

BIOGRAPHICAL SKETCH

Magdy F. Iskander

Hawaii Center for Advanced Communications

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TITLES:

- Director, Hawaii Center for Advanced Communications, and Professor of Electrical Engineering, University of Hawaii at Manoa, 2002-present
- Engineering Clinic Chair Professor, ECE Department, University of Utah 1977-2001
- Program Director: Electrical and Communications Systems Division, National Science Foundation, 1997-1999 (formulated a wireless communications initiative in the Engineering Directorate at NSF)

PROFESSIONAL PREPARATION:

- B.Sc. (Honors), Department of Electrical Engineering, University of Alexandria, Egypt, 1969
- M.Sc., University of Manitoba, Winnipeg, Manitoba, Canada, September 1972
- Ph.D., University of Manitoba, Winnipeg, Manitoba, Canada, December 1975

AWARDS AND SCHOLARSHIPS:

- 2013 University of Hawaii Board of Regents Medal for Excellence in Research
- 2010 University of Hawaii Board of Regents Medal for Excellence in Teaching
- 2013 IEEE Microwave Theory and Techniques Society Distinguished Educator Award
- 2012 IEEE Antennas and Propagation Society Chen-To Tai Distinguished Educator Award
- 2010 Northrop Grumman Excellence in Teaching Award
- 2011 Hi Chang Chai Teaching Excellence Award, selected by graduating Engineering Class
- University of Utah Distinguished Teaching Award, 2000
- Richard R. Stoddard Award for “innovation in electromagnetics education through the establishment of a unique NSF/IEEE National Center for Computer Applications in Electromagnetic Education (CAEME),” given by the IEEE Electromagnetic Compatibility Society, 1992.
- George Westinghouse National Award for innovation in and distinguished contributions to engineering education, 1991, sponsored by the American Society of Engineering Education.
- Curtis W. McGraw National Research Award for outstanding early achievement, 1985, sponsored by the Engineering Research Council of the American Society of Engineering Education.
- Fellow of the Institute of Electrical and Electronics Engineers (IEEE), 1993. Distinguished Lecturer, IEEE Antennas and Propagation Society, 1994-97.

LEADERSHIP:

- 2002 President, IEEE Antennas and Propagation Society, 2001 Vice President.
- General Chair, 2012, 2010, 2007, 2005, and 2003, IEEE Antennas and Propagation conferences Honolulu, HI
- 2002 and 2013 The Hawaii Kuhina Award, Hawaii Visitors and Convention Bureau
- General Chair, 2000 IEEE Antennas and Propagation Society International Symposium.
- General Chair, 1996 Frontiers in Education Conference, Salt Lake City, Utah.
- Organizer and General Chair of four four-day symposia on “Microwave Processing of Materials,” 1990, 1992, 1994, and 1996, Materials Research Society, San Francisco, California

PRODUCTS:

A. Journal Founding Editor in Chief

Founding Editor, *Computer Applications in Engineering Education* John Wiley & Sons, 1992-present. The Journal received Award in Publishing Excellence in the category of Science/Technology/Medicine from the American Association of Publishers.

B. Books

- *Electromagnetic Fields and Waves*, Waveland Press, second edition, 2012
- *Electromagnetic Fields and Waves*, Prentice Hall, February 1992, Waveland press 2000
- *Computer Applications in Electromagnetic Education: Software Book*, Vol. I, 1991; Vol. II, 1994, M. F. Iskander, Editor.
- *Microwave Processing of Materials I* (1991), *II* (1992), *III* (1994), *IV* (1994), *V* (1996), M. F. Iskander, Co-Editor, MRS Publication.

C. Journal Articles

Over 230 papers in peer reviewed technical journals. The following are examples:

- J. Rayno, M. F. Iskander, and N. Celik, “Synthesis of Broadband True-3D Metamaterial Artificial Magnetic Conductor Ground Planes Using Genetic Programming,” *IEEE Trans. Antennas and Propagation*, in press, 2014
- R. Peron, N. Celik, G.C. Huang, and M. F. Iskander, “Textile Electromagnetic Coupler for Monitoring Vital Signs and Changes in Lung Water Content”, *IEEE Antennas and Propagat. Letters*, in press, 2014

