papers, and numerous books/book chapters and filed more than 80 patents. Dr. Wu was the principal initiator and organizer of many conferences and events including the General Chair of the 2012 IEEE MTT-S International Microwave Symposium (IMS – the largest IEEE annual conference), the TPC Co-Chair of the 2020 IEEE International Symposium on Antennas and Propagation (APS). He was the 2016 President of the IEEE Microwave Theory and Technology Society (MTT-S). He also served as the two-terms inaugural representative of the North America in the General Assembly of the European Microwave Association (EuMA). He was the recipient of many awards and prizes including the 2019 IEEE MTT-S Microwave Prize, the 2021 EIC Julian C. Smith Medal, 2022 IEEE MTT-S Outstanding Educator Award, and 2022 IEEE AP-S John Kraus Antenna Award. He was an IEEE MTT-S Distinguished Microwave Lecturer. Dr. Ke Wu is a Fellow of the IEEE, the Canadian Academy of Engineering, and the Academy of Science of the Royal Society of Canada, and the German National Academy of Science and Engineering (acatech).

***** ALL ARE WELCOME *****

For enquiries: Prof. CHENG Kwok Keung (kkcheng@ee.cuhk.edu.hk), Tel: 3943 8269