

Ryan S. Westafer

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EDUCATION: Georgia Institute of Technology, Atlanta, GA
Doctoral Candidate, School of Electrical and Computer Engineering
Investigation of Phononic Crystals for Dispersive Surface Acoustic Wave Ozone Sensors
(see research experience)

MSECE (Electrical & Computer Engineering), December 2006

BS Computer Engineering, Highest Honor, May 2005

SKILLS: Hardware: AVR, HC(S)12, PIC, CPLD/FPGA devices, I²C & SPI communication. A/D design, PCB layout (EAGLE, Protel/Altium), VLSI using Cadence, SMD rework, VNA 2-Port Measurements & Calibration (HP8753X), iFFT TDR and time gating, design of stripline coupled resonator filters.

Fabrication: lithography & mask design, sputtering, evaporation, high vacuum systems, dicing, bonding, stylus profilometry, AFM.

Computers: UNIX, linux & kernel development. Physical networking, basic sockets, and TCP/IP & UDP. MATLAB, LabVIEW, AutoCAD, COMSOL MultiPhysics, Agilent ADS. Java/JNI, Lisp, TCL, PHP, PERL, C, assembly, Visual Basic, SQL, and LaTeX.

PUBLICATIONS: **Westafer RS**, Bergin MH, Levitin G, Hess D, Edmonson PJ, and Hunt WD. *Functionalization of High Frequency SAW RFID Devices for Ozone Dosimetry*. IEEE Conference on Sensors, 2009.

Westafer RS, Mohammadi S, Adibi A, and Hunt WD. *Computation of Surface Acoustic Wave Dispersion and Band Gaps*. COMSOL Conference, Boston MA, 2009.

Westafer RS, Bergin MH, Levitin G, Hess D, Edmonson PJ, and Hunt WD. *Ozone Sensors for Real-time Passive Wireless Application*. EPA International Nanotechnology Conference: Applications and Implications, Chicago IL, 2008.

Mohammadi S, Eftekhar AA, Khelif A, Moubchir H, **Westafer R**, Hunt WD, Adibi A. *Complete phononic bandgaps and bandgap maps in two dimensional silicon phononic crystal plates*. Electronics Letters, 2007.

Lee SH, Massey EW, **Westafer RS**, Hunt WD. *A Novel Method to Investigate Dependence of SAW Resonator Sensor Signatures on Localized Surface Perturbations*. 5th IEEE Conference on Sensors, 2006.

EXPERIENCE: School of Electrical and Computer Engineering, Georgia Tech 01/2010 – 05/2010
“Instructor of Record”
Circuits and Electronics (ECE3710)
Planned course, wrote & gave lectures, wrote & graded tests, gave in-class demonstrations

GT Microelectronic Acoustics Group, Atlanta, GA 08/2005 – 12/2010
Graduate Research Assistant
Designing the dispersion of acoustic energy in engineered acoustic materials in the UHF range.
Wrote code to compute band structures for interfacial waves in trirefringent media.
Designed Van Atta array configuration for passive retrodirective SAW RFID backscatter.
Developed a passive `backscatter' RFID ozone sensor operating in the UHF range.
Configured Cypress PSOC, Mini-Circuits components, and LabVIEW software comprising a UHF `backscatter' RFID pulse interrogation system.

Broadcom Corporation, Duluth, GA 05/2005 – 08/2005
Graduate Intern, Systems Test Engineering
Developed interoperability testing architecture for broadband VoIP and PSTN.
Designed scalable telephony server with seamless TCP/IP remote control via TCL.

Institute for Human and Machine Cognition, Pensacola, FL 05/2002 – 08/2004
Student Research Assistant, TSAS and Augmented Cognition projects
Developed software and hardware for UAV dynamics measurement.
Wrote drivers and GUIs for human biometrics monitoring & tongue display interface.
Designed real-time multi-stream data collection in a multi-agent system.

ACTIVITIES: *Eta Kappa Nu* (ECE Honor Society) Vice President 2004, Webmaster 2005
IEEE Hardware (Robotics) Team – Graduate Mentor, Chair 2004 & 2005
Tau Beta Pi (Engineering Honor Society) – Alumnus Advisor, Graduate Mentor 2008, VP Membership 2007, VP Computing 2006
GT Men's Volleyball Club Team – VP 2008, Technology Coordinator 2007

REFERENCES: Dr. Anil Raj Dr. Bill Hunt
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Pensacola, FL 32502 Atlanta, GA 30332

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