Atul Prakash

Addresses

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Education

Ph.D., Dept. of EECS, University of California, Berkeley, 1989
M.S. in Computer Science. University of California, Berkeley, 1984
B.Tech. in Electrical Engineering. Indian Institute of Technology, New Delhi, 1982

Brief Biographical Sketch

Atul Prakash is a Professor in the Department of EECS at the University of Michigan. His research interests include security, computer-supported cooperative work (CSCW), distributed systems, and software engineering. He has participated as co-PI in several large-scale research projects, including two NSF-funded multi-institution collaboratories, the five year Upper Atmospheric Research Collaboratory Project and the currently ongoing three year KDI-supported SPARC collaboratory project. and is the PI on a multi-faculty grant in the area of security, funded by DARPA. He is currently serving as the Director of the Industrial Partnership program of the Computer Science and Engineering Division at the University of Michigan. The Antigone project, under his leadership, is exploring mechanisms for specifying and enforcing security policies in group communication systems. It has been used to support secure video multicasts of an Internet2 workshop to the participants. He has been supported by funding from IBM Watson Research Center, Microsoft, Intel, NSF, NASA, National Security Agency, and Hitachi Software, among others.
Professor Prakash has served on several program committees, including several ACM CSCW Conferences, IEEE ICDCS conference, and the IEEE Distributed Systems conference, organized and co-chaired a successful workshop on CSCW systems, and served as associate program chair of several conferences.

Appointments

• University of Michigan (Sept 2001 to Present) - Professor, Department of EEECS.
• University of Michigan (June 1995 to Present) - Associate Professor, Department of EECS.
• University of Michigan (January 1989 to June 1995) - Assistant Professor, Department of EECS.
• IBM T.J. Watson Research Center (October 1995 to May 1996) - Visiting Research Scientist (on sabbatical leave from the University of Michigan)

Awards

• The Smithsonian-ComputerWorld Innovation Awards Program, 1998, Inclusion of the UARC project in the permanent archives of the Smithsonian Institution in the Science category.
• Research Excellence Award, Department of EECS, University of Michigan, Ann Arbor, 1996-97.
• Research Initiation Award, National Science Foundation, 1989.
• Irving and Lucille Smith Fellowship, University of California, Berkeley, 1988-89.
• Regents Fellowship, University of California, Berkeley, 1983-84.
• Rajiv Bambawale Memorial Award for the best B.Tech. Project, IIT Delhi, 1982.

Closely Related Publications

• Patrick McDaniel, Atul Prakash, and Peter Honeyman Antigone: A Flexible Framework for Secure Group Communication, *Proc. of the 8th Usenix Security Symposium*, August, 1999, pp. 99-114.
• Radu Litiu and Atul Prakash, Stateful Group Communication Services, *Proc. of the International Conference on Distributed Computing Systems (ICDCS)*, Austin TX, June 1999, pp. 82-89.
• T. Jaeger, A. Prakash, N. Islam, and J. Liedtke, Flexible Control of Downloaded Executable Content, *ACM Transactions on Information and System Security*, Vol. 2, Issue 2, May 1999, pp. 177-228.
• R. Strom, G. Banavar, K. Miller, A. Prakash, and M. Ward, Concurrency Control and View Notification Algorithms for Collaborative Replicated Objects, *IEEE Transactions on Computers*, Vol. 47, No. 4, April 1998, pp. 458-471.
• R. W. Hall, A. G. Mathur, F. Jahanian, A. Prakash, and C. Rasmussen, Corona: A Communication Service for Scal-

able, Reliable Group Collaboration Systems, in *Proc. ACM Conference on Computer Supported Cooperative Work (CSCW 96)*, Boston, MA, Nov. 1996, pp. 140-151.

Other Relevant Publications

• Jang Ho Lee, Atul Prakash Trent Jaeger, and Gwobaw Wu Supporting Multi-User, Multi-Applet Workspaces in CBE, in *Proc. of the Sixth ACM Conference on Computer-Supported Cooperative Work (CSCW 96)*, November 1996, pages 344-355.
• T. Jaeger, A.D. Rubin, and A. Prakash, Building Systems that Flexibly Control Downloaded Executable Content, *Proc. of the 6th USENIX UNIX Security Symposium*, July 1996, pp. 131-148 *(Best Student Paper Award)*.
• A. G. Mathur and A. Prakash, A Protocol Composition-Based Approach to QoS Control in Collaboration Systems, in *Proc. Third IEEE International Conference on Multimedia Computing and Systems*, June 1996, pp. 62-69.
• S. Paul and A. Prakash, A Query Algebra for Program Databases, *IEEE Transactions on Software Engineering*, Vol. 22, No. 3, March 1996, pp. 202-217.
• A. Prakash and M. Knister, A Framework for Undoing Actions in Collaborative Systems, *ACM Transactions on Computer-Human Interaction*, Vol. 1, No. 4, December 1994, pp. 295-330.

Related Educational Activites

• Developed a graduate-level course on web technologies dealing with issues in security and privacy, scalability and performance, and applications. This course came out of experiences from previous NSF and related projects.
• Worked with Technical Communications faculty to define a technical communication add-on component for the software engineering course at the university of Michigan. The results were presented at the at the 1997 Annual Conference of American Society for Engineering Education.

Synergistic Activities

• UARC and SPARC collaboratories: worked with space scientists and social scientists to make research in collaborative systems relevant to supporting Internet-based collaboration on real-time scientific data in the space science domain.
• Collaborations with several faculty in the university in areas such as security, mobility, and electronic commerce.
• Worked with IBM Research (leading to filing of a patent) on design of algorithms to support low-latency, optimistic transactions in group collaboration systems.

Collaborators

D. Atkins (UM), R. Clauer (UM) A.D. Rubin (AT&T), G. Banavar (IBM), T. Finholt (UM), J. Hardin (UM), P. Honeyman (UM), N. Islam (IBM), F. Jahanian (UM), H.V. Jagdish (UM), Tim Killeen (UM), J. Liedtke (IBM), K. Miller (IBM), B. Noble (UM), G. Olson (UM), A.D. Rubin (AT&T), N. Soparkar (UM), R. Strom (IBM), M. Ward (IBM), M. Wellman (UM), T. Weymouth (UM).

Graduate Students Advised

Trent Jaeger (IBM Watson), Nelson Manohar (IBM Watson), Amit Mathur (Oracle and current), Hyongsop Shim (Telcordia), Gwobaw Wu (Intel), Jang Ho Lee (IBM), Patrick McDaniel (current), Radu Litiu (current), Lukasz Opyrchal (current).

Graduate Advisor: C.V. Ramamoorthy (UC Berkeley)