Alex Fabrikant

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EDUCATION

◇ **University of California, Berkeley**
Ph.D., Computer Science (expected, August 2008)
Dissertation: Complexity of game dynamics
Advisor: Christos H. Papadimitriou
Graduate minor in systems, security, and networking
Graduate minor in statistics

◇ **University of California, Berkeley**
B.S., Electrical Engineering and Computer Science, *Summa cum laude*, 2002
B.A., Mathematics, *Summa cum laude*, 2002
B.A., Linguistics, 2002

RESEARCH INTERESTS

Algorithmic game theory, theoretical aspects of networking, economics of security

PUBLICATIONS (REFEREED)

Alex Fabrikant and Christos Papadimitriou, "The complexity of game dynamics: BGP oscillations, sink equlibria, and beyond." In the Proceedings of the Symposium on Discrete Algorithms (SODA) 2008, pages 844–853.

Constantinos Daskalakis, **Alex Fabrikant**, and Christos Papadimitriou, "The Game World is Flat: The Complexity of Nash Equilibria in Succinct Games." In the Proceedings of the International Conference on Automata, Languages, and Programming (ICALP) 2006, pages 513–524.

Alex Fabrikant, Christos Papadimitriou, Kunal Talwar, "The Complexity of Pure Nash Equilibria." In the Proceedings of Symposium on the Theory Of Computing (STOC) 2004, pages 604–612.

Alex Fabrikant, Ankur Luthra, Elitza Maneva, Christos H. Papadimitriou, and Scott Shenker, "On a Network Creation Game." In the Proceedings of the Symposium on the Principles of Distributed Computing (PODC) 2003, pages 347–351.

Alex Fabrikant, Elias Koutsoupias, and Christos H. Papadimitriou, "Heuristically Optimized Trade-offs: A New Paradigm for Power Laws in the Internet." In the Proceedings of the International Conference on Automata, Languages, and Programming (ICALP) 2002, pages 110–122.

Alex Fabrikant, Tad Hogg, "Graph Coloring with Quantum Heuristics." In the Proceedings of the American Association for Artificial Intelligence Conference (AAAI) 2002, pages 22–27.

PUBLICATIONS (NON-REFEREED)

Lior S. Pachter, Jody Schwartz, Jim Lord, Alexander Fabrikant, Alexander Poliakov, Kelly A. Frazer, Inna Dubchak. "AVID and VISTA: Comparative Genomics Tools for Biological Discovery." Poster at the International Conference on Computational Molecular Biology (RECOMB) 2001.

Lior Pachter, Nick Bray, Inna Dubchak, Alex Fabrikant, Jim Lord, Lior Pachter, Eddy Rubin, Jody Schwartz. "AVID: Aligner for VISTA Including Draft." Poster at Genome Sequencing and Biology Workshop, Cold Spring Harbor, 2001.

INVITED TALKS

"The Complexity of Game Dynamics: Sink Equilibria, BGP Oscillations, and Beyond", Dagstuhl Seminar on Equilibrium Computation, Nov 2007, Dagstuhl, Germany

"The Complexity of Game Dynamics: Sink Equilibria, BGP Oscillations, and Beyond", The Institute For Operations Research and The Management Sciences (INFORMS) Annual Meeting, 2007, Seattle, WA

"The Complexity of Game Dynamics: Sink Equilibria, BGP Oscillations, and Beyond", Theory Seminar, Microsoft Research, Nov 2007, Redmond, WA

"Selfish Behavior in Networks," Frontiers in Distributed Information Systems Workshop (FDIS) 2005, San Francisco, CA

Awards

- ◇ John and Fannie Hertz Foundation Fellow, 2002–2007
- ◇ NSF Graduate Research Fellowship, 2002 (declined)
- ◇ DOD National Defense Science and Engineering Graduate Fellowship 2002 (declined)
- ◇ Computing Research Association Outstanding Undergraduate Award 2002, Runner-Up (2nd place in the US)
- ◇ Google Scholarship 2002, 3rd place
- ◇ UC Berkeley EECS Department Citation (top in graduating class), 2002
- ◇ UC Berkeley Programming Contest 2002, 1st place overall
- ◇ UC Berkeley Programming Contest 2000, 2nd place overall
- ◇ ACM Programming Contest, Pacific Northwest Region, 1998 and 2002, 4th place

Teaching experience

- ◇ Prison University Project, San Quentin State Prison (`http://prisonuniversityproject.org/`)
  - · Summer 2007: Lecturer, Chemistry (pilot course)
  - · Spring 2007: Lecturer, Geometry
  - · Spring 2005, Summer 2005: Teaching Assistant, Pre-Calculus & Calculus
  - · Summer 2004–Fall 2004; Fall 2005–Fall 2006: Teaching Assistant, Developmental Math
- ◇ CS Department, UC Berkeley
  - · Spring 2007: Teaching Assistant, Discrete Math for CS
    - – Guest lecturer for 3 lectures
    - – 2nd highest TA rating in the 7 years the course was taught
  - · Spring 2004: Teaching Assistant, Introduction to CS Theory
  - · Spring 2001: Teaching Assistant, Complexity Theory
  - · Spring 2000: Reader, Discrete Math for CS
- ◇ Fall 2000–Fall 2002: CS Tutor for Eta Kappa Nu (volunteer)
- ◇ Spring 1999–Spring 2000: Math Tutor, Clark Kerr Campus, UC Berkeley

Industry experience

- ◇ Research intern, HP Labs (Summer 2003)
- ◇ Research intern, Xerox PARC, Information Science & Technology lab (Summer 2000)
- ◇ Research assistant, Lawrence Berkeley National Lab, Genome Sciences Division (2000-2001)
- ◇ Intern, Schlumberger ATE, Compilers and Patterns Group (Summer 1999)

Service

- ◇ Reviewer for STOC 2005, SODA 2005, CCC 2005, ICALP 2005, SODA 2006, STOC 2006, SODA 2007, STOC 2007, FOCS 2007, SODA 2008, STOC 2008, ICALP 2008, ESA 2008
- ◇ Graduate representative, Berkeley CS Dept. Faculty Hiring Committee, 2006-2007
- ◇ Organizer, Berkeley Theory Graduate Informal Forum, Fall 2003 – Fall 2004
- ◇ Mailing list manager, Berkeley CS Theory Group, 2004–current
- ◇ Organizer & presenter, CS GRE Theory workshop, UC Berkeley, Fall 2002

Technical Skills	Languages: C/C++, perl, Java, Python, lex/yacc, Common Lisp, Scheme, Pascal, MIPS assembly, Postscript, Visual Basic
	Math: Matlab, Mathematica; TeX/LaTeX
	Miscellanea: CVS, ClearCase; CGI, SQL, HTML
	Environments: Linux (inc. system administration), FreeBSD, Solaris, HP-UX, Windows
Professional memberships	ACM SIGACT (student member)
	Eta Kappa Nu
	Tau Beta Pi
Languages	English (fully fluent), Russian (fully fluent), Spanish (conversational)
Citizenship	US
References	Available on request.