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EDUCATION

Ph.D. in Electrical Engineering, June 2002, University of Michigan, Ann Arbor. Thesis title: *Multi-functional Slot Spiral Antennas for Airborne and Automotive Applications*. Advisor: Prof. John Volakis

M.S.E.E., June 1999, University of Michigan, Ann Arbor, Michigan

Dipl. Eng. in Electrical Engineering, June 1994, University of Nis, Yugoslavia. Thesis title: *Design and Realization of a Planar Spiral Antenna*. Advisor: Prof. Bratislav Milovanovic

ACADEMIC EMPLOYMENT HISTORY

Assistant Professor, University of Colorado in Boulder, August 2002 – Present.

Graduate Student Research Assistant, University of Michigan in Ann Arbor, April 1997-July 2002

Research Engineer, University of Nis, Serbia, June 1994 – May 1997

PUBLICATIONS

Peer Reviewed Book Chapters

- [1] **D. S. Filipovic**, T. P. Cencich, Frequency Independent Antennas, Ch. 13 in 4th Edition of Antenna Engineering Handbook, McGraw Hill, to be published in 2007. (60pg)
- [2] **D. S. Filipovic**, T. P. Cencich and M. W. Nurnberger, *Frequency Independent Antennas*, Encyclopedia of RF and Microwave Engineering, Ed. K. Chang, Vol. 2., pp. 1674-1690, Wiley, 2005.
- [3] T. P. Cencich, **D. S. Filipovic**, *Spiral Antennas*, Encyclopedia of RF and Microwave Engineering, Ed. K. Chang, Vol. 5., pp. 4853-4869, Wiley, 2005.

Journal Papers

- [1] M. Lukic, **D. S. Filipovic**, *Modeling of Three-Dimensional Surface Roughness Effects with Application to μ -Coaxial Lines*, To appear in IEEE Microwave Theory and Techniques in March 2007.
- [2] Y. Lee, Y. Park, F. Niu and **D. S. Filipovic**, *Design and Optimization of RF ICs with Embedded Linear Macromodels of MEMS Resonators Using Artificial Neural Network*, To Appear in International Journal of RF and MW Computer Aided Engineering in 2007.
- [3] M. Buck, **D. S. Filipovic**, *Spiral Cavity Backing Effects on Pattern Symmetry and Modal Contamination*, IEEE Antennas and Wireless Propagation Letters, pp. 243-246, Dec. 2006.
- [4] **D. S. Filipovic**, Z. B. Popovic, M. V. Lukic, and K. Vanhille, *Design of Microfabricated Rectangular Coaxial Lines and Components for mm-Wave Applications*, YUMTT Review, pp. 11-16, Nov. 2006.
- [5] Y. Lee, Y. Park, F. Niu and **D. S. Filipovic**, *Design and Optimization of One-Port RF MEMS Resonators and Related Integrated Circuits Using ANN Based Macromodeling Approach*, IEE Proceedings Circuits, Devices and Systems, pp. 480-488, Oct. 2006.

