

Seminar on

SYMETA: SYnthesizing 3D METAmaterials for RF, microwave and THz applications

by

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Date : 15 February 2016 (Monday)
Time : 04:00 pm – 05:00 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

Abstract

SYMETA is a 5 year research programme and a 5 University consortium supported by 15 companies addressing EPSRC's Grand Challenge: Engineering across length scales, from atoms to applications; SYMETA is a radical research project with the potential to transform communication, electronics and manufacturing industries. Metamaterials offer a unique opportunity, however up until now, manufacture of metamaterials has been limited to the small-scale through work taking place in University labs and workshops. SYMETA offers a truly disruptive advancement in the technology: to scale up the manufacture of materials with end-user-defined electromagnetic parameters, with metallic, dielectric and magnetic inclusions. Wireless products will be manufactured at rapid rates, at the point of use and with minimal waste. SYMETA will manufacture materials from which the subwavelength building blocks ("meta-atoms") can be constructed. SYMETA will electromagnetically characterise current materials used in additive manufacture and will design, manufacture and test new materials developed by the consortium partners.

The talk will introduce this Grand Challenge and outline SYMETA's building blocks and organisation.

Biography

Yiannis Vardaxoglou is the Head of the Wireless Communications Research Group (WiCR) researching wide-ranging topics applicable to cutting-edge wireless communications technology. His research focuses primarily on antennas, microwave and mm-wave engineering, and metamaterial structures, with income >£10M (300 publications). He authored a pioneering book on Frequency Selective Surfaces. WiCR collaborates with many internationally leading companies and universities and is home to the internationally renowned Loughborough Antennas & Propagation Conference (currently in its 12th year).

***** ALL ARE WELCOME *****

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