

Candidate for Chair

Lance Fortnow
Northwestern University, Evanston, IL USA

BIOGRAPHY

Academic Background:

Ph.D., MIT, 1989, Applied Mathematics.

Professional Experience:

Professor, Northwestern University, Evanston, IL, 2008 – 2009;
Professor, University of Chicago, Chicago, IL, 2003 – 2007;
Senior Research Scientist, NEC Research Institute, Princeton, NJ, 1999 – 2003.

Professional Interest:

Computational Complexity; Electronic Commerce.

ACM Activities:

Vice-Chair, SIGACT, 2005 – 2009;
Editor-in-Chief, ACM Transactions on Computation Theory, 2007 – 2009;
General Chair, ACM Conference on Electronic Commerce, 2008 – 2008;
Editor, JACM, 2005 - 2009

Membership and Offices in Related Organizations:

Chair of Steering Committee, IEEE Conference on Computational Complexity,
2000 – 2006;
Organizer, Focus on Computation and the Socio-Economic Sciences, DIMACS,
2004 – 2007.

Awards Received:

ACM: Fellow, 2007.
Other: Fulbright Scholar in The Netherlands, 1996; NSF Presidential Faculty Fellow, 1992.

STATEMENT

During the past four years as vice-chair I have seen SIGACT continue its role as the leading organization for theoretical computer science. SIGACT has had great success in increasing NSF funding in theory through its Committee for the Advancement of Theoretical Computer Science. Personally, I led the launch of the new SIGACT sponsored journal ACM Transactions on Computation Theory. SIGACT continues to successfully run STOC and other major conferences, maintains a strong newsletter and remains fiscally very strong.

Still the theory community has many challenges and SIGACT should lead the way.

As theory grows we find ourselves fracturing somewhat into the various subfields. SIGACT needs to work to keep the theory community strong as a whole, in particular making sure that the SIG fairly treats the needs of all members of our community.

SIGACT should work with other SIGs in joint projects to bring new directions to our field as well as keep others aware of the importance of theory in our community.

The current state of the economy will pose challenges to recruiting and beyond. SIGACT must take a leadership role in helping the theory community, individually and as a whole, to grow and remain successful.

Candidate for Chair

Madhu Sudan
MIT, Cambridge, MA, USA

BIOGRAPHY

Academic Background:

Ph.D., U.C. Berkeley, 1992, Computer Science.

Professional Experience:

Professor, MIT, Cambridge, MA, USA, 1997 – Present;
Research Staff Member, IBM Research, Thomas J. Watson Center, Yorktown Heights, NY, USA, 1992 – 1997.

Professional Interest:

Computational Complexity; Coding Theory; Optimization; Approximation Algorithms; Property Testing.

Awards Received:

ACM: Doctoral Dissertation Award, 1993.
Other: IEEE Information Theory Society Paper Award, 2000; Godel Prize, 2001; Nevanlinna Prize, 2002.

STATEMENT

The SIGACT Chair position seems to involve the clear function of selecting chairs of STOC and committees for the Knuth Prize and the Godel Prize. In these I hope not to do anything controversial!

The more subjective and important role may be to increase the visibility of research in theoretical CS (both the past ones, and the questions we are seeking to address in the future), in conjunction with the SIGACT committee for Advancing Theoretical CS. On this aspect I do hope to invest significant effort.

Candidate for Member at Large

Cynthia Dwork
Microsoft, Mountain View, CA USA

BIOGRAPHY

Academic Background:

Ph.D., Cornell, 1983, Computer Science.

Professional Experience:

Principal Researcher, Microsoft, Mountain View, CA, 2001 – Present;
Staff Fellow, Compaq, Palo Alto, CA, 2000 – 2001;
Research Staff Member, IBM, San Jose, CA, 1985 – 2000.

Professional Interest:

Private data analysis; Cryptography; Complexity; Internet mathematics; Distributed computing.

ACM Activities:

Program Chair of STOC, SIGACT, 2008;
Program Chair of PODC, SACT-SIGOPS, 1990;
Godel Prize Award Committee, SIGACT, 2009.

Membership and Offices in Related Organizations:

Program Chair for CRYPTO 2006, International Association of Cryptologic Researchers, 2006 – 2006;
Fellows Selection Committee, International Association of Cryptologic Researchers, 2005 – Present.