- [6] K. Vanhille, D. Fontaine, C. Nichols, **D. S. Filipovic**, and Z. Popovic, *Quasi-Planar High Q mm-Wave Resonators*, IEEE Microwave Theory and Techniques, pp. 2439-2446, June 2006.
- [7] M. Lukic, S. Rondineau, Z. Popovic and **D. S. Filipovic**, *Modeling of Rectangular μ -Coaxial Lines*, IEEE Microwave Theory and Techniques, pp. 2068-2076, May 2006.
- [8] **D. S. Filipovic**, A. Bhuber, T. Cencich, *Low-Profile Broadband Dual-Mode Four-Arm Slot Spiral Antenna with Dual Dyson Balun Feed*, IEE Proceedings Microwave, Antennas & Propagation, pp. 527-533, Dec. 2005.
- [9] Y. Lee, **D. S. Filipovic**, *ANN Based Electromagnetic Models for the Design of RF MEMS Switches*, IEEE Microwave and Wireless Components Letters, pp. 823-825, Nov. 2005.
- [10] N. Stutzke, **D. S. Filipovic**, *Four-Arm 2nd- Mode Slot Spiral Antenna With Simple Single-Port Feed*, IEEE Antennas and Wireless Propagation Letters, pp. 213-216, 2005.
- [11] M. Buck, **D. S. Filipovic**, *Split-Beam Mode Four-Arm Slot Sinuous Antenna*, IEEE Antennas and Wireless Propagation Letters, pp. 83-86, 2004.
- [12] Y. Lee, Y. Park, F. Niu, B., Bochman, K.C. Gupta, **D. S. Filipovic**, *ANN Modeling of RF MEMS Resonators*, Special Issue of International Journal of RF and MW Computer Aided Engineering, pp. 302-316, June, 2004.
- [13] **D.S. Filipovic** and J.L. Volakis, *Conformal Multi-functional Slot Aperture (combo-antenna) for Automotive Applications*, IEEE Transaction on Antennas & Propagation, pp. 563-571, Feb. 2004.
- [14] **D.S. Filipovic** and J.L. Volakis, *Novel Slot Spiral Antenna Designs for Dual-band/Multi-band Operation*, IEEE Transactions on Antennas & Propagation, pp. 430-440, March, 2003.
- [15] J.L. Volakis, T.F. Eibert, **D.S. Filipovic**, Y.E. Erdemli and E. Topsakal, *Hybrid Finite Element Methods for Array and FSS Analysis Using Multiresolution Elements and Fast Integral Techniques*, Electromagnetics, pp. 297-313, May 2002.
- [16] **D.S. Filipovic** and J.L. Volakis, *A Broadband Meanderline Slot Spiral Antenna*, IEE Proceedings, Microwaves, Antennas & Propagation, pp. 98-105, April 2002.
- [17] J.L. Volakis, M.W. Nurnberger and **D.S. Filipovic**, *A Broadband Cavity Backed Slot Spiral Antenna*, IEEE Antennas & Propagation Magazine, pp. 15-26, Dec. 2001.
- [18] **D.S. Filipovic**, L.S. Andersen and J.L. Volakis, *A Multiresolution Method for Simulating Infinite Periodic Arrays*, IEEE Transactions on Antennas & Propagation, pp. 1784-1786, Nov. 2000.
- [19] H.T. Anastassiou, J.L. Volakis and **D.S. Filipovic**, *Integral Equation Modeling of Cylindrically Periodic Scatterers in the Interior of a Cylindrical Waveguide*, IEEE Microwave Theory & Techniques, pp.1713-1720, Nov. 1998.

FUNDING HISTORY

- [1] **DARPA-MTO 3D-MERFS Program**, Subcontract to BAE Systems, *Analysis and Design of 3D RF Multilayer Interconnects*, Phase II, Duration 10/06 – 10/06, \$292,000, PI (Co-PI is Prof. Popovic; team members: BAE Systems, Nashua NH, Rohm and Hass, Blacksburg VA)
- [2] **NSF**, *Analytical and Numerical Modeling of Double Negative Materials with Application to Antenna Design*, Duration 10/05-10/08, \$270,000, Co-PI (PI is Prof. Kuester, and Co-PI is Prof. Picket-May)
- [3] **Navy SBIR**, with Applied EM, Hampton VA, *An Integrated Antenna Set for Software Radios*, Phase II, Duration 10/05-10/07, \$100,000, PI

- [4] **DARPA-MTO 3D-MERFS Program**, Subcontract to BAE Systems, *Analysis and Design of 3D RF Multilayer Interconnects*, Phase I, Duration 5/04 – 10/05, \$250,000, PI (Co-PI is Prof. Popovic; team members: BAE Systems, Nashua NH, Rohm and Hass, Blacksburg VA)
- [5] **Lockheed Martin**, Denver CO, *Wideband Antenna Modeling*, Duration 11/05-12/05, \$10,000, PI
- [6] **Motorola** (through CAMPMoDe), Plantation FL, *Modeling of MEMS Resonators*, Phase II and III, Duration 5/03-5/05, \$96,000, PI
- [7] **Lockheed Martin**, Denver CO, *Two Arm Multimode Spiral*, Duration 12/03-12/04, \$50,000, PI
- [8] **Navy SBIR**, with Applied EM, Hampton VA, *An Integrated Antenna Set for Software Radios*, Phase I, Duration 1/04 - 5/04, \$15,000, PI
- [9] **Lockheed Martin**, Denver CO, *Low Profile Broadband Multimode Spiral*, Duration 7/03-12/03, \$25,000, PI (continuation granted)
- [10] **Lockheed Martin**, Denver CO, *Low Profile Broadband Multimode Spiral*, Duration 1/03-7/03, \$25,000, PI
- [11] **Motorola** (through CAMPMoDe), Plantation FL, *Modeling of MEMS Resonators*, Phase I, Duration 11/02-4/04, \$38,000, Co-PI (PI was Prof. K.C. Gupta)

Gifts

- [1] **First RF Corporation**, Boulder CO, through University of Colorado Foundation –\$20,000.
- [2] **Ansoft Corporation**, Boulder CO, 20 full-licenses for using all Ansoft products.

