

IEEE KITCHENER-WATERLOO MTT Chapter Presentation

Ke Wu

**Professor of Electrical Engineering
Canada Research Chair in Radio Frequency and Millimeter-Wave Engineering
Poly-Grames Research Center
Ecole Polytechnique, Montreal, Canada**

[“Integration Techniques of Planar and Non-planar Structures for RF and Millimeter-Wave Circuits and Systems”](#)

Abstract:

Our proposed integration technologies of planar and non-planar structures as well as new progress in the field suggest that a unified multilayered framework of integrated multifrequency multichip modules be attractive for low-cost RF and millimeter-wave circuits and systems as well as millimeter-wave photonic applications. This presentation reviews the state-of-the-art and underlying features of the proposed integration platforms for designing the next generation high-frequency ICs. Challenging issues and future R&D directions are discussed. Potential problems and possible solutions are also presented. It is believed that new 3D schemes called substrate integrated circuits (SICs) will offer a potentially cost-effective and performance-promising solution for widespread applications. With the development of new micro-/nano-fabrication process and synthetic techniques, unique hybrid and monolithic high-density 3-D integration of planar and non-planar structures becomes realizable.

The speaker will also present the newly developed research infrastructures in connection with the “Facility for Advanced Millimeter-wave Engineering (FAME)” and the Poly-Grames Research Center as well as the other major research access. In addition, he will briefly talk about the current research efforts at his research center as a whole.

Biography:

Ke Wu is Professor of Electrical Engineering at Ecole Polytechnique (University of Montreal) and Canada Research Chair in Radio-Frequency and Millimeter-Wave Engineering. Dr. Wu held visiting or guest professorships with many universities around the world, including the Cheung Kong Endowed Chair Professorship and an Honorary Professorship. He has been the Director of the Poly-Grames Research Center, and the Founding Director of the Facility for Advanced Millimeter-wave Engineering (FAME). He has authored over 390 referred papers, and 12 books/book chapters. He has been invited to deliver over 130 invited presentations including keynote conference speeches around the world.

Dr. Wu has held positions in and has served on many national and international committees and conferences, including chairs of technical program committee, and general chairs and general co-chairs of international conferences including the general chairman of the future 2012 IEEE MTT-S International Microwave Symposium to be held in Montreal. He has served on the editorial or review boards of various international journals and IEEE Transactions and Letters including guest editors, associate editor, and editor-in-chef. He was elected into the board of directors of Canadian Institute for Telecommunication Research. He has been providing consulting service to a large number of companies. He is currently the Chair of the Joint IEEE Montreal Chapter of MTTs/APS/LEOS, and the Coordinator of IEEE MTT-S Region-7 Chapters. He was the recipient of many coveted awards and prizes including the Asia-Pacific Microwave Prize, the Urgel-Archambault Prize, the IEEE MTT-S Outstanding Young Engineer Award (the first recipient in the world) and the 2004 Fessenden Medal of the IEEE Canada. Dr. Wu is a Fellow of the IEEE, and a Fellow of the Canadian Academy of Engineering.

DATE: Monday November 22, 2004

All are Welcome!

TIME: 2:00pm

Invited by Prof. R. Mansour

LOCATION: EIT 3142, University of Waterloo Electrical & Computer Engineering Dept.