Awards Received:

ACM: Edsger W. Dijkstra Prize in Distributed Computing, 2007.
Other: Elected Fellow of the American Academy of Arts and Sciences, 2008;
Elected to the National Academy of Engineering, 2008.

STATEMENT

For a generation I have thrived as a member of the Theoretical Computer Science community and benefited from its exciting and inspiring culture. I would be honored to contribute to this community by serving on the SIGACT Executive Committee.

Candidate for Member at Large

Anna Lysyanskaya
Brown University, Providence, RI USA

BIOGRAPHY

Academic Background:

Ph.D., MIT, 2002, EECS.

Professional Experience:

Associate Professor, Brown University, Providence, 2008 – 2009;

Assistant Professor, Brown University, Providence, 2002 – 2008.

Professional Interest:

Cryptography; Theoretical Computer Science; Computer Security.

Awards Received:

Other: Sloan Foundation Fellowship, 2008;

2006 Pat Goldberg Memorial Best Paper Award (IBM Research), 2007;

Technology Review's "35 Innovators under 35", 2007.

STATEMENT

The reasons that I want to serve the ACM SIGACT is that the theory community has been a nurturing environment for me and I would like to give back. My priorities are, of course, high quality research and its effective dissemination, mentoring, and dialogue with other branches of CS and with funding agencies. Finally, since the cryptography community is my home in the theory community, I am interested in bringing the ACM and the IACR closer together.

Candidate for Member at Large

Michael Mitzenmacher

Harvard University, School of Engineering and Applied Sciences, Cambridge, MA USA

BIOGRAPHY

Academic Background:

Ph.D., U. C. Berkeley, 1996, Computer Science.

Professional Experience:

Professor, Harvard University, School of Engineering and Applied Sciences, Cambridge, MA, 1999 – 2009;

Research Scientist, Digital Systems Research Center, Palo Alto, CA, 1996 – 1999.

Professional Interest:

Algorithms; Randomized Algorithms; Probabilistic Analysis; Networks; Information Theory.

ACM Activities:

SIGACT Committee for the Advancement of TCS, SIGACT, 2005 – 2007;

STOC 2009 Program Chair, SIGACT, 2008 – 2009.

Membership and Offices in Related Organizations:

IEEE FOCS Conference Treasurer, IEEE, 2005 – 2008.

Awards Received:

Other: IEEE Information Theory Society Best Paper Award, 2002.

STATEMENT

As Member-at-Large for SIGACT, my main goal would be to promote theoretical computer science to the rest of the computer science community and other scientific communities. Only recently has the TCS community started to organize and vocalize about its agenda, but we are already starting to see payoffs, including increased consideration in NSF funding and a greater role in groups like the Computing Community Consortium. While the tendency in the TCS community is to let the theorems speak for themselves, we must continue to do a better job promoting our work and our contributions. I would consider that to be my primary job, if elected.

My other main goal is increased education. As many have noted and Jeanette Wing has popularized, computational thinking is far more than programming. The notions of algorithms and complexity are fundamental to computational thinking, and therefore the theory community can and should play a key role in developing and promoting

computational thinking curricula at all levels. Such efforts will improve scientific education overall, enhance the stature of computer science in general and of theory in particular, and improve the pipeline of students looking to computer science as a career.

Candidate for Member at Large

Toniann Pitassi
University of Toronto, Toronto, Ontario, Canada

BIOGRAPHY

Academic Background:

Ph.D., University of Toronto, 1992, Computer Science.

Professional Experience:

University of Toronto, Professor, Dept. of Computer Science, Joint appointment in Math, Toronto, Ontario, 2000 – 2009;

University of Arizona, Asst. Professor, Dept. of Computer Science, Tucson, Arizona, 1996 – 2000;

University of Pittsburgh, Dept. of Mathematics, joint appointment in Computer Science, Pittsburgh, PA, 1994 – 1996.

Professional Interest:

Computational Complexity; Logic and Proof Complexity; Combinatorics; Algorithms.

Membership and Offices in Related Organizations:

Core Panel Member, ICM (International Congress of Mathematicians), 2008 – 2009;

Council Member, ASL (Association of Symbolic Logic), 2002 – 2005;

Conference Committee Member, Computational Complexity Conference, 2001 – 2004.

