



University of Naples Federico II



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IEEE – EMC Italy Chapter

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## **IEEE Distinguished Lecture on:** **Multiphysics Solution for Nanoelectronics**

**Università di Napoli Federico II – Dipartimento di Ingegneria Elettrica**  
**May 12, 2011, h.10.30-12.00**

### **Speaker**

**Professor Wen-Yan Yin**, Qiu Shi Chair Professor, Centre for Optical and Electromagnetic Research, Zhejiang University, China

### **Abstract.**

More recently, significant progress has been achieved in the development of carbon nanotube (CNT)-based interconnects and CNT field effect transistors (CNTFET). In order to thoroughly understand signal transmission characteristics of single-, double-, and multi-walled carbon nanotube (SWCNT & DWCNT & MWCNT) transmission lines, we have to take quantum effects into account appropriately. In this talk, multiphysics solutions to various SWCNT, DWCNT, and MWCNT transmission lines and active devices will be addressed, with both frequency- and temperature-dependent quantum effects treated in detail.

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### **About the Speaker:**

**Wen-Yan Yin (M'99-SM'01)** received his M.Sc. degree from Xidian University in 1989 and Ph.D. degree from Xi'an Jiaotong University in 1994. He worked in the Department of Electronic Engineering, Northwestern Polytechnic University as an Associate Professor from 1993 to 1996. He was a Research Fellow with the Department of Electrical Engineering at Duisburg University, granted by the Alexander von Humboldt-Stiftung of Germany from 1996 to 1998. Since Dec.1998, he has been with the MMIC Modeling and Packing Lab, Department of ECE of National University of Singapore (NUS) as a Research Fellow. In March 2002, he joined the Temasek Laboratories of NUS, as a Research Scientist. From April 2005 to Dec.2008, he was with the School of Electronic Information and Electrical Engineering, as a Professor of Shanghai Jiao Tong University (SJTU). He was also the Director of Center for Microwave and RF Technologies (CMRFT) of SJTU. From Jan. 2009 to now, he is the "Qiu Shi" Chair Professor of Zhejiang University (ZJU), working at the Centre for Optical and Electromagnetic Research, National State Key Lab of MOI, ZJU of China. He is also the adjunct Professor of CMRFT, SJTU.

His main research interests are in the development of modeling techniques for passive and active RF and millimeter wave device and circuits, nanoelectronics, electromagnetic compatibility (EMC) and electromagnetic protection (EMP) of communication platforms, computational multiphysics methods and its applications.

He has published more than 180 international journal articles (including one international book, 15 book chapters and more than sixty IEEE Papers). One chapter of "Complex Media" is included in the Encyclopedia of RF and Microwave Engineering, published in 2005 by John Wiley & Sons, Inc.

Dr. Yin is the IEEE EMC Society Distinguished Lecturer from 2011 to 2012, General Co-Chair of IEEE EDAPS'2011. He received the Science and Technology Promotion Award of the first class from the local Shanghai government of China in 2005, the Technology Invention Award of the first class from the Educational Ministry of China in 2007, the National Technology Invention Award of the second class from Chinese government in 2008, and the Best Paper Award of APEMC'2008.

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