



University of Pavia

Ph.D. School of Electrical and Electronics Engineering and Computer Science
Ph. D. School in Microelectronics

SEMINAR

Millimeter-wave Identification, Sensing and Tracking (MIST) Systems for Future Internet of Things and Smart Environment

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Abstract: Emerging millimeter-wave Identification, Sensing and Tracking (MIST) technology is set out to exploit the smaller structure size and the larger available bandwidths in order to alleviate the limitations of low-frequency RFID. The successful development of MIST into markets is strategically critical for future smart living and better life in terms of green environment, efficient energy and secure information. In this work, the state-of-art of innovative techniques, which allow propelling the MIST technology in the front line of future innovative wireless systems will be presented. Two recent developments in our group will be highlighted with hardware demonstrations. Interestingly, the MIST concept is fully compatible with upcoming and future wireless requirements and architectures such as 5G technologies. The great potentials and exciting prospects of MIST systems as well as their technological challenges will be discussed.

Bio: 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 is also the NSERC-Huawei Industrial Research Chair in Future Wireless Technologies (the first Huawei-endowed Chair in the world). He has been the Director of the Poly-Grames Research Center and the Founding Director (2008-2014) of the Center for Radiofrequency Electronics Research of Quebec. He held/holds visiting/honorary professorships at various universities in the world. He has authored/co-authored over 1100 referred papers, and a number of books/book chapters and more than 40 patents. Dr. Wu was the general chair of the 2012 IEEE MTT-S International Microwave Symposium. He is the 2016 President of the IEEE Microwave Theory and Techniques Society (MTT-S). He also serves as the inaugural North-American representative in the General Assembly of the European Microwave Association (EuMA). 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, the 2013 Award of Merit of Federation of Chinese Canadian Professionals, the 2014 IEEE MTT-S Microwave Application Award, the 2014 Marie-Victorin Prize (Prix du Québec – the highest distinction of Québec in the Natural Sciences and Engineering), the 2015 Prix d'Excellence en Recherche et Innovation of Polytechnique Montréal and the 2015 IEEE Montreal Section Gold Medal of Achievement. 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.

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