

ROBERT L. GREENWELL II

EDUCATION

- January 2006 – Present University of Tennessee, Knoxville
Doctor of Science in Electrical Engineering candidate
- GPA: 4.0/4.0
- August 2003 – December 2006 University of Tennessee, Knoxville
Master of Science in Electrical Engineering
- Master's Thesis: *Design of a 5-V Compatible Rail-to-Rail Input/Output Operational Amplifier in 3.3-V SOI CMOS for Wide-Temperature Range Operation*
 - GPA: 3.94/4.0
- August 1999 – August 2003 University of Tennessee, Knoxville
Bachelor of Science in Electrical Engineering
- Magna Cum Laude: 3.67/4.0

WORK EXPERIENCE

- August 2003 – Present *Graduate Research Assistant*
UT Integrated Circuits and Systems Laboratory
Primary Advisor: Dr. Benjamin Blalock
- 2006 – 2007 *Consultant*
XYZ Microsystems, LLC
Knoxville, Tennessee.
- May 2003 – August 2003 *Undergraduate Research Assistant*
Oak Ridge National Laboratory
Primary Advisor: Dr. M. Nance Ericson
- December 2002 – August 2003 *Undergraduate Research Assistant*
UT Integrated Circuits and Systems Laboratory
Primary Advisor: Dr. Benjamin Blalock

TECHNICAL EXPERIENCE

- Circuit Design and Integration:
- Analog and mixed-signal IC design, simulation, layout, verification, and product testing
 - Bulk CMOS, SiGe BiCMOS, and SOI CMOS process technologies
 - System development and integration
 - Recent Projects:
 - Thesis topic: a 5-V compatible quad-operational amplifier IC fabricated in a 3.3-V process designed to operate from -180°C to 120°C . Flight qualified baseline technology for the 2009 JPL Mars Science Laboratory rover.
 - Analog ASIC integrator for 10 x 12 mm² multi-team remote sensor interface IC, targeted for use on NASA manned/unmanned spacecraft
- CAD Tool Development:
- Installation, maintenance, and customization of process design kits (PDK) and associated tools
 - Includes work with Cadence, Mentor, Synopsys, and Magic toolsets

MEMBERSHIPS / AWARDS

- IEEE, Phi Eta Sigma, National Society of Collegiate Scholars
- Bodenheimer Fellowship
- T. Vaughn Blalock Memorial Graduate Scholarship
- Alumni Valedictorian Scholarship
- Allen Rice Cox Memorial Scholarship
- Billy & Sylvia Moore Engineering Scholarship
- Leonard & Betty Shealy Engineering Scholarship
- TSAC Ned McWherter Scholarship
- Top 15%, Electrical Engineering, Junior Standing
- Top 15%, Electrical Engineering, Senior Standing

PUBLICATIONS

- C. Ulaganathan, N. Nambiar, B. Prothro, R. Greenwell, S. Chen, H. Hoang, R. Broughton, K. Cornett, G. Fu, B. J. Blalock, C. L. Britton, Jr., M. N. Ericson, H. A. Mantooh, J. D. Cressler, and R. W. Berger, "A SiGe BiCMOS Instrumentation Channel for Extreme Environment Applications," accepted into the *IEEE Midwest Symposium Circuits & Systems*, Aug. 10-13, 2008, Knoxville, Tennessee.
- Yuan Chen; Mojaradi, M.; Aranki, N.; Kazemian, E.; Grogan, R.; Kolawa, E.; Blalock, B.; Greenwell, R.; Westergard, L., "Design and Qualification Methodology for a Successful Technology Infusion for a Wide Temperature Op-Amp," *Aerospace Conference, 2008 IEEE*, vol., no., pp.1-7, 1-8 March 2008
- R.L. Greenwell, S.C. Terry, B.J. Blalock, M.M. Mojarradi, and E. Kolawa, "5-V Compatible Radiation-Hardened SOI Rail-to-Rail Input/Output Operational Amplifier for Extreme Environments," *Government Microcircuit Applications & Critical Technology Conference*, March 2007.
- S.C. Terry, J.D. Vandersand, B.J. Blalock, J.A. Richmond, R.L. Greenwell, S.C. Bunch, D. R. Hogue, and K. G. Merkel, "Total Dose Performance of a 1-V Body-Driven Amplifier Fabricated in a 3.3-V/0.35- μ m Non-Hardened PD-SOI CMOS Process," *IEEE Nuclear and Space Radiation Effects Conference*, July 11-15, 2005, Seattle, Washington, E-7.
- M.N. Ericson, C.L. Britton, J.M. Rochelle, B.J. Blalock, B.D. Williamson, R.L. Greenwell, and R. Schultz, "High Temperature DC Characterization of Fully-Depleted 0.5 μ m SOS-CMOS MOSFETs For Analog Circuit Design," accepted to *IEEE International SOI Conference 2003*, Oct. 2003.

PATENT APPLICATIONS AND PATENT INFORMATION

- "Wide-temperature integrated operational amplifier," M. Mojarradi, G. Levanas, Y. Chen, R. Cozy, R. Greenwell, S. Terry, B. Blalock, U.S. Patent Application No. 20070229158. (October 2007)