Awards Received:

Other: NSERC Accelerator Award (Canada), 2007; Premiere's Research Excellence Award (Canada), 2001; NSERC University Faculty Award, 2000; NSF Young Investigator Award, 1994.

STATEMENT

Research in our field has never been more exciting. I am running for member-at-large because I am honored to be part of this community and I want to help promote the growth and development of our scientific achievements and goals.

Candidate for Member at Large

Michael E. Saks

Rutgers University, Department of Mathematics, Piscataway, NJ USA

BIOGRAPHY

Academic Background:

Ph.D., Massachusetts Institute of Technology, 1980, Mathematics.

Professional Experience:

Professor, Department of Mathematics, Rutgers University, 1981 – Present;
Professor, Department of Computer Science and Engineering, UCSD, 1989 – 1991;
Technical Staff, Bell Communications Research, Morristown, NJ, 1984 – 1986.

Professional Interest:

Computational Complexity; Discrete Mathematics; Algorithms.

ACM Activities:

Chair, Program Committee, SODA 1997, 1996 – 1997.

Membership and Offices in Related Organizations:

Editorial Boards, Several including SICOMP and JACM;
Conference Steering Committee, IEEE Computational Complexity, 2002 – 2005;
Executive Committee, DIMACS, 1992 – Present.

Awards Received:

ACM: Godel Prize, 2004.

STATEMENT

I have not previously been involved in ACM administrative activities. I'm prepared to make myself more knowledgeable about the operation of SIGACT, to fulfill the responsibilities of an at-large committee member, and to be responsive to issues raised by members.

Candidate for Member at Large

Baruch Schieber
IBM - TJ Watson Research Center, Yorktown Heights, NY USA

BIOGRAPHY

Academic Background:

Ph.D., Tel Aviv University, 1987, Computer Science.

Professional Experience:

Senior Manager, Optimization Center, IBM - TJ Watson Research Center, Yorktown Heights, NY, 2001 – Present.

Professional Interest:

Algorithms; Theoretical Computer Science; Combinatorial Optimization; Business Optimization.

STATEMENT

This is the first time I run for an ACM-SIGACT position. As part of my work at IBM Research I am exposed to many instances where state of the art algorithms are applied and make a change in business and government. My major goal as a Member-at-Large would be to tighten the connections of our community with industry. This will enable us to prepare our students for their future career and to increase the exposure of our community.

Candidate for Member at Large

Alan L. Selman
University at Buffalo, SUNY, Buffalo, NY USA

BIOGRAPHY

Academic Background:

Ph.D., Penn. State University, 1970, Mathematics.

Professional Experience:

Professor, University at Buffalo, SUNY, Buffalo, NY, 1990 – Present;
Professor and Chairman, University at Buffalo, SUNY, Buffalo, NY, 1990 – 1996;
Professor, Northeastern University, Boston, MA, 1986 – 1990.

Professional Interest:

Computational complexity.

Membership and Offices in Related Organizations:

Member of the Executive Board, Technical Committee on FOCS, IEEE Computer Society, 1985 – 1988;
Conference Chair, Structure in Complexity Theory Conference, IEEE Computer Society, 1986 – 1988.

Awards Received:

ACM: Fellow, 1997; SIGACT Distinguished Service Award, 2001.
Other: Meritorius Service Award, IEEE Computer Society, 1989.

STATEMENT

As a sponsor of several major annual conferences, SIGACT is a large and successful organization. The Committee for the Advancement of Theoretical Computer Science (CATCS) has the important responsibility of influencing and advising funding agencies and of increasing visibility of theory of computing. CATCS has been especially successful in advising NSF and in assisting in recruiting for positions. CATCS needs to continue to establish ongoing programs to tell our story, for good theory of computing is essential for good computer science. We should make this case in many different ways to several different constituencies. SIGACT needs to continue to play the leadership role in the effort to raise funding levels.

Peter Lee, Head, Department of Computer Science, CMU, wrote “it seems pretty clear that, over the next decade, the best CS departments will be required to have the best theory

research.” It would be wonderful for computer science and for our students if SIGACT could influence CS departments broadly to invest in research in theory of computing.

Members may learn more about my view of theory of computing by reading the report, sponsored by NSF, “Challenges for Theory of Computing” at <http://www.cse.buffalo.edu/~selman/report/>.