Katherine J. Lai

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Education

Cornell University **Ithaca, NY**

Ph.D. Candidate in Computer Science, 2008-present

Massachusetts Institute of Technology **Cambridge, MA**

M.Eng. in Electrical Engineering and Computer Science, June 2008.

Massachusetts Institute of Technology **Cambridge, MA**

B.S. in Electrical Engineering and Computer Science, June 2007.
B.S. in Mathematics, June 2007.

Research interests

Graph algorithms, combinatorial optimization, and approximation algorithms.

Publications

T. G. Abbott, K. J. Lai, M. R. Lieberman, and E. C. Price, "Browser-Based Attacks on Tor," In the *Proceedings of the 7th International Symposium on Privacy Enhancing Technologies*, Ottawa, Canada, 2007, pages 184-199.

K. J. Lai, Complexity of Union-Split-Find Problems. M.Eng. thesis, Department of Electrical Engineering and Computer Science, MIT, 2008.

Awards and Honors

NSF Graduate Fellow, 2009-
Cornell John McMullen Dean's Fellowship, 2008-2009
Member of Tau Beta Pi (TBP), national engineering honor society
Member of Eta Kappa Nu (HKN), national honor society for Electrical Engineering and Computer Science

Teaching Experience

MIT **Cambridge, MA**
Teaching Assistant *January 2008 - May 2008*

Worked with Professor Manolis Kellis and Professor Piotr Indyk on running the Design and Analysis of Algorithms course at MIT. I held weekly recitations and participated in writing problem set assignments and test problems. Rated 5.9/7.0 in the *Underground Guide to Course 6*.

Student Information Processing Board **Cambridge, MA**
Caffeinated Crash Course on C++ *January 2008*

Taught a brief but comprehensive course on C++ for beginners.

MIT **Cambridge, MA**
Teaching Assistant *September 2007 - January 2008*

Assisted Professor David Karger with running the Advanced Algorithms course at MIT by taking part in making the problem set assignments, holding office hours for students, and giving lectures on optional material. Rated 5.8/7.0 in the *Underground Guide to Course 6*.

MIT **Cambridge, MA**
Grader *September 2006 - December 2006*

Worked with the Teaching Assistant to grade the problem sets for the Advanced Algorithms course at MIT.

MIT **Cambridge, MA**
Lab Assistant for Circuits and Electronics *September 2004 - December 2004*

Staffed a lab to help students construct and debug simple circuits.

Other Work Experience

iRobot **Bedford, MA**
Software Engineering Intern *June 2008 - August 2008*

Software engineering intern in the Research Group of the Government and Industrial Robots division of iRobot.

Google **Mountain View, CA**
Software Engineering Intern *June 2006 - August 2006*

Software development position in the crawling group, performing analysis on logs in multi-terabyte databases and developing tools to help target problem sites for the crawl.

IBM **Essex Junction, VT**
Summer Intern *June 2005 - August 2005*

Worked in the Device Modeling and Simulation Department to identify an ideal methodology for testing diodes in SOI and to develop a model for body resistance in SOI MOSFETs.

Activities

Theory Discussion Group Co-coordinator *Fall 2009*

Worked with another Cornell graduate student to run the Theory Discussion Group, a weekly reading group focused on recent results in theoretical computer science.

Expanding Your Horizons Conference at Cornell *April 2009*

Worked with other Cornell graduate students to hold computer science-related workshops at the annual Expanding Your Horizons Conference at Cornell. The conference provides workshops for

7th-9th grade girls to increase awareness and interest in science and technology.

MIT Eta Kappa Nu Big Sib Program *December 2007 - May 2008*

Mentored two undergraduate students interested in Electrical Engineering and Computer Science.

MIT Lecture Series Committee Chairman *January 2005 - December 2005*

Led and managed the organization of more than 100 staff members and acted as theater manager for the student-run movie theater.

Harvard-MIT Math Tournament Registration Director *Fall 2004 - February 2006*

Oversaw the registration process for the approximately 600 students that attend the annual high school math competition.

MIT Student Information Processing Board IAP Class Co-coordinator *October 2006 - January 2007*

Worked with the other co-coordinator to organize 24 student-taught classes during the Independent Activities Period.