

## **IET Toronto Local Network Event**

### **Technical Presentation**

**Date: 16<sup>th</sup> October 2014**

**Time: Arrive at 18:30, presentation starts at 18:45 for approx. 1hr with Q&A session.**

**Title: “Microwave Engineering Research at the Emerging Microwave Technologies Group (INAOE, Mexico)”**

The Microwave Emerging Technologies Group was created in 2005 in the National Institute of Astrophysics, Optics and Electronics (INAOE, Mexico). Since then, several technologies have been developed for various applications such as Radioastronomy, Telecommunications and Material Sensing. In this talk an overview of some of these technologies will be presented.

Firstly, High Temperature Superconducting filters will be shown which are used to suppress unwanted bands for Radio-telescopes. In addition, some of the advances in electromagnetic sensing of materials and food products will be exposed. Finally, recent advances in breast cancer detection using microwave scanners will be presented.

### **The Speaker**

Dr. Alonso Corona-Chavez, PhD, BSc, CEng, SMIEEE, MIET, is Head of the Emerging Microwave Technologies Group, National Institute of Astrophysics, Optics and Electronics, Puebla, Mexico.

Dr. Corona obtained his BSc. in Electronics Engineering from ITESM, Mexico and his PhD from the University of Birmingham, UK in 2001. His PhD thesis concerned microwave beamformers using High Temperature Superconductors. From 2001 to 2004 he was a microwave engineer for CryoSystems Ltd. (UK) where he developed superconducting Front Ends for the telecommunications industry. Moreover, he was an Honorary Research fellow at the Electrical Engineering Department of the University of Birmingham, UK (2001-2004).



In 2004 he joined the National Institute of Astrophysics, Optics and Electronics where he founded the Emerging Microwave Technologies Group, Puebla, Mexico. In April 2009 he was awarded a Fulbright fellowship to carry out research at the Electrical Engineering Department, University of California at Los Angeles. From January 2014 he has been a visiting Professor at Queen's University, Kingston, Ontario.

## The Venue

Upper Dining Room  
Faculty Club  
University of Toronto  
St. George Campus  
41 Willcocks Street  
Toronto, Ontario  
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Canada

