

Curriculum Vitae

Erick N. Maxwell

I. Personal Data

School: College of Engineering
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II. Education

- 2000-Present Ph.D. in Electrical Engineering, University of South Florida, In-Process
- 2002-2003 M.S. in Engineering Management, University of South Florida
- 2001-2001 M.S. in Electrical Engineering, University of South Florida
- 1989-1994 B.S. in Electrical Engineering, Southern University and A&M,

III. Employment History

- 2000-Present Research Engineer, Harris Corporation, Melbourne, FL
Microsystems Technology Research Group (MTG)

Conducted research on the novel sensing technologies being developed by universities and industry. Developed a classification system for the information collected in the survey and wrote reports entitled: "2004 Industry Sensor Survey" and "2005 Industry Sensor Survey." In addition, researched PWB miniaturization, antennas design on liquid crystal polymer and current temperature profiling on FLEX.

- 1995-2000 Hardware Designer, Harris Corporation, Melbourne, FL
Government Communication Systems Division (GCSD)

As a member of GCSD performed board-level digital hardware design, which included the electrical design, analysis, simulation and test of CCA. Also, designed FPGAs, CPLDs to include: ACTEL, Xilinx, Lattice, Philips, and others. Designed to support DSPs including TMSx549, x5410. Used design-for-testability techniques; managed and oversaw board layout; as well as coordinated with components, purchasing, and drafting. Work with quality control, configuration management, as well as software, mechanical and other engineers in a team effort. Use design/fabrication and assembly flows. Develop functional and automated test procedures. Conduct preliminary and detail design reviews for both internal and external customers. Design to commercial, industrial and government design requirements.

- 1993-1994 Hardware Designer, Delco Electronics, Kokomo, IN
Cooperative Education

As a cooperative education student, researched the electrical design requirements for the internal design and manufacturing of power supplies. Researched exchanging a crystal for a ceramic resonator in Delco's serial transmitter and receiver (SXR). Wrote C++ code for simulation interface to applied dynamics real time system.

IV. Academic Experience

- 2003 Competitive Benchmark of the Multi-family Housing Maintenance/Repair Service Request Process, University of South Florida
- Conducted research with a 4-member team under the supervision of an instructor in a Benchmarking course. This research involved partnering with the Hamptons at Tampa Palms apartment community to benchmark the repair and maintenance request process of USF residence services. This research quantified the importance of rental property upkeep and improvement as well as the modifications necessary for USF residence services to become competitive with the Hamptons.
- 1993 Delco Electronics Cost Improvement (April 1993 - July 1993):
- Engaged in researching the electrical impact of replacing a crystal with a compatible ceramic resonator for a highly manufactured serial transceiver device. The results of this research was so compelling, a requirement to give a personal presentation of the findings to several persons in upper-level management, including the division vice president. Consequently, this research led to a \$2.5 million dollar annual cost improvement.

V. Society Memberships

- 2005- IEEE Engineering in Medicine and Biology Society
2005- IEEE Education Society
2005- IEEE Engineering Management Society
2004- Society of Professional Engineers
2004- Florida Engineering Society
2003- Tau Beta Pi, National Engineering Honor Society
2003- IEEE Antenna and Propagation Society
2002- IEEE Microwave Theory and Techniques Society
2002- Phi Kappa Phi, Honor Society
1993- Eta Kappa Nu (HKN), Electrical Engineering Honor Society
1992- National Society of Black Engineers

VI. Academic and Professional Honors

- 2003-Present Registered Professional Engineer, State of Florida
- 2004-2006 Integrative Graduate Education and Research Traineeship, National Science Foundation
- 2000-2005 McKnight Doctoral Fellowship, Florida Education Fund
- 2004 Best Presentation, Harris Corporation
- 2003 Best Technical Presentation, Harris Corporation
- 1997 Harris Reach for the Stars, Harris Corporation
- 1994 Amp Alliance Scholar, Louisiana-Louis Stokes Alliance for Minority Participation
- 1992-1994 University Scholar, Southern University and A&M College
- 1992 Hughes Corporate Scholar, Hughes Aircraft
- 1989-1994 T.H. Harris Scholar, State of Louisiana

VII. Other Honors

1992 Kuwait Liberation Medal, U.S. Armed Forces

(Other Honors Continued)

1992 Presidential Citation, U.S. Armed Forces
1991 U.S. Veteran of Foreign, U.S. Army
1991 Army Commendation Medal, U.S. Armed Forces
1991 Southwest Asia Service Medal, U.S. Armed Forces
1991 Army Achievement Award, U.S. Armed Forces

VIII. Publications and Patents

Chapters/Articles, etc.