ACADEMIC AWARDS AND HONORS

- [1] M. Buck (student), Winner of the FEKO competition 2006.
- [2] **D. S. Filipovic**, *DARPA MTO Recognition for Outstanding Technical Contributions*, 1/16/06.
- [3] N. Stutzke, N. Kefauver, **D. S. Filipovic**, First Place - Student Paper Competition at the 2004 Antenna Application Symposium, Monticello, IL, 2004.
- [4] **D. S. Filipovic**, J. Volakis, First Place – Student Paper Competition (150 papers submitted) at the 2002 IEEE Antennas and Propagation Symposium, San Antonio, Tx, 2002.
- [5] **D. S. Filipovic**, Nikola Tesla Award, Serbian Academy of Arts and Sciences – Nikola Tesla Foundation, Best Graduation Thesis in Serbia, 1994.

GRADUATE STUDENT ADVISING

Graduated Students

- [1] Yongjae Lee, July 2006, Doctor of Philosophy, Thesis Title: *Design of RF Circuits with Embedded Multi-Physics Models of MEMS Devices*, University of Colorado, July 2006.
- [2] Nathan Stutzke, May 2005, Master of Science, Thesis Title: *Slot Spiral Antennas for Single and Multimode Applications*, University of Colorado, May 2005
- [3] Qianli Mu, Advisor from Fall 2003 through May 2005. MSEE without thesis option. Research topic: *Frequency scanning spiral antennas and arrays*

Current Students

- [1] Milan Lukic, Research Topic: *Modeling 3D micro-rectangular coaxial lines*
- [2] Michael Buck, Research Topic: *Unconventional Spiral and Sinuous Antennas*
- [3] James McDonald, Research Topic: *Dipole Antennas for UltraWideBand Operation*
- [4] Neill Kefauver, Research Topic: *Direction Finding Antennas*

- [5] Yuya Saito, Research Topic: *Modeling, Design and Characterization of Recta-Coax Based Components*
- [6] Kichul Kim, Research Topic: *Electromagnetic Performance of CNT Interconnects*
- [7] Mohammed Bait Suwailam, Reserch Topic: *Antennas for Software Defined Radio*

TEACHING

Undergraduate Teaching

- [1] *ECEN3400, Electromagnetic Fields and Waves*, Spring, Fall 2006.
- [2] *ECEN3410, Electromagnetic Fields and Transmission*, Spring 2004
- [3] Independent study – Q. Mathews, K. Noble, J. Gorman

Graduate Teaching

- [1] *ECEN5134, Electromagnetic Radiation and Antennas*, Fall 2002, 2003, 2005
- [2] *ECEN5154, Computational Electromagnetics*, Spring 2003, 2005, 2007
- [3] *ECEN5004, Advanced Antennas 1: Advanced Antenna Modeling* (New course), Fall 2004
- [4] *ECEN5104, CAD for Passive Microwave Circuits*, Fall 2005.
- [5] Independent Studies with more than 10 graduate students.

PROFESSIONAL SERVICE

Internal

- [1] Member of the Undergraduate Curriculum Committee: 2004 – present
- [2] Freshman academic advisor: Fall 2005 - present
- [3] Member of the Graduate Studies Committee: 2003 - present
- [4] Member of the Search Committee – Fall 2004 - Spring 2005
- [5] Member of the Freshman Recruiting Committee – Fall 2006 resent
- [6] Member of the ABET Evaluation Committee for ECEN3400- Fall 2004
- [7] Co-chaired preliminary exams in electromagnetics in 2003-2007
- [8] Member of the CAMPMODE 2002-2004
- [9] Member of dissertation committees for more than 20 students

External

- [1] Editorial board member for the International Journal of RF and Microwave Computer Aided Engineering
- [2] Associate Editor for the International Journal of Antennas and Propagation
- [3] Guest Editor for the Special Issue on UWB Antennas for the IJAP
- [4] Member of the Editorial Board for the IASTED Conference on Antennas, Radar and Wave Propagation
- [5] Organized special session: Antennas for Wireless Communications, URSI Meeting, Boulder, CO 2005
- [6] Session chair number of times at IEEE APS/URSI Symposiums 2002, 2003, 2004, 2005
- [7] Reviewer for IEEE Transactions Antennas and Propagation, IEEE Antennas Wireless Propagation Letters, IEEE Microwave Wireless Components Letters, IEEE Transactions Nanotechnology, IEEE Transaction Microwave Theory Techniques, International Journal RF and Microwave Computer Aided Engineering, various government agencies