Philip Brighten Godfrey

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RESEARCH INTERESTS

My interests are in theory and systems, especially algorithms, networking, and distributed systems. My recent research has been in peer-to-peer systems, wireless ad hoc (sensor) networks, and approximation algorithms.

EDUCATION

- **UC Berkeley** Second year Ph.D. student in Computer Science; GPA: 3.94.

- **Carnegie Mellon** B.S., Computer Science, May 2002; minors in Jazz and Trumpet Performance; GPA: 3.95

- **Ripon College** Completed 8 courses in Math and Computer Science while in high school; GPA: 4.0

- **Ripon High School** Graduated, Class of 1998; GPA: 4.253/4.0 (honors class = 4.8); class rank 2/135.

HONORS

- NSF Graduate Research Fellowship, 2004.

- California Microelectronics Fellowship, 2002-2003.

- Phi Kappa Phi honor society, Spring 2002.

- Honorable Mention, Computing Research Association Outstanding Undergraduate Award Program 2002. One of 44 from the US and Canada chosen for "outstanding research potential in an area of computing research."

- Honorable Mention, 2002 Google Scholarship. One of eight US students recognized.

- 2002 Andrew Carnegie Society Presidential Scholar. One of 34 recognized students in my graduating class.

- Phi Beta Kappa, October 2001 (early induction). One of 20 early inductees in my graduating class.

- CMU Small Undergraduate Research Grant, Spring 2002. Awarded by CMU's Undergraduate Research Initiative, and sponsored by Compaq Computer Corporation, for my research in Natural Language CAPTCHAs (see below).

GRADUATE-LEVEL COURSEWORK

- **UC Berkeley** Computer Networks (CS268, Spring 2004), Computational Biology (CS294-2 Spring 2004), Probability Theory (Stat205a, Fall 2003), Advanced Topics in Computer Systems (CS262a, Fall 2003), Foundations of Parallel and Distributed Systems (CS273, Spring 2003), Random Graphs and Complex Networks (Stat206, Spring 2003), Complexity Theory (CS278, Fall 2002), Statistical Learning Theory (CS281A, Fall 2002).

- **CMU** Algorithms in the Real World (15-853, Fall 2001), Distributed Systems (15-612, Spring 2001), Intro to Artificial Neural Networks (15-882, Spring 2000).

EXPERIENCE

- **Google Inc., summer 2002** Clustering of data for Froogle, a structured search product.

- **CAPTCHA project, fall 2001-spring 2002** Research in methods to automatically differentiate humans and computers using a natural language-based (i.e., text only) test. Advisor: Prof. Lenore Blum. See http://captcha.net.

- **Cray Inc., summer 2001** Design and implementation in C of a fast multi-link file transfer protocol and server for the Cray X1 supercomputer.

- **Cray Inc., summer 2000** Development of routing software for the Cray X1 memory subsystem. Involved translating a prototype from LISP to C++ and work on the routing algorithm.

SKILLS

- **Programming Languages** C, C++, Java, OCaml, Standard ML, Python, Perl, LISP, Alpha Assembly, Pascal

PAPERS

Available at `http://www.cs.berkeley.edu/~pbg/`.

- P. Brighten Godfrey, Alex Fabrikant, and Ion Stoica. Heterogeneity and Load Balance in Distributed Hash Tables. In preparation.

- P. Brighten Godfrey and David Ratajczak. Naps: Scalable, Robust Topology Management in Wireless Ad Hoc Networks. *Proc. Information Processing in Sensor Networks* (IPSN), 2004.

- Brighten Godfrey, Karthik Lakshminarayanan, Sonesh Surana, Richard Karp, and Ion Stoica. Load Balancing in Dynamic Structured P2P Systems. *Proc. of IEEE INFOCOM*, 2004.

- Kamalika Chaudhuri, Brighten Godfrey, Satish Rao, and Kunal Talwar. Paths, Trees and Minimum Latency Tours. *Proc. of FOCS 2003*: 36-45.

PRESENTATIONS

- Philip Brighten Godfrey. Text Oriented CAPTCHAs. Presentation, First Workshop on Human Interactive Proofs at Xerox PARC, January 9-11, 2002.