香港城市大學 City University of Hong Kong

Department of Electronic Engineering

State Key Laboratory of Millimeter Waves 毫米波國家重點實驗室（香港）

IEEE (HK) Section AP/MTT

Distinguished Seminar on

Millimeter-Wave Electronics and Photonics: Towards Multilevel Multifunction Scalable Integrations

by

Prof. Ke Wu
University of Montreal, Canada

Abstract

Recent research and development of millimeter-wave electronics and photonics have generated a significant momentum for their potential mass applications. This leap forward is being propelled by the organic convergence of multiple technologies and the scalable integration of multiple functions. This presentation begins with the overview of the three most fundamental wireless functionalities, namely data, sensing and power. Basic features of millimeter-wave technology as well as its historical and social issues are exposed. Technological roadmap is highlighted with reference to various enabling and building technological elements, ranging from current and emerging compound materials to evolving and beyond CMOS, and from developing substrate integrated circuits to future electromagnetic techniques. The talk provides a brief tour of the state-of-the-art millimeter-wave devices, circuits, systems and applications. Challenging issues and future directions such as the emerging wireless systems are discussed for research and development. Potential problems and possible solutions are also presented.

Biography

Ke Wu is Professor of electrical engineering, and Canada Research Chair in RF and millimeter-wave engineering at the Ecole Polytechnique (University of Montreal). He has been the Director of the Poly-Grames Research Center and the Founding Director of the Center for Radiofrequency Electronics Research of Quebec. He has authored/co-authored over 940 referred papers, and a number of books/book chapters and more than 30 patents. He is one of the most prolific and highly cited authors in the engineering world. Dr. Wu has held key positions in and has served on various panels and international committees including the chair of technical program committees, international steering committees and international conferences/symposia. In particular, he was the general chair of the 2012 IEEE MTT-S International Microwave Symposium. He has served on the editorial/review boards of many technical journals, transactions and letters as well as scientific encyclopedia including editors and guest editors. He has been providing consulting services to corporations, governments and universities around the world. Dr. Wu is an elected IEEE MTT-S AdCom member and served as the chair of the IEEE MTT-S Transnational Committee and Member and Geographic Activities (MGA) Committee. He was the recipient of many awards and prizes including the inaugural IEEE MTT-S Outstanding Young Engineer Award, the 2004 Fessenden Medal of the IEEE Canada, the 2009 Thomas W. Eadie Medal from the Royal Society of Canada (The Academies of Arts, Humanities and Sciences of Canada), the Queen Elizabeth II Diamond Jubilee Medal and the 2013 Award of Merit of Federation of Chinese Canadian Professionals. He is a Fellow of the IEEE, a Fellow of the Canadian Academy of Engineering (CAE) and a Fellow of the Royal Society of Canada. He was an IEEE MTT-S Distinguished Microwave Lecturer from Jan. 2009 to Dec. 2011.

Date : December 16, 2013 (Monday)
Time : 02:30pm – 03:30pm
Venue : Room 15-202, Meeting room of State Key Laboratory of Millimeter Waves, 15/F, Academic 3,City University of Hong Kong

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

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