

Seminar on

GHz to THz Components and Microsystems Utilizing 3D Additive Manufacturing Technology

by

Prof Hao Xin

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Abstract

Additive manufacturing technologies, often called 3D printing, have received much attention recently with impressive demonstrations ranging from musical instruments, to vehicles, to housing components or even entire buildings. Different structural materials including metal, polymer, ceramics, biological tissues and even concrete, have been incorporated in various 3D printing technologies. Printing dimension ranging from nanometers to meters has been reported. This presentation will highlight several research projects being carried out at Prof. Hao Xin's group in the area of 3D printed electronics such as waveguides, antennas, lenses and holographic devices for GHz to THz operation. Interesting applications enabled by 3D printed structures such as a new type of lens array for electronic beam scanning will also be described. Some of important future research directions will be discussed as well.

Biography

Dr. Hao Xin, Professor of Electrical and Computer Engineering at the University of Arizona. He is named an Arizona Engineering fellow in Aug. 2013. He joined University of Arizona since August 2005 as an assistant professor. He was promoted to tenured associate professor in 2009 and to full professor in 2012. He received his Ph.D in Physics from Massachusetts Institute of Technology in February 2001. From 2000 to 2003, he was a research scientist with the Rockwell Scientific Company. He was a Sr. Principal Multidisciplinary Engineer with Raytheon Company from 2003 to 2005.

His primary research interests are in the area of microwave / millimeter wave / THz antennas, devices, circuits and their applications in wireless communication and sensing systems. His recent research activities have covered a broad range of high frequency technologies, including applications of new technologies and materials in microwave and millimeter wave circuits such as electromagnetic band gap crystals and other meta-materials, carbon nano-tubes devices, solid state devices and circuits, active or semi-active antennas, and passive circuits. He has authored over 230 referred publications and 14 patents (13 issued and 1 pending) in the areas of microwave and millimeter-wave technologies, random power harvesting based on ferro-fluidic nano-particles and carbon nanotube based devices. He is a senior member of IEEE and chair of the joint chapter of IEEE AP/MTT/EMC/COMM in Tucson AZ. He is a general co-chair of the 8th International Workshop on Antenna Technology. He also serves as an associate editor for IEEE Antennas and Wireless Propagation Letters. hxin@ece.arizona.edu 520-626-6941.

Date : 10 June 2015 (Wednesday)

Time : 02:30 pm – 03:30 pm

Venue : Room 15-202, 15/F, meeting room of State Key Laboratory of Millimeter Waves, 15/F, Academic 3, City University of Hong Kong

*** ALL ARE WELCOME ***

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