

# MATT BALL

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## EDUCATION

**Brown University** Providence, RI ◦ Physics Concentrator ◦ Projected Graduation: May 2009

Selected Coursework:

**Computer Science:** Models of Computation · Computer Systems · Software Engineering · Networking

**Physics:** Classical Mechanics · Quantum Mechanics · Electrodynamics · Thermodynamics · Cosmology

**Mathematics:** Multivariable Calculus · Linear Algebra · Cryptography · Probability · ODEs & PDEs

**Abington Friends School** Abington, PA ◦ Class of 2005

**Cumulative GPA:** 4.0/4.0

**Honors:** National Cum Laude Society · Advanced Placement Scholar with Honor · Award for Outstanding Research in Human Health · First Place, Montgomery County Science Research Competition

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## RELEVANT EXPERIENCE

**Lapis Software Associates** ◦ Software Development Intern Summer 2008

- Developed front-end and back-end code for a web-based public health survey system.
- Created dynamically generated servlet-based web pages for administrator and user interaction.
- Implemented web server software in Java, which interacted with JSP and MySQL.

**Centocor, Inc.** ◦ Summer Intern Summer 2006

- Interned with the Direct Product Capture Business Unit.
- Executed daily batch record reviews as part of QA and Good Manufacturing Practice.
- Developed a complete process map as part of a long-term project to simplify data flow.
- Analyzed equipment usage data to determine efficiency and forecast future needs.

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## SKILLS & INTERESTS

- Proficiency in software development in Java, Python, JavaScript, C.
- Familiarity with standard productivity and creative software, primarily Office and Adobe Creative Suite.
- Proficiency with technical software: Crystal Reports, Mathematica, MATLAB, Kaleidagraph, Minitab.
- Familiarity with UNIX, GNU/Linux, Windows, Macintosh operating systems.
- Familiarity with MySQL, JSP, L<sup>A</sup>T<sub>E</sub>X, PHP, Scheme, ML, shell scripting.
- Interests: cooking, running, technical theatre, music, squash, skiing, Ultimate Frisbee, computers & gaming.

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## ADDITIONAL EXPERIENCE

**Brown Opera Productions** ◦ Board Member and Webmaster 2005 - 2009

- Current board member of and webmaster for BOP, a solely student-run theatre group.
- Served as technical director for each of BOP's annual full-length operatic productions while at Brown.

**Brown University Physics Department** ◦ Summer Researcher Summer 2007

- Assisted Brown professors working in experimental high-energy particle physics.
- Tested and assessed a new job batching system for comparing Monte Carlo methods.
- Developed a series of Unix programs to efficiently configure and execute batch simulations.
- Created templates for manipulating results in ROOT, a data analysis library developed by CERN.
- Searched for particles predicted by technicolor physics models using the above tools.

**Fox Chase Cancer Center** ◦ Howard Hughes Student Scientist 2003 - 2004

- Researched PTEN and the molecular genetics of endometrial cancer (EC).
- Investigated correlations between elevated estrogen levels and incidence rate of EC.
- Tested glycodeclin as a possible promoter of the genes *lacZ* and PTEN.
- Applied novel recombineering techniques to create a genetically altered mouse model.