

KATHY BRANTLEY

386 E Del Mar Blvd, Pasadena, CA 91101

(626) 298-2535; kathy@caltech.edu

Education

- **California Institute of Technology**—Pasadena, CA
MS in Geology expected June 2005
- **California Institute of Technology**—Pasadena, CA
BS in Mechanical Engineering with Honors, June 2003
 - GPA: 3.7 (overall), 3.8 (in major)

Experience

- **California Institute of Technology**—Pasadena, CA
Masters Research in Geology: Summer 2003 - Spring 2005
 - Developed a numerical model of river erosion that predicts widening and aggradation in flume experiments.
 - Used Cl-36 dating to determine Pleistocene slip rate of the Northern Death Valley Fault Zone (in progress).
- **California Institute of Technology**—Pasadena, CA
Writing Tutor: Winter 2002 - Summer 2003
 - Assisted individual students with term papers, science writing, and graduate and professional essays at Caltech's Hixon Writing Center.
- **California Institute of Technology**—Pasadena, CA
Undergraduate Thesis Research in Granular Flows: Summer 2002 - Spring 2003
 - "A Characterization of Booming Sands". Advisors: Prof. Melany Hunt and Prof. Chris Brennen. Performed laboratory analysis and coordinated field work in the Mojave Desert and Death Valley.
- **Lutheridge/Lutherock Ministries**—Arden, NC
Camp Counselor: Summer 2001
 - Ate, slept, sang, rock climbed, and had food fights with third graders through mentally challenged adults in a Christian setting in the Blue Ridge Mountains of NC.
- **Los Alamos National Laboratory**—Los Alamos, NM
Plasma Physics Research: Summer 2000
 - Built a vacuum chamber for a magnetized target fusion experiment.
- **NASA Jet Propulsion Laboratory**—Pasadena, CA
Space Mission Design Engineer: Summer 1999
 - Designed the power system for an unmanned Discovery-class mission to Mercury.

Skills

- **Computer Languages:** Java, Scheme, Python, Matlab, HTML
- **Operating Systems:** Windows, Mac OS/X, Linux/Unix
- **Other Skills:** Photoshop, ArcGIS, GMT, Final Cut, L^AT_EX.
- **Languages:** English and German.

Honors

- 2003 National Defense Science and Engineering Graduate Fellowship (3-year graduate fellowship)
- 2003 National Science Foundation Fellowship Competition Honorable Mention
- 2002 Ray Owen Summer Undergraduate Research Fellowship
- 2002 Caltech Representative at the Pacific Earthquake Engineering Research Center (PEER) Earthquake Engineering Scholar's Course
- 2002 Perpall Speaking Contest Semifinalist (Caltech's technical presentation competition for undergraduates)
- 1999 Caltech Axline Scholarship (4-year merit scholarship to Caltech)
- 1999 United States Physics Team
- 1999 Valedictorian, Montgomery High School, Skillman, NJ
- 1999 Freshman Physics Prize, Princeton University (as a senior in high school)

Patents, Publications, and Presentations

- K. S. Brantley, M. L. Hunt, and C. E. Brennen, *Booming sand dunes: field measurements*, Physical Review Letters, in submission.
- K. S. Brantley, M. L. Hunt, C. E. Brennen, and S. Gao, *Characterization of Booming Sands*, presented at the Materials Research Society Fall Conference, Boston, MA, November 2002.
- 1991 US Patent #5,328,206