Yahya Rahmat-Samii

Yahya Rahmat-Samii
Distinguished Professor and Northrop Grumman Chair in Electrical Engineering/Electromagnetics
Primary Area: Physical and Wave Electronics

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Research Lab: Antenna Research, Analysis, and Measurement Laboratory

Research and Teaching Interests:
Electromagnetics, satellite communication antennas, personal communication antennas including human interaction, biotelemetry and RFID applications, antennas for remote sensing and radio astronomy applications

Awards and Recognitions

2013	Fellow, Applied Computational Electromagnetics Society
2012	NASA Group Achievement Award .For exceptional contributions to the Juno Step 1 and Step 2 exemplary winning proposal efforts leading to the start of mission developments..
2012	Ernest K. Smith USNC-URSI, 2nd Best Student Paper Prize Award T. Brockett and Y. Rahmat-Samii, .A New Paradigm in Solar Energy Harvesting: Characterization of High Absorption Nanopilar Array Photovoltaics .
2012	2nd Place – Student Paper Award, 2012 North America Radio Science Meeting (URSI), Boulder, CO T. Brockett, H. Rajagopalan, and Y. Rahmat-Samii, “A New Paradigm in Solar Energy Harvesting: Characterization of High Absorption Nanopillar Array Photovoltaics,” URSI National Radio Science Meeting, U. Colorado at Boulder, January 3-6, 2012.
2011	IEEE Technical Field Awards and Medal in Electromagnetics .for fundamental contributions to reflector antennas, near-field measurements and diagnostics, antenna and human interactions, and optimization algorithms in electromagnetics..
2011	UCLA Academic Senate.s Distinguished Teaching Award

2010	UCLA School of Engineering and Applied Science Lockheed Martin Excellence in Teaching Award
2009-2011	Elected President of US National Committee of URSI (International Union of Radio Science)
2009	IEEE Antennas and Propagation Society Distinguished Achievement Award, .For pioneering contributions to the design, optimization and measurement of modern ground and space-borne reflector antennas and antennas for handheld communication devices..
2008	National Academy of Engineering
2007	Fellow of Antenna Measurement Techniques Association, .For outstanding and pioneering contributions to the theory, practice and art of antenna and RF measurements. Throughout your career you have exemplified and promoted the goals and objectives of the antenna measurement techniques association.. 2007 IEEE Chen-To Tai Distinguished Educator Award for his .significant contributions to electromagnetics education and for inspiring new methodologies for the design, analysis and measurement of complex antenna systems..
2007-2010	IEEE Distinguished Lecturer for Antennas and Propagation Society
2006	NASA Board Award, .For the creative development of a scientific contribution which has been determined to be significant value in the advancement of the space and aeronautical activities of NASA and is entitled: Fan Beam Patterns Radiated from a Parabolic Reflector Antenna..
2005	International Union of Radio Science Booker Gold Medal for his .contributions to reflector antenna design and practice, near-field measurements and diagnostic techniques, handheld antennas and human interactions, genetic algorithms in electromagnetics, and the spectral theory of diffraction..
2002	JPL/NASA Award of Exceptional Technical Excellence for his, .Advanced and /second Generation Precipitation Radar Technology Development..
2001	Elected Foreign Member of The Royal Flemish Academy of Science and the Arts
2000	IEEE Third Millennium Medal for his, .Outstanding achievements and contributions..
2000	AMTA Distinguished Achievement Award, .who throughout his career exemplified and promotes the goals and objectives of AMTA. The AMTA herby cites Professor Yahya Rahmat-Samii: (a) For his creative development and application of Plane-polar and Bi-polar near field measurement techniques, (b) For his major contributions in the utilization of microwave holography diagnostic and phaseless measurements of reflector and array antennas, (c) For his prolific publications in diverse area of antennas fro personal, satellite, radar and radio astronomical applications, electromagnetic theory, optimization and computational techniques, and measurements and diagnostics, (d) For his excellence and enthusiasm in educating vast number of engineers and researchers worldwide, (e) For his dedication and services to the AMTA..
1999	

	ECE University of Illinois Urbana-Urbana Distinguished Alumnus Award, for his, .pioneering research activities, outstanding teaching and service to the IEEE, and a prolific publication records in the fields of applied and theoretical electromagnetics..
1995	Elected President of IEEE Antennas and Propagation Society
1994	IEEE AP-S Harold A. Wheeler Best Applications Prize Paper Award, “On the Reflectivity of Complex Mesh Surfaces,” IEEE Trans. Antennas and Propagation vol. AP-39, no. 7, pp. 1352-1365, September, 1991..
1991	IEEE AP-S Harold A. Wheeler Best Applications Prize Paper Award, “The Bi-Polar Planar Near- filed Measurement Technique Part I: Implementation and Measurement Comparisons,” IEEE Trans. Antennas and Propagation, Vol. 42, No. 2, pp. 184-195, February 1994..
1988	NASA Group Achievement Award, .In recognition of the team.s outstanding achievement in the development, implementation, testing and transfer of mobile satellite communications technology..
1985	IEEE Fellow, .Contributions to reflector antennas, near-field measurement techniques, and high frequency electromagnetic diffraction..
1982-1985	IEEE Distinguished Lecturer for Antennas and Propagation Society

