Thursday, April 26
Scaife Hall Auditorium
Room 125 at 4:30 p.m.
Refreshments at 4:00 p.m.

Low-Cost Phased Array and Reflectarray Antennas

Electronically scanned phased arrays are widely used in various civil and military applications including radar, broadcasting, cellular communications, satellite communications, and weather forecasting. However, the implementation of phased arrays has been limited to base stations, military applications, and high-end commercial products, regardless of their numerous technical advantages. The primary hindrance of the wide-scale deployment of phased arrays is the high cost associated with transmit/receive (T/R) modules. Phase shifters are critical elements within these T/R modules that create phase shifts between antenna elements and steer the antenna beam to the desired direction. In many cases, the cost of phase shifters is up to nearly half of the cost of an entire electronically scanned phased array. This seminar is to present an innovative concept termed electronically steerable passive array radiator (ESPAR) to realize next-generation low-cost phased arrays, and related techniques for millimeter-wave applications.

Xun Gong
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Xun Gong received his B.S. and M.S. degrees in Electrical Engineering from FuDan University in 1997 and 2000, respectively, and the Ph.D. degree in Electrical Engineering from the University of Michigan, Ann Arbor in 2005. He is currently an associate professor in the Department of Electrical Engineering and Computer Science at University of Central Florida (UCF). He was with the Birck Nanotechnology Center at Purdue University, West Lafayette, IN, as a post-doctoral research associate. He served as the Chair of the IEEE Wireless and Microwave Technology Conference (WAMICON) 2012, and was appointed as the Operations Chair of 2014 IEEE MTT-S International Microwave Symposium (IMS) and the TPC Chair for 2013 IEEE AP-S International Symposium. He served as the IEEE AP/MTT Chapter Chair in Orlando, FL during 2007-2010. He has been the recipient of the NSF Faculty Early CAREER Award for 2009-2014.

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