

DAVID L. MILLINER

Term Address

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Permanent Address

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OBJECTIVE

A full time position working in research and development for a wireless semiconductor company.

WEBSITE

<http://www.prism.gatech.edu/~gtg183z/>

EDUCATION

Ph.D. Student in Electrical Engineering, August 2004 - Present
Georgia Institute of Technology, Atlanta GA
School of Electrical and Computer Engineering
Thesis Advisor: Dr. John R. Barry

Master of Science in Electrical Engineering, June 2004
Massachusetts Institute of Technology, Cambridge, MA
School of Electrical Engineering and Computer Science

Bachelor of Science in Electrical Engineering, June 2003
Massachusetts Institute of Technology, Cambridge, MA
School of Electrical Engineering and Computer Science

WORK EXPERIENCE

Georgia Institute of Technology - Communication Theory Research Group, Atlanta, GA
Graduate Research Assistant (August, 2004 – present).

Texas Instruments R&D - Wireless Networking Algorithms, Dallas, TX (Summer 2006)
Developed Multiple-Input Multiple-Output (MIMO) detection algorithms for 802.11n wireless networks focusing on near-optimal receivers with reduced complexity.

Texas Instruments R&D - Broadband Architectures, Dallas, TX (Summer 2004)
Developed a forward error correction unit for Digital Video Broadcast handheld applications. Responsible for the fixed point design of the soft slicer and Reed-Solomon (RS) decoder as well as hardware design of the RS decoder.

Massachusetts Institute of Technology, Cambridge, MA (Spring 2004)
Teaching Assistant: Introduction to Digital Projects Laboratory.
TA rating 6.7/7.0 - highest in course history.
(<https://hkn.mit.edu/6guide/src/spring04/6111.html>, Requires MIT Site Certificate).
Taught recitations and supervised individual/group laboratory projects.
(<http://web.mit.edu/6.111/www/s2004>).

Texas Instruments R&D- Wireless Broadband Architectures, Dallas, TX (Summer/Fall 2003)
Systems and architectures work on linear MIMO detection algorithms. Developed architectural designs and performed FPGA prototyping and real-time laboratory testing of a three transmitter and three receiver system.

Texas Instruments R&D- Audio and Imaging Laboratory, Dallas, TX (Summer 2001/2002)
Developed a beat detection algorithm capable of identifying beats given an input file of musical data. Also worked on audio decoder optimizations for Dolby Digital and DTS.

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WORK EXPERIENCE CONTINUED

Massachusetts Institute of Technology- Media Laboratory, Cambridge, MA (06/2000-12/2001)
Research Assistant: Musical algorithm development and microcontroller programming.

Axon Corporation, New Orleans, LA (Summer 1998 and 1999)
Electrical Engineering Intern: Radio circuit prototype development and testing. RF research and development including writing Labview code to automate antenna pattern testing.

SOCIETIES

Institute of Electrical and Electronics Engineering (IEEE) *Student Member*
Eta Kappa Nu (HKN)

SELECTED PUBLICATIONS

D. L. Milliner, D. W. Waters, A. Batra, and J. R. Barry, "Nonuniform Computational Complexity Allocation for OFDM Detectors," submitted, *IEEE Transactions on Signal Processing*, 2008.

D. L. Milliner, E. Zimmermann, J. R. Barry, and G. Fettweis, "Channel State Information Based LLR Clipping in List MIMO Detection", submitted, *IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC)*, Cannes, France, September 15-18, 2008.

D. L. Milliner, E. Zimmermann, J. R. Barry, and G. Fettweis, "A Framework for Fixed Complexity Breadth-First MIMO Detection," invited paper, accepted, *10th International Symposium on Spread Spectrum Techniques and Applications (ISSSTA)*, August 25-28, Bologna, Italy, August 2008.

PATENTS

5 patents pending

HONORS

Georgia Institute of Technology President's Fellow (2004-Present)
German Academic Exchange Service (DAAD) Ph.D. Research Grant (Spring 2008)
MIT Masterworks Finalist for Thesis on MIMO Architectures (Spring 2004)
Massachusetts Institute of Technology Graduate Fellowship (Fall 2003)
MIT Bell Northern Research Undergraduate Laboratory Prize (2001)
National Merit Scholarship Finalist (1999)
Bausch & Lomb Science Medal (1998)
Bell South Telecommunications Award (1997 and 1998)

COMPUTER SKILLS

MATLAB, C, VHDL, Verilog, System C, LaTeX, Adobe Framemaker, ModelSim, Design Compiler, Synplify Pro, Assembly, Scheme, Unix, Microsoft Office, Xilinx System Generator, Xilinx ISE, Labview.

OTHER SKILLS

Fluent in French.

REFeree ACTIVITIES

IEEE Transactions on Wireless Communications IEEE Transactions on Communications
IEEE Signal Processing Letters IEEE Vehicular Technology Conference
IEEE International Conference on Communications
IEEE Wireless Communications and Networking Conference
Journal on Wireless Communications and Mobile Computing

CITIZENSHIP

U. S.