- J. Baker, and M. F. Iskander, "A New Design Approach for Electrically Small High Frequency Antennas," *IEEE Antennas and Propagation Letters*, accepted for publication, 2014.
 - S. Yong Lim, Z. Yun, and M. F. Iskander, "Propagation Measurement and Modeling for Indoor Stairwells at 2.4 and 5.8 GHz," *IEEE Trans. Antennas and Propagation*, Vol. 62, No. 9, pp. 4754-4761, 2014.
 - Y. Li, M. F. Iskander, Z. Zhang, and Z. Feng, "A new low cost leaky wave Coplanar waveguide continuous transverse stub antenna array using metamaterial-based phase shifters for beam steering," *IEEE Trans. Antennas and Prop.*, vol.61, , pp.3511-18, July 2013
 - J. Rayno, N. Celik, and M. F. Iskander, Dual Polarization cylindrical long slot array (CLSA) antenna integrated with compact broadband baluns and slot impedance transformers," *IEEE Antennas and Wireless Prop.*, vol.12, pp. 1384-87, 2013.
 - N. Celik, R. Gagarin, G. C. Huang, M F. Iskander, and B. Berg, "Microwave Stethoscope: development and benchmarking of a vital signs sensor using computer controlled phantoms and human studies," *IEEE Trans. Biomedical Engineering*, 9 pages, Jan 22, 2013
 - Yue Li, Zhijun Zhang, Jianfeng Zheng, Zhenghe Feng, and Magdy F. Iskander, "A Compact Hepta-band Loop-Inverted F Reconfigurable Antenna for Mobile Phone," *IEEE Transactions, Antennas and Propagation*, Vol. 60, No.1, pp. 389-392, 2012
 - Kunpeng Wei, Zhijun Zhang, Zhenghe Feng, and Magdy F. Iskander, "Periodic Leaky-wave Antenna Array with Horizontally Polarized Omnidirectional Pattern," *IEEE Trans. Antennas and Propagation*, vol.60, No.7, pp.3165-3173, 2012
 - K. Wei, Z. Zhang, Z. Feng, and M. F. Iskander," A MNG-TL Loop Antenna Array with Horizontally Polarized Omnidirectional Patterns," *IEEE Trans. Antennas and Prop.*, Vol. 60, pp.2702-2710, 2012
 - H.S. Youn, Y.L. Lee, N. Celik, and M.F. Iskander, "Design of a Cylindrical Long-Slot Array Antenna Integrated with Hybrid EBG/Ferrite Ground Plane," *IEEE Antennas and Wireless Propagation Letters*, accepted for publication, October 2011.
 - N. Omaki, Z Yun, Nuri Celik, H-Sun Youn, and M. F. Iskander, "Effective HF Radar Installation in Challenging Terrain Environments for Homeland Security Applications," *IEEE Antennas and Wireless Propagation Letters*, Vol.10, pp. 1143 – 1146, September 2011
 - Juinn-Horng Deng, Nuri Celik, Zhengqing Yun, and Magdy F. Iskander, "Low Complexity Hybrid Smart Antenna with Directional Elements over Frequency Selective Fading Channel," *IEICE Trans. Commun.*, vol. E94-B, No.12, pages 3610-13, Dec. 2011
 - Jill S. Kobashigawa, Hyoung-sun Youn, Magdy F. Iskander, and Zhengqing Yun, "Classification of Buried Targets Using Ground Penetrating Radar: Comparison Between Genetic Programming and Neural Networks," *IEEE Antennas and Wireless Propagation Letters*, PP. 971 – 974, August 2011
 - M. F. Iskander, Z. Yun, N. Celik, H-sun Youn, N. Omaki, and J. M Baker, "HF and Passive Radar Designs for Homeland Security Applications," *Marine Technology Society Journal, special issue on Maritime Homeland Security*, Vol. 45, No.3, pp.111-119, June 2011.
 - Dalia Nashaat, Hala A. Elsadek, Esmat A. Abdallah, Magdy F. Iskander and Hadia Elhenawy, "UltraWide Bandwidth 2x2 Microstrip Patch Array Antenna Using Electromagnetic Band-gap Structure (EBG)," *IEEE Trans. Antennas and Propagation*, vol. 59, No.5, pp.1528-1534, May 2011.
 - Y. Li, Z. Zhang, J. Zheng, Z. Feng, and M. F. Iskander, "Experimental Analysis of a Wideband Pattern Diversity Antenna with Compact Reconfigurable CPW-to-Slotline Transition Feed," *IEEE Trans. Antennas and Propagation*, Vol.59, issue 11, pp.4222-4228, 2011.
 - Z. Zhang, Xu Gao, W. Chen, Z. Feng, and M. F. Iskander, "Study of Conformal Switchable Antenna System on Cylindrical Surface for Isotropic Coverage," *IEEE Transactions Antennas and Propagation*, Vol. 59, issue 3, pp. 776-783, 2011.
 - N. Celik, R. Gagarin, H-S Youn, and M. F. Iskander, "A Non-Invasive Microwave Sensor and Signal Processing Technique for Continuous Monitoring of Vital Signs," *IEEE Antennas and Wireless Propagation Letters*, vol. 10, pp.286-289, March 2011.
- D. Patents:** Nine (9) issued patents including the following:
- Coaxial Continuous Transverse Stub Element Device Antenna Array, US patent #6,201,509, 2001
 - Coplanar Waveguide Continuous Transverse Stub Antenna Technology, US Patent 7,079,082, 2006
 - Ferrite Phase Shifter and Phase Array Radar System, US patent 7,417,587, August 2008
 - Multiband Coplanar Waveguide CTS Antenna, US Patent 7,079,082 issued on July 18, 2006
- E. Research Funding:** Over \$19 million from funding agencies including NSF, NIH, ARO, ONR, Army CERDEC, DOE (Oakridge National Lab, LLN Lab), Brooks Air Force Base, Hill Air Force Base, and corporate sponsors including Raytheon, Motorola, Texas Instruments, Ericsson, Kyocera wireless, Corning Inc, BAE Systems, L-3 Communications, and Agilent Technologies.