

Daniel Dadush
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Permanent Address:

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Education:

Georgia Tech, Atlanta, GA (August 07 - Present)

Pursuing Phd, [ACO Program](#) (Algorithms, Combinatorics, and Optimization)

Awards: Georgia Tech Foundation Fellowship, \$12000 + \$2000 travel expenses, 4 years

ACO Graduate Student Award, \$5000, 1 year

Brown University, Providence, RI (January 2002 to May 2006)

S.C.B. Degree in Mathematics, graduated Magna Cum Laude

Honors: Elected to Phi Beta Kappa, Brown University 2005

David Howell Premium for excellence in Mathematics and Natural Philosophy, Brown University 2005

Walt Whitman High School, Bethesda, MD (September 1996 - June 2000)

Spoken Languages: Fluent in French, English, and Italian

Elementary Chinese (spent 6 months in China)

Conferences / Workshops Attended:

- Summer School on Fourier analytic and probabilistic methods in convexity, August 2008, Cleveland, Ohio. ([website](#))
- CP-AI-OR, May 2008, Paris, France. ([website](#))
- ADONET-CIRM, October 2007, Trento, Italy. School on Graphs and Algorithms ([website](#))
- Park City Mathematics Institute, July 2004, Park City, Utah. Topic: Geometric Combinatorics ([website](#))

Research Experience:

Graduate Researcher, Professor Vempala, Dept. of Comp. Science, Georgia Tech (January 2008 - Present)

- Developed simple geometric techniques to study log-concave functions.
- Developing new techniques to tackle difficult isoperimetric inequalities.
- Studying a new approach for resolving the slicing conjecture.

NSF EAPSI Fellow, Andreas Dress, PICB, Shanghai, China (June 2008 - August 2008)

- Developed and implemented an algorithm for solving parametric linear programs

- Examined a parametric linear programming approach for solving a community structure detection problem.

Undergraduate Researcher, Professor Upfal, Dept. of Comp. Science, Brown University
(January 2005 - December 2005)

- Examined the benefits of using two stages in a bipartite matching problem with edges weighted with $\exp(1)$ random variables.
- Researching ways to create a viable approximation scheme for a variant of the stochastic shortest path problem.

Undergraduate Researcher, Professor Abramovich, Dept. Math., Brown University
(January 2004 - August 2004)

- Researched an algebraic geometry problem treating the resolution of non-singular partitions of rational cones.
- Tried to establish conditions for when a non-singular rational cone is directly factorizable.

Undergraduate Researcher, David Targan, Dean of the College, Brown University
(September 2003 - May 2004)

- Researched efficient and effective ways to present the relationships between courses and departments visually and interactively to help students better understand the university and aid deans in advising students.

Reference: http://www.brown.edu/Administration/George_Street_Journal/vol28/28GSJ18d.html

Professional Experience:

Intern, ITA Software, Cambridge, MA (June 2006 – December 2006)

- Developed web technology for ITA Software's experimental group.

Web Programmer, Yoda Spa, Milan, Italy (August 2000 - December 2001)

- Yoda Spa: one of the first high tech marketing firms in Italy.
- Responsible for creating the front-end and back-end infrastructure for medium and large scale web projects.
- Trained new employees to use various internet technologies and programming languages used by the company.
- Developed and implemented the critical sections of the interface / back end infrastructure for a currently highly popular fantasy soccer site. Reference: <http://www.supercup.it>

Undergraduate Projects:

Kung Foo Arena, CS 196-2 Project, Brown University (January 2006 - May 2006)

- Worked in a team of 4 people to create a Ragdoll physics based fighting game in C++ (MSV 7.0).
- Responsible for creating the AI system that allows the fighter to learn from both experience and user input.

Reference: <http://www.cs.brown.edu/courses/cs196-2/groups/kungfu/>

Traveling Salesman Problem, CS 258 Project, Brown University (February 2006 - May 2006)

- Worked for two months to implement a powerful and efficient algorithms to solve the Euclidean Traveling Salesman Problem in C++ (MSV 7.0).
- Implemented both Lin-Kernighan local search, and a Held-Karp branch and bound scheme.

Command 'n' Roll, CS 32 Final Project, Brown University (January 2003 - May 2003)

- Worked in a team of 5 people to create a real time strategy game in C++ (GCC 3.0 / Linux).
- Served as a general bug fixer/jack of all trades, coded the main gameloop that tied all the different components of the game together, created our shared development environment to help speed up testing and integration of the various project components.

Teaching Experience:

Volunteer, Providence Children's Museum, Providence, RI (February 2006 - May 2006)

- Served as an exhibit educator to help children in their learning process through play and guided conversation.

Undergraduate TA, Dept. of Comp. Science, Brown University (January 2005 - December 2005)

- Wrote/graded homeworks and exams, held office hours and review sessions for CS157 (Design and Analysis of Algorithms) and CS155 (Probabilistic methods of Computer Science).

Counselor for Promys Program, Boston University, Boston, Ma (July 2003 - August 2003)

- Promys (Program in Mathematics for Young Scientists): Introduces talented high school students to important and beautiful parts of elementary number theory and teaches them how to explore mathematics independently.
- Took care of four students, graded their daily problem sets, and helped them grow mathematically.
- Organized review sessions on various topics in number theory for students in the program.

Reference: <http://www.promys.org>

Undergraduate TA, Dept. of Mathematics, Brown University (January 2003 - May 2003)

- Headed weekly homework and course material review sessions for MA 153 (Abstract Algebra).

Teacher, Walt Whitman HS, Bethesda, MD (September 1999 - June 2000)

- Taught the AP computer science class with three other senior classmates.
- Prepared lecture material and programming assignments, graded programming assignments.