

Seminar on

On the Ideal Antenna and the Physical Aperture of General Antennas

by

Professor Raphael Kastner

School of Electrical Engineering, Tel Aviv University, Tel Aviv 69978, Israel

Abstract:

The value of the physical aperture of a given antenna is needed for the purpose of specifying the incident, or available power in receive mode. While quite obvious for large aperture-type antennas, this value is not clear for small and slender antennas. In order to generalize the definition, we propose to rely on the concept of an ideal antenna (IA), one that absorbs all the power incident upon it and having an aperture efficiency of unity. A corresponding IA can be defined for arbitrary antenna, including small and slender ones. With it one can define the generalized physical aperture (GPA) as the effective aperture of the IA.

Biography:

Raphael Kastner (F'08) was born in Haifa, Israel, in 1948. He received the B.Sc.(summa cum laude) and the M.Sc. degrees in electrical engineering, engineering from the Technion, Israel Institute of Technology in 1973 and 1976, respectively, and his Ph.D.degree from the University of Illinois, Urbana, in 1982.

From 1976 to 1988 he was with RAFAEL, Israel Armament Development Authority, where from 1982 to 1986 he headed the antenna section. He was a Visiting Assistant Professor at Syracuse University from 1986 to 1987, and a Visiting Scholar at the University of Illinois in 1987 and 1989. Since 1988 he has been with School of Electrical Engineering, Tel Aviv University, where is now a Professor. In 2000 he co-founded XellAnt Inc. and acted as its CEO until 2004. He is a recipient of the IEEE Third Millennium medal and several excellence in teaching awards, and is a member of Tau Beta Pi and Eta Kappa Nu. His research interests are in computational electromagnetics and antennas.

Date : 9 February 2015 (Monday)
Time : 04:00 pm – 05:00 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 ***

Enquiries:

Professor Kwok Wa LEUNG, Department of Electronic Engineering
Tel.: (852) 3442 9659 Fax: (852) 3442 0562 E-mail: eekleung@cityu.edu.hk