

RABIH F. SALIBA

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OBJECTIVE

Seeking a full time position in the fields of communications, signal processing and embedded system design

EDUCATION

August 2007 – Present - The University of Texas at Austin

- **Master of Science in Electrical Engineering**, May 2009 (expected)
- Communications, Networks and Signals Track
- Member of the Wireless Networking and Communications Group (WNCG)
- Advisor: Prof. Brian L. Evans

Courses: Wireless Communications Lab, Digital Communications, Probability and Stochastic Processes, Multidimensional Digital Signal Processing, Digital Signal Processing, Digital Image processing, Advanced Wireless – Modulation and Multiple Access, Communication Networks: Tech/Arch/Protocol, VLSI-I

September 2003 – June 2007 - American University of Beirut

- **Bachelor of Engineering in Computer & Communications**
- Minor in **Mathematics**
- Date of graduation: June 2007

Selected Courses: Wireless Communications, Wireless Communications Lab, Communication Systems, Communications Lab, Real-Time Digital Signal Processing Laboratory, Multimedia and Networking, Computer Networks, Real Analysis, Advanced Probability and Random Variables, Data Structures and Algorithms, Operating Systems, Application of Analytical Methods in Engineering I-II, Computer Architecture, Microprocessor Systems

PROJECTS

- Implemented, simulated and analyzed the effect of compressive sensing on 2-D images and considered its application over Wireless Sensor Networks.
- Implemented different equalization techniques for ISI channels in MATLAB and compared their performance with theoretical bounds.
- Analyzed the outcomes of using a universal timing signal WWVB for application layer synchronization in Wireless Sensor Networks.
- Final Year Project: Built and simulated a Neuronal Communication Network in NS 2 using a firing-rate network model. The project relates communication in neuronal and data networks based on the common Poisson Process behavior in both
- Developed a system level simulator for the UMTS cellular system in MATLAB based on the Vehicular Test Environment; the project also included developing a Graphical User Interface (GUI) for the system
- Analyzed and compared Differentiated Services performance and Best-effort performance for multimedia applications such as voice and video conferencing using OPNET
- Developed in C++, using the UNIX TCP/IP sockets, a video streaming server and client that communicate using RTSP (Real-Time Streaming Protocol) and send data using RTP (Real-Time Transfer Protocol), over a UDP/IP socket interface
- Designed, implemented, and tested a v.22bis transceiver for a voiceband modem by simulating the system in LabVIEW, developing algorithms in Matlab, and programming a Texas Instruments digital signal processor starter kit board
- Designed, implemented, and tested a four-function calculator by programming and interfacing a Microchip microcontroller to a hex keypad and an LCD display

TECHNICAL SKILLS

- **High-level languages:** C, C++
- **Algorithm development environments:** LabVIEW, MathScript, MATLAB
- **Test and measurement tools:** Signal generators, oscilloscopes, spectrum analyzers, LabVIEW
- **Hardware description languages:** Active HDL, VHDL
- **Wireless network planning and optimization tools:** Ericsson TEMS Cell Planner Universal, ATDI's ICS Telecom
- **Network simulation tools:** OPNET IT Guru, NS2
- **Assembly languages:** MIPS R2000, PIC 16F84 Microcontroller, TI TMS320C6713 DSP
- **Modeling languages:** UML, HTML
- **Operating systems:** Windows (9x, XP), Linux
- **Software development tools:** MPLAB IDE Microchip Programming, TI Code Composer Studio, Visual C++, Visual Studio.net
- **Electronic design automation tools:** ModelSim, PSpice, Sonata, Xilinx, Orcad, Cadence
- **Standards implemented:** V.22bis transceiver for voiceband modem
- **Office tools:** Microsoft Project, Excel, PowerPoint, Visio, Word and Front Page

WORK EXPERIENCE

Teaching Assistant for the course Real-Time Digital Signal Processing Laboratory. Conducted lab sessions and gave recitations on the lab theory. (Fall 2007 – Present, The University of Texas at Austin)

Research Assistant: Physical and network layer synchronization for Wireless Sensor Networks (Summer 2008, The University of Texas at Austin)

Two months summer training at the Royal Institute of Technology, Stockholm, Sweden. The training was in the field of Biomedical DSP where C++ and MATLAB were used to code, implement, test and validate different DSP algorithms such as FFT-based period detector for ECG signals. (Summer 2006, The Royal Institute of Technology)

HONORS AND AWARDS

- AUB Dean's Honor List: Fall 2003-2004, Spring 2004, Fall 2004-2005, Spring 2006, Fall 2006-2007
- 2003: International College Scholars Award
- 2003: IC Salim Hachache Award for outstanding skills in math & sciences

PERSONAL

Fluent in English, French and Arabic

AFFILIATIONS

Student member of IEEE since 2004