Seminar On

A review of computational microwave and millimeter wave imaging

By

Dr Thomas Fromenteze

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Date : **24 July 2018 (Tuesday)**

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

This talk focuses on the emergence of computational imaging techniques used in the microwave and millimeter wave domains that allow for the simplification of conventional architectures used in various applications such as medical diagnosis and security screening.

These approaches rely essentially on the development of radiating components allowing the spatial information of a region of interest to be encoded onto a set of frequency points by means of random field patterns interrogating the scene. Such techniques reduce the number of active chains required for the development of real-time imaging systems by shifting constraints to the numerical layer where it is necessary to solve inverse problems using increasingly powerful and affordable computing machines.

A review of different applications of these techniques carried out by Xlim research institute and Duke University will thus be presented.

Biography

Thomas Fromenteze received the Ph.D. degree in 2015 from the University of Limoges, France. In 2015-2016, he was a Post-Doctoral Researcher with the Center for Metamaterials and Integrated Plasmonics, Duke University, USA. Since 2017, he is an Assistant Professor at the University of Limoges, working with Xlim Research Institute. He is also an adjunct assistant professor at Duke CMIP. His main research interests lie in microwave and millimeter wave imaging, computational imaging, wave propagation in complex media, and the associated inverse problems. He received the 11th EuRAD Young Engineer Prize during the European Microwave Week 2015.

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

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