

Seminar On

Research on Multifunctional Reconfigurable Microwave Passive Devices

By

Dr Feng Lin

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Date : 30 July 2018 (Monday)

Time : 11:00 am – 12:00 noon

Venue : Room 15-202, meeting room of State Key Laboratory of Millimeter Waves,
15/F, Lau Ming Wai Academic Building, City University of Hong Kong

Abstract

With advances in wireless communications, the radio spectrum resources increasingly tense. To increase the efficiency of spectrum usage and reduce the size and cost of wireless handsets, software defined radio and cognitive radio require modern transceiver systems to be reconfigurable for supporting multiple frequencies and different communication standards. There is a great demand for multifunctional reconfigurable devices, which can change their frequency and operation mode based on the unused/available wireless spectrum and their surrounding environmental conditions.

This talk will introduce three different kinds of microwave passive components with reconfigurable responses:

- 1): Tunable 0.6 GHz-1.7 GHz bandpass filter with constant bandwidth using switchable varactor-tuned resonators
- 2): Design of a class of filtering couplers with reconfigurable frequency
- 3): Advanced quadrature couplers with reconfigurable power-dividing ratio

Biography

Feng Lin (林峰) received the B.Eng. degree in information engineering and Ph.D. degree in electromagnetic fields and microwave technology from the South China University of Technology, Guangzhou, China, in 2008 and 2013, respectively. His Ph.D. dissertation concerned design theory and realization of multiband couplers and power dividers. From 2013 to 2015, he was a Post-Doctoral Research Fellow with the University of Michigan, Ann Arbor, MI, USA. In 2016, he joined the School of Information and Electronics, Beijing Institute of Technology, Beijing, China, as an Associate Professor. His current research interests include RF MEMS and millimeter-wave reconfigurable devices.

*** ALL ARE WELCOME ***

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