Posting Detail

Title : (Reminder) Distinguished Lecture on Advances in Electromagnetic Horn Antennas by Dr Trevor S. Bird

Body :

Department of Electronic Engineering
&
State Key Laboratory of Millimeter Waves (Hong Kong)

IEEE AP/MTT HK Joint Chapter

Distinguished Lecture on

Advances in Electromagnetic Horn Antennas

By

Dr Trevor S. Bird FTSE, FIEEE, Hon. FEng. Aust
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Date *: 09 May 2011 (Monday)*
Time *: 03:00 p.m. – 04:00 p.m.*
Venue *: Room G 6302, 6/F, Green Zone, Academic Building, City University of Hong Kong*

Abstract
Electromagnetic horn antennas are one of the most useful tools in the armoury of antenna engineers everywhere. They are used from basic experiments in microwaves to sophisticated feeds for multi-million dollar reflectors in space or on the earth. They were also involved in some of the first experiments on electromagnetics by Bose in the 1880s. The applicable frequencies are from VHF to terahertz and beyond. As the frequency has increased into the terahertz region, the horn antenna has continued to be used because it provides a reliable and stable radiation pattern, which is readily designed. Major developments have happened in horn technology over the years, from scalar horns and small apertures through to corrugated and dielectric lined varieties. Some improvements have been possible in recent years through the use of accurate computer software and developments in new or synthetic electromagnetic materials.

This talk will commence with an introduction on the common horn types such as smooth-wall and corrugated geometries. Some practical examples will be high-lighted. Recent horn improvements will be described for profiled circular and rectangular geometries. Finally, recent application of metamaterials to enhance a horn's performance will be described.

Biography

Trevor S. Bird received the B. App. Sc., M. App. Sc. and PhD degrees from the University of Melbourne. He is currently a CSIRO Fellow and Principal of Antengenuity, a specialist consulting firm, an Adjunct Professor at Macquarie University and a Guest Professor of Shanghai Jiao Tong University.

Dr Bird is a Fellow of four learned societies, including the Australian Academy of Technological and Engineering Sciences and IEEE. He has published widely in the areas of antennas especially for wireless and satellite communications while active in commercial exploitation of research (holds 13 patents). He has received 5 best paper awards including the 2001 H.A. Wheeler Applications Prize Paper Award of the IEEE Antennas & Propagation Society. Teams he has led have been recognised for excellence on three occasions including the Society of Satellite Professionals International (New York) in 2004. Dr Bird has been recipient of a CSIRO medal twice for research excellence. He received an Australian Centenary Medal in 2003 for service to Australian society in telecommunications and also that year was named Professional Engineer of the Year by the Sydney Division of Engineers, Australia.

He was a Distinguished Lecturer for the IEEE Antennas & Propagation Society from 1997 to 1999, Vice-chair and Chair of the NSW IEEE Section in 1999 to 2000 and 2001 to 2002 respectively, Associate Editor of the IEEE Transactions on Antennas & Propagation from 2001 to 2004, Editor-in-Chief of these Transactions from 2004 to 2010. Currently, he is member of the Editorial Boards of IEEE Transactions on Microwave Theory & Techniques, Journal of Infrared, Millimeter and Terahertz Waves and IET Microwaves, Antennas & Propagation as well as Chair of the IEEE Antennas & Propagation Society's Publication Committee. His biography has since 2006 been listed in Who's Who in Australia.

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

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Venue :	Not Applicable
Category :	Academic Seminar
Department/Office :	State Key Lab of Mm Waves (SKL)
Event Start Date :	2011-05-09
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Attachment :	

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