

Curriculum Vitae  
**University Address**  
Harvey Mudd College  
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Mathematics  
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**OBJECTIVE** To obtain a research position in the mathematical sciences.

**EDUCATION** **Harvey Mudd College**, Claremont, CA B.S. expected May 2009  
Major: Mathematics Hum/Soc Concentration I: Asian Studies  
Hum/Soc Concentration II: Economics

**Coursework:** Senior Thesis (advisor: Francis E. Su), Graduate Analysis I (Stroock) and II (Folland), Mathematical Analysis I (Rudin) and II, Complex Analysis (Staff & Snider), Abstract Algebra I and II (Dummit & Foote), Advanced Linear Algebra, Algebraic Geometry (audit), Geometric Combinatorics (independent study), Algorithms, Applied Partial Differential Equations, Game Theory, Intermediate Probability, Applied Linear and Statistical Models, Discrete Mathematics, Putnam Seminar (2 semesters), Mathematics Forum, Mathematics Colloquium.

**Other Coursework:** Special Relativity and Quantum Mechanics, Electromagnetic Theory and Optics Lecture and Lab, Mechanics Lecture and lab, intro courses in Biology, Chemistry (+ labs), Systems Engineering, Engineering Design, Computer Science. Supplemented with 37 credits of coursework in the humanities and social sciences.

**RESEARCH EXPERIENCE** **Academic Excellence Math Tutor**, HMC Math Dept., Claremont, CA 09/07–present  
Tutor core math weekly, lead exam review sessions, study teaching techniques. Areas tutored include single- and multi-variable calculus, linear algebra, differential equations, probability, statistics, discrete mathematics. Grader for calculus/linear algebra (9/06–12/06).

**Harvey Mudd College REU**, HMC Math Dept., Claremont, CA Summer 2008  
Conducted research classifying the isomorphism classes of 4-dimensional cubical simplices. Wrote paper to submit for publication; Presentation of research at the Joint meetings.

**Institute for Advanced Study/Park City Math Institute**, Park City, UT Summer 2008  
Selected to attend three-week session in Algebraic Geometry. Courses included: Intro to Algebraic Geometry, Algorithmic Fewnomial Theory, Resolving Singularities, Toric Varieties. Graduate Courses Attended: Resolution of Singularities (Mustata), Introduction to Multiplier Ideals (Lazarsfeld), Intro to Minimal Models and Flips (Kollar).

**Mathematical Sciences Research Institute REU**, Berkeley, CA Summer 2007  
Researched in Experimental Math, perturbation theory, asymptotic analysis. Wrote Lawrence Berkeley technical reports; Gave oral presentations. Presented poster at SACNAS.

**Help Desk Staff**, Computer Information Services Department, Claremont, CA Summer 2007  
Provided technical and systems support on campus over the phone and in person. Performed web programming tasks; Engaged in miscellaneous system setup, configuration, and repair.

**Zero-Gravity Team Member**, Engineering Department, Claremont, CA 7/06–9/06  
Constructed BURST apparatus (Bubbles in Reduced Gravity and Slug Transitions). Participated in physiological training; Flew in Weightless Wonder. Conducted Presentations and outreach to campus and community.

<b>HONORS &amp; AWARDS</b>	Presidential Scholarship: Full tuition for 4 years (HMC) 2005–2009 Leeds Fellow, Travel Scholarship (HMC) 2008 Hubie & Patty Clark Summer Research Fellow (HMC) 2008 Meritorious Paper, Mathematical Contest in Modeling 2007 Freshman Writing Prize: HMC Dept. of Arts, Humanities and Social Sciences 2006 National Hispanic Scholar, College Board 2004
<b>PUBLIC-ATIONS</b>	Natalie Durgin, Sofia Garcia, Tamara Flournoy, and David Bailey, “‘Syncing’ Up with the Quinn-Rand-Strogatz Constant: Hurwitz-Zeta Functions in Non-Linear physics.” (June 11, 2008). Paper LBNL-63718. <a href="http://repositories.cdlib.org/lbnl/LBNL-63718">http://repositories.cdlib.org/lbnl/LBNL-63718</a> .  Natalie Durgin, Helen Highberger, Jacob Scott, and Francis Su. “Classifying the Simplices of the 4-Dimensional Cube.” (Paper in progress for submission).
<b>PRESENT-ATIONS</b>	“Syncing Up With the Quinn-Rand-Strogatz Constant.” (SACNAS 2007) “Classifying the Simplices of the 4-Dimensional Cube.” (Joint Meetings 2009).
<b>SKILLS</b>	Proficient in $\text{\LaTeX}$ , Java, C++, XHTML, Mathematica, all MS Office applications; Familiar with FORTRAN90, Matlab, Perl, PHP; Basic Ruby, Solid Works; Operating Systems: Ubuntu, CentOS, Windows XP/Vista, OS 10, (Parallels). Language Skills: Conversational Spanish, Elementary Chinese (verbal and written). Strong organizational, communication, and presentation skills.
<b>ACTIVITIES</b>	<b>President</b> , Harvey Mudd Math Club, Claremont, CA 9/08–present Founded Mudd SIAM chapter; Resurrected Mudd MAA chapter; Served as treasurer (9/07–5/08). Organized the first annual Harvey Mudd Integration Bee. Host seminars in $\text{\LaTeX}$ and proof writing. <b>Executive Member</b> , Mudd Investment Fund, Claremont, CA 9/07–present Manage a \$50,000+ portfolio of securities (stocks and ETFs). Risk management team (Fall 2008). Global equities and ETFs group (2007) <b>Dorm Treasurer</b> , Harvey Mudd College, Claremont, CA 9/06–05/08 Managed a budget of \$3000 for a dorm of 70 people. <b>Other</b> , Membership in SACNAS, SIAM, MAA. Private tutoring, Barnstormers Aviation club (ground school/flight hours logged), SCUBA Club, Concert Choir, Claremont Colleges Ballroom Dance Company, Mexico service projects.
<b>REFERENCES</b>	Available upon request.