

Education

MASSACHUSETTS INSTITUTE OF TECHNOLOGY – CAMBRIDGE, MA

Ph.D. in Electrical Engineering and Computer Science; Cumulative GPA: 5.0 / 5.0 June 2011

S.M. in Electrical Engineering and Computer Science; Ernst A. Guillemin Thesis Award, 1st place June 2007

CORNELL UNIVERSITY COLLEGE OF ENGINEERING – ITHACA, NY

B.S. with honors in Electrical and Computer Engineering, minor in Applied Mathematics May 2005

Cumulative GPA: 4.22 / 4.3

Ranked 2nd academically out of 668 graduating students in the College of Engineering

Objective

A research-oriented position with a focus on creating and analyzing abstract mathematical models.

Work Experience

MIT LABORATORY FOR INFORMATION AND DECISION SYSTEMS – CAMBRIDGE, MA Fall 2005 - present

Graduate Research Assistant

- Studied game theory with emphasis on constructing algorithms for computing equilibria of infinite games.
- Constructed a hierarchy of solutions trading off between strength of prediction and efficient computation.
- Presented this work at twelve conferences yielding three journal papers as first author with two more in progress.

LYRIC SEMICONDUCTOR, INC. – CAMBRIDGE, MA June 2007 - February 2008

Summer Research Intern / Consultant

- Explored abstract mathematical models of analog circuits for next-generation cellular technologies.
- Used this analysis in conjunction with my EE background to make recommendations to the circuit design team.
- Continued this work on a consulting basis as long as my studies would allow.

WILLIAMS COLLEGE MATHEMATICS REU PROGRAM (“SMALL”) – WILLIAMSTOWN, MA Summer 2004

Undergraduate Researcher

- Studied Ergodic Theory and its connections to Topology and Number Theory.
- Classified group extensions of rank 1 transformations and discovered a new topology on the integers.
- Contributed to a paper published in Colloquium Mathematicum and gave a talk at an MAA conference.

CORNELL ECE MIXED ANALOG-DIGITAL VLSI GROUP – ITHACA, NY Spring 2004

Undergraduate Researcher

- Researched quasi delay-insensitive asynchronous mixed signal analog-to-digital converter designs.

CORNELL CENTER FOR NANOSCALE SYSTEMS – ITHACA, NY Summer 2003

Undergraduate Researcher

- Adapted Spice3 simulator to support a new Double-Gated MOS transistor model for low-power applications.

Background

- Linear, Semidefinite, and Convex Optimization; Game Theory; Theory of Computation;
- Real, Convex, and Functional Analysis; Measure Theory; Probability;
- Algebra; Topology; Algebraic Topology; Differential Geometry;
- Signal Processing; Information Theory; Control Theory; Electromagnetics;
- Synchronous and Asynchronous Digital Design; Analog and RF Circuit Design

Awards and Activities

GRADUATE:

- Ernst A. Guillemin Masters Thesis Award, 1st place
- EECS rep to the Graduate Student Council
- Laboratory for Chocolate Science

UNDERGRADUATE:

- Pertsch Prize – highest ranked (by GPA) junior in ECE
- Baccalaureate Service Award
- Dean’s Advisory Committee for Engineering College
- Symphonic Band

Skills - C, C++, Java, MATLAB, SeDuMi, YALMIP, Unix, Windows, Mac OS X, L^AT_EX, MS Office