



# 学术报告

## ACADEMIC LECTURE

**题目:** UNIFIED AND ACCURATE CAD MODEL FOR RF, MICROWAVE  
AND MILLIMETER-WAVE INTEGRATED CIRCUITS AND ANTENNAS

**时间:** 2013.11.4(周一)早上 9:50

**地点:** 浙大玉泉校区行政楼 208 会议室

**报告人:** Professor Ke Wu



### Abstract:

We have proposed a unified CAD-oriented circuit model for accurate representation of radio-frequency (RF), microwave and millimeter-wave planar integrated circuits (ICs) and antennas. This is realized by implementing a so-called “short-open calibration” (SOC) procedure that calibrates (de-embeds) results obtained from full-wave numerical methods such as method of moments (MoM) with two unique calibration standards: *short and open elements*. This SOC is used to evaluate and to remove unwanted numerical error terms. Following a brief description of our SOC and 3-D MoM in this talk, different classes of planar structures are characterized in terms of their CAD circuit models that involve all physical effects, which are also well verified by our measurements. They are very useful not only in gaining physical insight into the electrical behavior of planar structure but also in implementing efficient network-oriented design/optimization approach. The proposed joint field/circuit models bridge the gap between field simulation/modeling and circuit design/synthesis. New development regarding other numerical calibration schemes will also be discussed in this presentation.

### Biography:

Dr. 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 with over 13934 citations. 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), and the Queen Elizabeth II Diamond Jubilee Medal. 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.