

John C. Young

Research Assistant Professor of Electrical and Computer Engineering
University of Kentucky, Lexington, KY 40506-0046

Professional Preparation

Auburn University, Auburn , AL	Electrical Engineering	B.E.E., 1997
Clemson University, Clemson, SC	Electrical Engineering	M.S., 2000
Clemson University, Clemson, SC	Electrical Engineering	Ph.D., 2002
Tokyo Institute of Technology, Japan	Computational Electromagnetics	Postdoctoral, 2003-2005

Appointments

Research Asst. Professor	Electrical and Computer Eng., Univ. of Kentucky	2008-present
R&D Antenna Engineer	Japan Radio Co., Tokyo, Japan	2005-2008

Publications

Most Relevant Publications

1. J.C. Young, C.M. Butler, and M.G. Harrison, " Transmission Through Axisymmetric, Cascaded Cylindrical Cavities Coupled by Apertures - Part I: Structures with Coaxial and Circular-Cylindrical Cross-Sections", *IEEE Trans. Electromagn. Compat.*, vol. 47, no. 3, pp. 406-416, Aug. 2005.
2. J.C. Young and C.M. Butler, "Transmission Through Axisymmetric, Cascaded Cylindrical Cavities Coupled by Apertures - Part 2: Structures with Varying Cross-Sections", *IEEE Trans. Electromagn. Compat.*, vol. 47, no. 3, pp. 417-423, Aug. 2005.
3. J. C. Young, J. Hirokawa, and M. Ando, "Analysis of a Rectangular Waveguide, Edge-Slot Array with Finite Wall Thickness," *IEEE Transactions on Antennas and Propagation*, 55(3):812-819, 2007.
4. J.C. Young, S. Masayuki, S. Yuzo, "Vertical Beam Shaping with Metal Strips in a Linear Edge Slot Array," *2nd European Conference on Antennas and Propagation*, Nov., 2007.
5. J.C. Young, Y. Kazama, J. Hirokawa, and M. Ando, "Full-Wave Optimization of Linear, Edge Slot Array with Flare and Choke for Decreased Vertical Beamwidth and Cross-Polarization," *2006 IEEE Int. Antennas Propagat. Symp. Dig.*, vol. 44, pp. 2761-2764, July 2006.

Other Significant Publications

1. J. C. Young and C. M. Butler, "An Efficient Method for the Analysis of a Structure Comprising and Appendage Attached to a Planar Surface of a Conducting Body," *IEEE Transactions on Antennas and Propagation*, 53(9):2985-2994, 2005.
2. J.C. Young and C.M. Butler, "Inductance of a Coil in a Slotted Shield", *IEEE Trans. Antennas Propagat.*, vol. 50, no. 4, pp. 475-484, April 2002.
3. J.C. Young and C.M. Butler, "Inductance of a Shielded Coil", *IEEE Trans. on Antennas Propagat.*, Vol. 49, No. 6, pp. 944-953, June 2001.

4. S.D. Rogers, J.C. Young, and C.M. Butler, "Monopoles Loaded With Coils: A Comparison of Measured and Computed Results", *Journal of Electromagnetic Waves and Applications*, Volume 15, No. 6, pp 833-858, June 2001.
5. J.C. Young, Y. Kazama, J. Hirokawa, and M. Ando, "Full Array Optimization of a Linear, Edgeslot Array with Low Sidelobes," *Proceedings of the 2006 IEICE General Conference*, vol. 44, pp. 3145-3148, July 2006.

Synergistic Activities

Dr. Young has made significant contributions to the analysis and design of slot array antennas using hybrid finite-element / spectral-domain integral equation formulations. Since a large class of slot arrays can be modeled as quasi-two-dimensional structures, spectral-domain integral equations provide a rigorous and efficient analysis technique. At Japan Radio Company and the Tokyo Institute of Technology, Dr. Young developed these hybrid codes for slot array antenna design as well as array optimization methods based on full-wave analysis. He designed antennas for use in sea-based radar systems which are in production and he is also party to several patents related to slot antenna arrays. Furthermore, he has continued his collaboration with colleagues in Japan concerning the design of scanned waveguide slot arrays with a goal of reducing scan blindness.

Recent Collaborators and Other Affiliations

Collaborators and Co-Authors

Adams, Robert J.	Dept. of Electrical & Computer Eng., University of Kentucky
Gedney, Stephen D.	Dept. of Electrical & Computer Eng., University of Kentucky
Kramer, Tyler	The Aerospace Corporation
Xin, Xu	Dept. of Electrical & Computer Eng., University of Kentucky

Graduate Advisor and Postdoctoral Sponsors

Graduate Advisor : Professor Chalmers M. Butler, Dept. of ECE, Clemson University
 Postdoctoral Sponsor : Jiro Hirokawa and Makoto Ando, Dept. of Electrical and Electronic Engineering, Tokyo Institute of Technology

Thesis Advisor and Postgraduate Scholar Sponsors

None