

Seminar On

Millimeter-wave Antenna Array and Dielectric Resonator Antenna Array

By

Dr Zhijiao Chen

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Date : 03 January 2018 (Wednesday)
Time : 10:30 am – 11:30 am
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

Smart antennas increase user capacity by directing virtual radiation patterns towards the desired user, which heavily increases the cost of equipment and system complexity. In contrast, semi-smart antennas improve the capacity of cellular networks (based on CDMA) by intelligent local cooperation between adjacent base-stations through changing the coverage according to the geographic traffic distribution in real time. In this way, a moderate capacity increase (around 20%) is available through the use of simple, low cost base-station antenna equipment and supervisory system, without any change to the mobile handset.

This seminar is focused on a variety of antenna concepts that can aid the deployment of the semi-smart base-station concept across the whole mobile landscape. It includes the developments of beam forming algorithm for circular/conformal array, metamaterial structures for outdoor Base Station (BS) antennas, Dielectric Resonator Antennas (DRA) for Wi-Fi Access Point (AP), Ultra-wideband (UWB) antennas for Picocell/Femtocell and hexaferrite antennas for TV White Space (TVWS). In addition, recent research on millimeter-wave antenna array and DRA array would be discussed.

Biography

Dr Zhijiao Chen received BSc from Beijing University of Posts and Telecommunications and BSc (Eng) from Queen Mary University of London in 2010, the Ph.D. degree in electronic engineering from QMUL in 2014, and then join the school of electronic engineering in BUPT as a Lecturer in 2014. Dr. Chen was secondment to Ace-Axis Wireless Technology Laboratories Ltd (Essex, UK) in 2012, and joined Northeastern University (Boston, MA) as a visiting student in 2013. She was the receipts of the Best Paper Award in iWAT 2013 (Karlsruhe, Germany), TICRA Travel Grant in EuCAP 2014 (Hague, Netherland), 3rd Place in QMUL Three-Minute Thesis (3MT) Competition Final 2014 (London, UK), and 3rd Prize Student Paper Competition in APS/URSI 2013 (Orlando, FL). Her research interests include millimeter wave antennas and dielectric resonator antennas.

*** ALL ARE WELCOME ***

Enquiries:

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