

Seminar on

Mysteries of DRA Modes: Unresolved Issues for the Future

by

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Abstract

This is just 31 years past after the Dielectric Resonator Antenna (DRA) was invented in 1983. Up to about 2005, the DRA research was primarily confined to limited number of research groups, who contributed significantly to its understanding and developments. This scenario gradually changed with time and the antenna community across the world realized its importance.

In recent years, the DRA researchers have been trying to explore newer features and possibilities to use DRAs in more effective way. This non-metal resonating structure is full of mysteries in the eye of electromagnetics and still remains an open book to us.

In this presentation, we will address two interesting aspects, which we have explored and unveiled during 2005-2014. These include the mysteries of resonant modes in DRAs, their realization in practical structures, and possible applications. The approach may be categorized as: (i) unknown modes in known geometry, and (ii) known modes in unknown geometries, both of which being equally important from application point of view. We will try to indicate the unresolved issues and a bunch promising problems to be solved by the new generation researchers in the future.

Biography

Debatosh Guha is Professor in the Institute of Radio Physics and Electronics at the University of Calcutta, India. He was Visiting Research Professor and Scientist in Different Universities and Research Labs in the USA, Canada, and UK. He has researched in developing various techniques for advancement of Microstrip and Dielectric Resonator Antenna (DRA) technologies. Application of Defected Ground Structure in antenna designs is one of his major contributions. He has published over 200 technical papers in top Journals and Conferences along with a Book entitled 'Microstrip and Printed Antennas: New Trends, Techniques and Applications' Wiley, UK, 2011. He has developed high gain wireless antennas for commercial products, available in the North America since 2007.

Professor Guha is a Fellow of the Indian National Academy of Engineering and Senior Member of the IEEE. He is a recipient of 2012 RMTG Senior Researcher Award of IEEE AP-Society, URSI Young Scientist Award 1996, and Jawaharlal Nehru Memorial Fund Prize 1984.

He is present Chair of IEEE Kolkata Section and URSI Commission B Chair for Indian National Committee. He served IEEE AP-MTT Kolkata Chapter as the Founding Chair (2004) and Chair (2010-2011). He introduced two major International Conferences on Antennas (annual) and Applied Electromagnetics (biennial) in India in 2010 and 2007, respectively. His current research interests include exploring unconventional modes and feeds for DRA, UWB and Broadband DRAs, DGS-inspired advanced antenna and arrays, unresolved issues of microstrip antenna design, and compact antennas for wireless applications.

Date : 11 September, 2014 (Thursday)
Time : 04:30 pm – 05:30 pm
Venue : Room 15-202, 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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