

MARIAM MOMENZADEH

mmomenza@ece.neu.edu

<http://www.ece.neu.edu/~mmomenza>

Summary of Skills

- Years of research experience related to
 - Test and Design for Testability of Circuits and Systems : 3 years
 - Jitter Modeling and Characterization of Automatic Test Equipment (ATE) Systems: 3 years
 - Fault-Tolerant Design and Fault-Tolerance in Distributed and Parallel Computing : 2 years
 - Nanotechnology (Quantum-dot Cellular Automata, QCA), Design, Test, Fault-Tolerance: 3 years
- Technical
 - Hardware description languages: Verilog, VHDL
 - Programming languages: Assembly, UNIX Script, C++, Pascal
 - Operating systems: Windows, Unix, Linux
 - Engineering applications: Spice, Tanner Tools, Orcad, Synopsis Design Compiler, Synopsis Tetramax, Modelsim, Matlab, Active HDL
 - Applications: L^AT_EX, MS Office, UNIX/Linux application programs

Work Experience

NORTHEASTERN UNIVERSITY ECE Department, Boston, MA 1/03-5/06

Teaching Assistant.

Courses: Digital Logic Design, Computer Architecture and Organization, Electrical Engineering I, Numerical Methods, Engineering Problem Solving with Software Applications

Conducted problem review sessions, prepared and graded problem sets and exams.

Research Assistant.

Performed research in defect and fault tolerant issues in nanotechnologies.

- Defect characterization of Quantum Cellular-dot Automata (QCA) and fault tolerant techniques for QCA. Developed novel schemes for testability in QCA-based designs.
- Developed novel QCA-based designs.
- Performed ATE-based scan test and optimization scheduling, jitter modeling and characterization of ATE systems (sponsored by LTX Corporation).

UNIVERSITY OF CONNECTICUT CSE Department, Storrs, CT 9/00- 12/02

Teaching Assistant.

- Courses: Computer Organization and its Laboratory, Microprocessor Laboratory

Conducted recitation and problem review sessions, prepared and graded problem sets and exams, and monitored lab assignments.

Projects example: a multi-threaded time-sharing program in order to explore the PowerPC memory access synchronization primitives.

Research Assistant.

Designed, analyzed, and implemented a Do-All algorithm on asynchronous message passing environment.

UNIVERSITY OF CONNECTICUT School of Business, Executive MBA. Summer 01&02

Graduate Assistant.

Performed maintenance and troubleshooting of the school's computer facilities.

- Researched market share information of various financial institutions across US and Europe.
- Developed new client database, resulting in increased productivity.

IRAN PHOSPHATE COMPANY Tehran, Iran 6/99- 7/00

Electrical Engineering Intern.

 Technical Design Section.

- Programmed and calibrated various sensory systems in the factory site, and supervised their functionality.

SHARIF UNIVERSITY OF TECHNOLOGY EE Department, Tehran, Iran

11/97- 5/98

Undergraduate Researcher.

- Designed and developed a remote central patient monitoring system using 8086 microprocessor and RS-232 interface.

Education

NORTHEASTERN UNIVERSITY

Boston, MA

Ph.D. in Computer Engineering,, Minor in Electrical Engineering

2006

GPA:3.96/4.0

Advisor: Professor Fabrizio Lombardi

- Dissertation: Defect Tolerance of QCA Systems at Nano-scale.

UNIVERSITY OF CONNECTICUT

Storrs, CT

Master of Science in Computer Science and Engineering.

2003

Advisor: Professor Alex A. Shvartsman

- Thesis: Emulating Shared-Memory Do-All in Asynchronous Message Passing Systems.

SHARIF UNIVERSITY OF TECHNOLOGY

Tehran, Iran

Bachelor of Science in Electrical Engineering.

1999

- Thesis: A 3-Phase Digital Multitransducer based on an 80751 Microcontroller.

Honors/Awards

- ASTE/NEPCON Test Engineering National Scholarship, 2003.
- Northeastern University Graduate Research Award, 2003- 2006.
- University of Connecticut Graduate Research Award, 2000- 2002.
- Ranked among top 0.1% of participants in the nationwide university entrance exam for B.Sc. degree, 1994.

Professional Memberships and Activities

- IEEE Member
 - IEEE Society of Women Engineers
- Reviewer for
- IEEE Design and Test of Computers Magazine
 - IEEE Transactions on Computers
 - IEEE VLSI Test Symposium (VTS)
 - Integration, the VLSI Journal

Professional References

1. Dr. Fabrizio Lombardi,
ITC Endowed Professor
Electrical & Computer Eng. Dept.
Northeastern University.
lombardi@ece.neu.edu
(617) 373-4854

3. Dr. Mehdi B. Tahoori,
Assistant Professor
Electrical & Computer Eng. Dept.
Northeastern University
mtahoori@ece.neu.edu
(617) 373-2032

2. Dr. Alexander A. Shvartsman,
Associate Professor
Computer Science & Engineering Dept.
University of Connecticut.
aas@cse.uconn.edu
(860) 486-2672