

IEEE Distinguished lecture. University of Siena, Department of Information Engineering and Mathematics, Via Roma 56, 53100, Siena,

Monday, June 13, 14:30-15:30 Aula Videoconferenze,

“Some Recent advances in Antennas Near Field Theory and possible Impact on Future Electromagnetic Applications”

Yahia Antar, IEEE Fellow

Canada Research in Electromagnetic Engineering, Royal Military College of Canada & Queen's University, Kingston, Ontario, Canada

Abstract

Microwave and millimeter wave antennas are vital components for wireless and satellite communications, radars and other sensors, and many other emerging applications. The presentation will start by general discussion of some research activities at the Royal Military College of Canada and Queen's University that are aligned with recent and emerging research directions in the field including a brief discussion of the state of art of Dielectric Resonator Antennas (DRA's) and a new class of one and two dimensional Leaky Wave Antennas . This will be followed by addressing some new theory and findings about the fundamentals of antenna near fields. The impact of these new findings on antenna design will be illustrated through examples involving MIMO antennas, near field focusing , and mutual coupling considerations in antenna systems.

Speaker Biography



Dr. Yahia Antar obtained degrees from the University of Alexandria (BSC) and the University of Manitoba (MSc. ,PhD). He worked at CRC and NRC in Ottawa before joining the staff of the Department of Electrical and Computer Engineering at the Royal Military College of Canada in Kingston where he has held the position of professor since 1990.

Dr. Antar is a Fellow of the IEEE (Institute of Electrical and Electronic Engineers) and a Fellow of the Engineering Institute of Canada (FEIC). He serves as an Associate Editor (Features) of the IEEE Antennas and Propagation Magazine and served as Associate Editor of the IEEE Transactions on Antennas and Propagation, IEEE AWPL. He served on NSERC grants selection and strategic grants committees, Ontario Early Research Awards (ERA) panels, and on review panels for the National Science Foundation.

In May 2002, Dr. Antar was awarded a Tier 1 Canada Research Chair in Electromagnetic Engineering which was renewed in 2009. In 2003 he was awarded the Royal Military College of Canada “Excellence in Research” Prize and in 2012 the Class of 1965 Teaching Excellence Award. He served on the URSI Board as Vice President, and on the IEEE Antennas and Propagation Society Administration Committee. On 31 January 2011, Dr. Antar was appointed Member of the Canadian Defence Science Advisory Board (DSAB). In October 2012 he received from the Governor General of Canada, the Queen's Diamond Jubilee Medal in recognition for his contribution to Canada. He is the recipient of the 2014 IEEE Canada RA Fessenden Silver Medal ,the 2015 recipient of the IEEE Canada J.M. Ham Outstanding Engineering Educator Award, and The 2015 Royal Military College Cowan Prize for excellence in Research.