

Bradley N Bond

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Education **Massachusetts Institute of Technology** Cambridge, MA
PhD Electrical Engineering, expected May 2009 **09/04 – Present**
Thesis: *Reduced Modeling of Nonlinear and RF Analog Circuits*
SM Electrical Engineering, May 2006
PhD thesis supervised by Professor Luca Daniel

Pennsylvania State University University Park, PA
BS Engineering Science and Mechanics, May 04 **09/00 – 05/04**
Honors Thesis: *Development of a Spin-Based Universal C-Not Gate for Quantum Computing*
GPA 3.6/4.0, Graduated with Honors in Engineering Science

Experience **Computational Prototyping Group** EECS Dept, MIT, Cambridge, MA
Research Assistant for Prof. Luca Daniel **08/04 – Present**
- Research towards the automatic extraction of nonlinear macromodels for analog circuits
- Extensive experience developing and using modeling and simulation simulation techniques

MIT Lincoln Labs Lexington, MA
Research Intern **06/9/08 – 8/8/08**
- Worked with Embedded Digital Systems group
- Research in Nonlinear Digital Predistortion for Nonlinear Signal Processing
- Developed nonlinear system identification technique for power amplifiers

Cadence Research Labs Berkeley, CA
Research Intern **06/01/07 – 9/28/07**
- Worked with Modeling and Simulation group
- Research towards fast simulation of circuits
- Developed and implemented new model reduction algorithms

Grad Level Teaching Assistant EECS Dept, MIT, Cambridge, MA
6.336 - Introduction to Numerical Simulation **09/05 – 12/05, 09/08 – Present**
Ran recitation sections, held office hours, wrote and modified problem sets, graded homework

Qualifications **Strong Skills:** MATLAB, Linear Algebra, Numerical Methods, ODEs, PDEs, Optimization

Relevant Courses: Numerical Methods (2), Numerical Simulation (2), Nonlinear Dynamics and Chaos, Electromagnetic Wave Theory, Nonlinear Programming, System Theory (2), Real Analysis

Affiliations IEEE Student Member, Reviewer for TCAD, TCAS-I, and TCAS-II journals

Selected Publications B. Bond and L. Daniel, **A Piecewise-Linear Moment Matching Approach to Parameterized Model Order Reduction for Highly Nonlinear Systems**, IEEE Transactions on Computer-Aided Design, *Dec. 2007, Volume: 26, Issue: 12, page(s): 2116 - 2129*

B. Bond and L. Daniel, **Guaranteed Stable Projection-Based Model Reduction for Indefinite and Unstable Linear Systems**, Proceedings of the IEEE Conference on Computer-Aided Design, San Jose, (2008). *Recipient of IEEE/ACM William J. McCalla Best Paper Award*

B. Bond and L. Daniel, **Stabilizing Schemes For Piecewise-Linear Reduced-Order Models via Projection and Weighting Functions**, Proceedings of the IEEE Conference on Computer-Aided Design, San Jose, Nov. 2007. *Nominated for IEEE/ACM William J. McCalla Best Paper Award*

Invited Talks B. Bond, **Stabilizing Schemes (and other advances) for Trajectory-Based Models of Nonlinear Systems**, Symposium on Recent Advances in Model Order Reduction, TU Eindhoven, The Netherlands, *November 2007*.