



## SEMINAR

Department of Electronic Engineering  
The Chinese University of Hong Kong

### **Multi-Band Multi-Polarization Digital Beamforming Synthetic Aperture Radars**

by

**Prof. Steve Gao**

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**Date: 30 August 2016 (Tuesday)**

**Time: 2:00 p.m.**

**Venue: Rm 222 Ho Sin Hang Engineering Bldg., CUHK**

#### **Abstract**

Due to the use of microwave signals, Synthetic Aperture Radars (SAR) can operate at any time on any days, and has found wide applications in earth observations worldwide. This talk will present some results from the project DIFFERENT, which is funded by European Union FP7 program and aims at the development of a new-generation of Multi-Band Multi-Polarization Digital Beamforming Synthetic Aperture Radars for Europe. The SAR system architecture, and its subsystems (antenna systems and RF board development, etc), will be discussed. Some results will be presented and discussed. A conclusion will be given in the end.

#### **Biography**

Steven Gao, *PhD*, is a Professor and Chair of RF and Microwave Engineering at the University of Kent, Canterbury, UK. He started his career since 1994 while at China Research Institute of Radiowave Propagation (China). Then he worked as a Post-doctoral Research Fellow at National University of Singapore (Singapore), a Research Fellow at Birmingham University (UK), a Visiting Research Scientist at Swiss Federal Institute of Technology (ETH Zurich, Switzerland), a Visiting Fellow at Chiba University (Japan), a Visiting Scientist at University of California at Santa Barbara (US), and a Senior Lecturer, Reader and Head of Antenna and Microwave Group at Northumbria University (UK). Prior to joining Kent as a Professor in Jan. 2013, he was the Head of Satellite Antennas and RF System Group at Surrey Space Centre, University of Surrey (UK). He also held short-term visiting appointments at some institutes including as a Visiting Professor at Northwestern Polytechnic University (China) and the University of Calabria (Italy).

Prof. Gao is a Distinguished Lecturer of *IEEE Antennas and Propagation Society*, an Associate Editor of *IEEE Transactions on Antennas and Propagation*, Associate Editor of *Radio Science* (US). He is a Fellow of IET. He has two books including *Space Antenna Handbook* (Wiley, 2012) and *Circularly Polarized Antennas* (Wiley-IEEE, 2014), over 250 papers and several patents. His main areas of expertise are in antennas, smart antennas, phased arrays, MIMO, satellite antenna, RF/microwave/millimetre-wave/THz circuits and RF front ends, satellite communications, wireless power transfer, UWB radars, GNSS reflectometry, synthetic-aperture radars, remote sensing, electromagnetic modelling and small satellites.

**\*\*\* All are welcome to attend \*\*\***

For inquires, please contact Prof. K.L.WU, Tel. No. 3943 8287