Maxwell, E., Weller, T., Harrow, J., Ng, A., “Mathematical Reformulation of the Ideal Gaussian for Ultra-Wideband Radar Systems,” (**submitted to** FEF Journal of Interdisciplinary Research). (Refereed)

Maxwell, E., Weller, T., Harrow, J., “A Tunable Single-Stage Ultra-Wideband Pulse Generator,” (**submitted to** IEEE Microwave Components and Letters). (Refereed)

Maxwell, E., Weller, T., Harrow, J., “Tunable UWB Pulse Generation Based on a Variable Edge Rate Compression Approach,” (**submitted to** IEEE Sarnoff Symposium). (Refereed)

Maxwell, E., Weller, T., Harrow, J., “An Improved Tunable Single-Stage Ultra-Wideband Pulse Generator Based on Variable Edge Rate Compression,” (**in progress** for submission to IEEE Microwave Components and Letters)

Other Publications

Maxwell, E., Weller, T., Harrow, J., **Patent Submitted--**“A Single-Stage Tunable UWB Pulse Generator,”

Maxwell, E., “Harris Corporation 2004 Industry Sensor Survey,” Aug 2004. (**In-House**).

Maxwell, E., “Harris Corporation 2003 Industry Sensor Survey,” Aug. 2003. (**In-House**).

Maxwell, E., “Current Temperature Profiling on Flex,” Aug. 2002. (**In-House**).

Papers/Presentations/Panels

Maxwell, E., 2005. BioFlorida’s 8th Annual Conference—Building the Vision: Cornerstone to Capstone. *Ultra-Wideband Radar for Non-Invasive Cancer Diagnostics*. 21-26 Feb. 2006. Orlando: Licensing Executives Society.

Maxwell, E., 2005. USF National Science Foundation, Integrative Graduate Education and Research Traineeship Student Meeting. *Ultra-Wideband Biopsy: Interdisciplinary Research on a Non-Invasive Technique to Evaluate the Extent of Axillary Lymph Node Metastasis*. 22 Apr 2005. Tampa: USF.

Maxwell, E., 2005. Annual USF/NSF-Integrative Graduate Education and Research Traineeship Symposium. *Ultra-Wideband Biopsy: Interdisciplinary Research on a Non-Invasive Technique to Evaluate the Extent of Axillary Lymph Node Metastasis*. 18-19Apr 2005. Tampa: USF.

Maxwell, E., 2005. Florida Education Fund: McKnight Doctoral Fellowship Research and Writing Conference. *Ultra-Wideband Biopsy: Research on a Non-Invasive Technique to Evaluate the Extent of Axillary Lymph Node Metastasis*. 07 Feb 2005. Tampa: FEF.

Maxwell, E., 2004. Harris Corporation: End of Year Intern Presentation (Best Presentation Award). Jul 2004. Melbourne: Government Communication Systems.

Maxwell, E., 2003. Harris Corporation: End of Year Intern Presentation (Best Technical Award). Jul 2003. Melbourne: Government Communication Systems.

Maxwell, E., 2002. Harris Corporation: End of Year Intern Presentation. Jul 2002. Melbourne: Government Communication Systems.

Posters Presentation

Maxwell, E., 2005. BioFlorida's 8th Annual Conference—Building the Vision: Cornerstone to Capstone. *Ultra-Wideband Radar for Non-Invasive Cancer Diagnostics*. 21-26 Feb. 2006. Orlando: Licensing Executives Society.

Maxwell, E., 2005. Seventh IEEE Wireless and Microwave Techonology: An IEEE Industry / Government / Education Conference. *RF-Microwave/Ultra-Wideband Biopsy: Research on a Non-Invasive Technique to Evaluate the Extent of Axillary Lymph Node Metastasis*. 07 Apr 2005. Clearwater: IEEE.

Maxwell, E., 2005. Annual USF/NSF-Integrative Graduate Education and Research Traineeship Symposium. *Ultra-Wideband Biopsy: Interdisciplinary Research on a Non-Invasive Technique to Evaluate the Extent of Axillary Lymph Node Metastasis*. 18-19 Apr 2005. Tampa: USF.

Maxwell, E., 2005. Integrative Graduate Education and Research Traineeship Project Meeting. *Ultra-Wideband Biopsy: Interdisciplinary Research on a Non-Invasive Technique to Evaluate the Extent of Axillary Lymph Node Metastasis*. 19 Nov 2005. Washington, DC: NSF.

Public/Community Service

Speaker, *Great American Teach-In*, 16 Nov 05, Tampa: Brooker Creek Elementary

Teacher, *Engineering-Applied Mathematics SAT Preparation Summer camp*, 01-30 Jun 05, Tampa: Middleton High School

3rd-4th Grade Speaker/Demonstrator, *Sensors of Light*, 4 Apr 05, Tampa: Hillsborough Baptist School

2nd Grade Speaker/Demonstrator, *Sensors of Light*, 18 Feb 05, Tampa: Lutz Elementary School

Facilitator, *Success, Maximizing the Scientific Pipeline*, 27-29 Jan 2005, Orlando: Florida-Georgia-Louis-Stokes Alliance for Minority Participation (FGLSAMP) Expo Conference

Facilitator/Recruiter, *Building Excellence in Teaching, Training Education and Research*, 29-31 Oct 04, New Orleans: Demonstrator L-LSAMP) and Center for Coastal Zone Assessment and Remote Sensing (CCZARS) Conference

Math Competition Judge, *Brain Bowl and Florida National Achievers Society Summit*, 15-16 Apr 04, Tampa: FEF