Announcing the AMTA 2008 Short Course!

Modern Topics in Antenna Measurements, Diagnostics and Optimizations: From Fundamentals to Recent Advances

Presented by:
Yahya Rahmat-Samii, Professor
University of California Los Angeles

Sunday, November 16, 2008
The Boston Park Plaza Hotel
Boston, Massachusetts
9:00 am – 5:00 pm

A separate registration fee is required to attend this short course ($300 early/$350 late).
Note registration opens on July 15, 2008.
The short course consists of six each one-hour lectures on the following topics and includes a continental breakfast served at 8:00 am, lunch, refreshments and a handout of the presentation materials.

Short Course Outline

Fundamental of EM Concepts for Antenna Characterizations
Antenna Radiated Fields, Ideal Dipole,
Solution of Wave Equations and Special Functions

Fundamentals of Various Near-Field Measurement Techniques
Equivalence Theorem, Spectral Formulation and Probe Corrections

Understanding Antenna Near-Field Diagnostic Techniques
Simulation Models, Back-Projections, Sampling Theorems

Case Studies of Several Reflector and Array Antenna Measurements
Reflector and Array Antenna Measurement Examples

Phaseless Measurements and Recent Advances
Why Phaseless Measurements, Phase Retrieval Algorithms, Measured Results

Advances in Antenna Design Optimizations
Genetic Algorithms (GA) and Particle Swarm Optimization (PSO)

Short Course Instructor Biography

Professor Yahya Rahmat-Samii (S'73-M'75-SM'79-F'85) received the M.S. and Ph.D. degrees in electrical engineering from the University of Illinois, Urbana-Champaign. He is a Distinguished Professor and past Chairman of the Electrical Engineering Department, University of California, Los Angeles (UCLA). He was a Senior Research Scientist with the National Aeronautics and Space Administration (NASA) Jet Propulsion Laboratory (JPL), California Institute of Technology prior to joining UCLA in 1989. In summer 1986, he was a Guest Professor with the Technical University of Denmark (TUD). He has also been a consultant to numerous aerospace and wireless companies.

He has been Editor and Guest editor of numerous technical journals and books. He has authored and coauthored over 720 technical journal and conference papers and has written 25 book chapters. He is a coauthor of Implanted Antennas in Medical Wireless Communications, (Morgan & Claypool Publishers, 2006), Electromagnetic Optimization by Genetic Algorithms (New York: Wiley, 1999) and Impedance Boundary Conditions in Electromagnetics (New York: Taylor & Francis, 1995). He has received several patents. He has had pioneering research contributions in diverse areas of electromagnetics, antennas, measurement and diagnostics techniques, numerical and asymptotic methods, satellite and personal communications, human/antenna interactions, frequency selective surfaces, electromagnetic band-gap structures, applications of the genetic algorithms and particle swarm optimization, etc., (visit http://www.ee.ucla.edu/antlab).

Dr. Rahmat-Samii is a Fellow of the Institute of Advances in Engineering (IAE) and a member of Commissions A, B, J and K of USNC/URSI, the Antenna Measurement Techniques Association (AMTA), Sigma Xi, Eta Kappa Nu and the Electromagnetics Academy. He was Vice-President and President of the IEEE Antennas and Propagation Society in 1994 and 1995, respectively. He was appointed an IEEE AP-S Distinguished Lecturer and presented lectures internationally. He was a member of the Strategic Planning and Review Committee (SPARC) of the IEEE. He was the IEEE AP-S Los Angeles Chapter Chairman (1987-1989); his chapter won the best chapter awards in two consecutive years. He is listed in Who's Who in America, Who's Who in Frontiers of Science and Technology and Who's Who in Engineering. Professor Rahmat-Samii is the designer of the IEEE Antennas and Propagation Society (IEEE AP-S) logo displayed on all IEEE-AP-S publications. He has been the plenary and millennium session speaker at numerous national and international symposia. He has been the organizer and presenter of many successful short courses worldwide. He was a Directors and Vice President of AMTA for three years. He has been Chairman and Co-chairman of several national and international symposia. He was a member of the University of California at Los Angeles (UCLA) Graduate council for three years.

For his contributions, Dr. Rahmat-Samii has received numerous NASA and JPL Certificates of Recognition. In 1984, he received the Henry Booker Award from URSI, which is given triennially to the most outstanding young radio scientist in North America. Since 1987, he has been designated every three years as one of the Academy of Science's Research Council Representatives to the URSI General Assemblies held in various parts of the world. He was also invited speaker to address the URSI 75th anniversary in Belgium. In 1992 and 1995, he received the Best Application Paper Prize Award (Wheeler Award) for papers published in 1991 and 1993 IEEE Transactions on Antennas and Propagation. In 1999, he received the University of Illinois ECE Distinguished Alumni Award. In 2000, Prof. Rahmat-Samii received the IEEE Third Millennium Medal and the AMTA Distinguished Achievement Award. In 2001, Rahmat-Samii received an Honorary Doctorate in physics from the University of Santiago de Compostela, Spain. In 2001, he became a Foreign Member of the Royal Flemish Academy of Belgium for Science and the Arts. In 2002, he received the Technical Excellence Award from JPL. He received the 2005 URSI Booker Gold Medal presented at the URSI General Assembly. He is the recipient of the 2007 Chen-To Tai Distinguished Educator Award of the IEEE Antennas and Propagation Society. In 2008, he was elected to the National Academy of Engineering (NAE). Prof. Rahmat-Samii is the designer of the IEEE AP-S logo, which is displayed on all IEEE AP-S publications.