Selected Publications

- M. A. Jensen and Y. Rahmat-Samii, “EM Interaction of Handset antennas and a Human in Personal Communications,” *Proceedings of IEEE*, vol. 83, no. 1, pp. 41472, January 1995.
- Y. Rahmat-Samii, L. I. Williams and R. G. Yaccarino, “The UCLA Bi-Polar Planar Near Field Antenna Measurement and Diagnostics Range,” *IEEE Antennas and Propagation Magazine*, vol. 37, no. 6, pp. 16-35, December 1995.
- D. W. Duan and Y. Rahmat-Samii, “A Generalized Diffraction Synthesis Technique for High Performance Reflector Antennas,” *IEEE Trans. Antennas and Propagation*, vol. 43, no. 1, pp. 27-40, January 1995.
- J. Gianvittorio and Y. Rahmat-Samii, “Fractal antennas: a novel antenna miniaturization technique and applications,” *IEEE Antennas and Propagation Magazine*, vol. 44, no. 1, pp. 20-36, February 2002.
- F. Yang and Y. Rahmat-Samii, “Microstrip Antennas Integrated with Electromagnetic Band-Gap (EBG) Structures: a Low Mutual Coupling Design for Array Applications,” *IEEE Transactions on Antennas and Propagation*, vol. 51, no. 10, pp. 2936-2946, October 2003.
- J. Robinson and Y. Rahmat-Samii, “Particle Swarm Optimization in Electromagnetics,” *IEEE Transactions on Antennas and Propagation*, vol. 52, no. 2, pp. , February 2004.

- J. Kim and Y. Rahmat-Samii, "Implanted Antennas inside a Human Body: Simulations, Designs and Characterizations," *IEEE Trans. on Microwave Theory and Techniques*, vol. 52, no. , pp. 1934-1943, August 2004.
- N. Jin and Y. Rahmat-Samii, "Parallel particle swarm optimization and finite-difference time-domain (PSO/FDTD) algorithm for multiband and wide-band patch antenna designs," *IEEE Trans. Antennas Propag.*, vol. 53, no. 11, pp. 3459-3468, November 2005.
- N. Jin and Y. Rahmat-Samii, "Advances in Particle Swarm Optimization for Antenna Designs: Real-Number, Binary, Single-Objective and Multiobjective Implementations," *IEEE Trans. Antennas Propag*, vol. 55, no. 3, pp. 556-567, March 2007.
- T. Brockett and Y. Rahmat-Samii, "A novel portable bipolar near-field measurement system for millimeter-wave antennas: construction, development, and verification," *IEEE Antennas and Propagation Magazine*, vol. 50, no. 5, pp. 121-130, October 2008.
- Y. Rahmat-Samii, J. Guterman, A. A. Moreira and C. Peixeiro, "Integrated Antennas for Wireless Personal Communications," in *Modern Antenna Handbook*, eds. C. A. Balanis, pp.1079- 1142, Wiley, 2008.
- H. Rajagopalan, Y. Rahmat-Samii, and W. A. Imbriale, "RF MEMS actuated reconfigurable reflectarray patch-slot element,"*IEEE Trans. Antennas Propag*, vol. 56, no. 12, pp. 3689-3699, December 2008.
- H. Rajagopalan, P. Izdebski, and Y. Rahmat-Samii, "Antennas in Medicine: Ingestible Capsule Antennas," in *Frontiers in Antennas, Next Generation Design and Engineering*, eds. F. B. Gross, pp.305-338, McGraw-Hill, 2011.
- Y. Rahmat-Samii, J. M. Kovitz, and H. Rajagopalan, "Nature-Inspired Optimization Techniques in Communication Antenna Designs," *Proceedings of the IEEE* , vol. 100, no. 7, pp. 2132-2144, July 2012.
- Y. Rahmat-Samii, "GTD, UTD, UAT, and STD: A Historical Revisit and Personal Observations," *IEEE Antennas and Propagation Magazine*, vol. 55, no. 3, pp. 29-40, May 2013.
- S. Rao, N. Llombart, E. Moradi, K. Koski, T. Bjorninen, L. Sydanheimo, J. Rabaey, J. Carmena, Y. Rahmat-Samii, and L. Ukkonen,"Miniature implantable and wearable on-body antennas: towards the new era of wireless body-centric systems [antenna applications corner]," *IEEE Antennas and Propagation Magazine*, vol. 56, no. 1, pp. 271-291, February 2014.