

Riad Wahby

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Objective An interesting and challenging position in circuit or system design.

Experience Silicon Laboratories, Inc.

Austin, TX

June 2004–Present

Staff Design Engineer in SiLabs's Wireline division. CMOS design of high performance mixed-signal telephony products; digital and analog design including amplifiers, data converters, voltage regulators, and power converters for subscriber line interface circuits, voice codecs, and modems. Lead Designer for ProSLIC™ product team.

Laboratory for Electromagnetic and Electronic Systems, MIT

Cambridge, MA

June 2003–May 2004

Research Assistant working under Professor David Perreault and the MIT/Industry Consortium on Advanced Automotive Electrical/Electronic Components and Systems. Worked on high-efficiency VHF (30–500 MHz) power rectifiers for a novel DC/DC converter architecture. Presented research results at the 2004 IEEE Power Electronics Specialists' Conference and in the IEEE Transactions on Power Electronics.

Department of Electrical Engineering and Computer Science, MIT

Cambridge, MA

September–December 2002

Teaching Assistant for 6.302, "Feedback Systems." Responsibilities included teaching students in small groups, preparing problem sets and solutions, assisting students with homework and projects, administration and bookkeeping for a class of 100 students.

Analog Devices, Advanced Linear Products Division

Wilmington, MA

June–September 2001, June–August 2002

Designed a 16 x 16 crosspoint switch for use in high-bandwidth video switching systems. Transistor-level design of a transimpedance video amplifier in a fast complementary bipolar process, followed by extensive characterization and simulation of system-level figures of merit such as bandwidth, switching time, channel crosstalk, and power consumption.

Analog Devices, Micromachined Products Division

Cambridge, MA

June–September 2000

Worked on a closed-loop digital feedback, digital output accelerometer. Worked closely in a team of two to determine stability, cost, performance, and feasibility of using digital signal processing to create a high-performance sensor device. Transistor-level modeling and simulation of the accelerometer were explored. Later, work was completed on a prototype system utilizing an FPGA to give maximum configurability and flexibility for the digital processing subsystem.

MIT Media Lab

Cambridge, MA

December 1998–May 1999, September 1999–February 2000

Worked with Dr. Alex Pentland and the Media Lab's Vision and Modeling group on implementation and applications of wearable computers. Emphasis was placed on hardware design for minimization of power consumption, as well as design and implementation of an agents-based middleware platform to facilitate augmented-reality wearables applications, and a graphical interface optimized for low-resolution displays.

Education Massachusetts Institute of Technology

Cambridge, MA

S.B. and M.Eng. in Electrical Engineering and Computer Science, June 2004.

GPA: 4.7 / 5.0 (EECS)

Thesis: "Radio-Frequency Rectifiers for DC-DC Power Conversion."

Publications J.M. Rivas, R.S. Wahby, J.S. Shafran, and D.J. Perreault, "New Architectures for Radio-Frequency dc-dc Power Conversion," *IEEE 35th Power Electronics Specialists Conference*, vol. 5, pp. 4074–4084, June 2004.

J.M. Rivas, R.S. Wahby, J.S. Shafran, and D.J. Perreault, "New Architectures for Radio-Frequency dc-dc Power Conversion," *IEEE Transactions on Power Electronics*, vol. 21, no. 2, pp. 380–393, June 2006.

Patents D.J. Perreault, J.M. Rivas, R.S. Wahby, and J.S. Shafran, "Method and Apparatus for Switched-Mode Power Conversion at Radio Frequencies," U.S. Patent Pending, 2005.

R.S. Wahby et al, "Power Supply with Digital Control Loop," U.S. Patents (4) Pending, 2008.

I.C. Tesu, R.S. Wahby, "Wide Swing Cascode Current Mirror," U.S. Patent Pending, 2009.

Skills Diverse design experience in analog and digital circuits and control systems. Very efficient layout designer. Veteran UNIX and Windows system administrator. Wireless and wired networking, LAN and WAN design and deployment. Proficient in more than two dozen programming, scripting, and markup languages. Fast learner. Accomplished solo violinist.

References Available upon request.