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Education

Ph.D. in Computer Science and Engineering, University of Washington, 1993.
M.S. in Computer Science and Engineering, University of Washington, 1991.
B.S. in Physics, with Honors, California Institute of Technology, 1985.

Employment

Assistant Professor of Computer Science, Princeton University, 1993-present.
Senior Computing Analyst, Caltech Concurrent Computing Project, California Institute of Technology, 1986-1989.

Honors and Awards

Alfred P. Sloan Fellowship, 1997.
Emerson Electric, E. Lawrence Keyes Faculty Advancement Award, Princeton University School of Engineering, 1996.
National Young Investigator award, 1994.

Research Interests

Operating Systems. Internet software. Computer security, especially relating to the World Wide Web. Security of mechanisms for distributing executable content over the Internet. Interaction of security with programming languages and operating systems. Distributed computing. Parallel computing architecture and software.

Publications

An Empirical Study of the SHRIMP System. Matthias A. Blumrich, Richard D. Alpert, Yuqun Chen, Douglas W. Clark, Stefanos, N. Damianakis, Cezary Dubnicki, Edward W. Felten, Liviu Iftode, Margaret Martonosi, Robert A. Shillner, and Kai Li. Proc. of 25th International Symposium on Computer Architecture, June 1998.

Performance Measurements for Multithreaded Programs. Minwen Ji, Edward W. Felten, and Kai Li. Proc. of 1998 SIGMETRICS Conference, June 1998.

Understanding Java Stack Inspection. Dan S. Wallach and Edward W. Felten. Proc. of 1998 IEEE Symposium on Security and Privacy, May 1998.

Java Security: Web Browsers and Beyond. Drew Dean, Edward W. Felten, Dan S. Wallach, and Dirk Balfanz. In "Internet Besieged: Countering Cyberspace Scofflaws," Dorothy E. Denning and Peter J. Denning, eds. ACM Press, New York, 1997.

Extensible Security Architectures for Java. Dan S. Wallach, Dirk Balfanz, Drew Dean, and Edward W. Felten. Proc. of 16th ACM Symposium on Operating Systems Principles, Oct. 1997. Outstanding Paper Award.

Web Spoofing: An Internet Con Game. Edward W. Felten, Dirk Balfanz, Drew Dean, and Dan S. Wallach. Proc. of 20th National Information Systems Security Conference, Oct. 1997.

A Java Filter. Dirk Balfanz and Edward W. Felten. Technical Report 567-97, Dept. of Computer Science, Princeton University, October 1997.

Inside RISKS: Webware Security. Edward W. Felten. Communications of the ACM, 40(4):130, 1997.

Reducing Waiting Costs in User-Level Communication. Stefanos N. Damianakis, Yuqun Chen, and Edward W. Felten. Proc. of 11th Intl. Parallel Processing Symposium, April 1997.

Stream Sockets on SHRIMP. Stefanos N. Damianakis, Cezary Dubnicki, and Edward W. Felten. Proc. of 1st Intl. Workshop on Communication and Architectural Support for Network-Based Parallel Computing, February 1997. (Proceedings available as Lecture Notes in Computer Science #1199.)

Client-Server Computing on the SHRIMP Multicomputer. Stefanos N. Damianakis, Angelos Bilas, Cezary Dubnicki, and Edward W. Felten. IEEE Micro 17(1):8-18, February 1997.

Fast RPC on the SHRIMP Virtual Memory Mapped Network Interface. Angelos Bilas and Edward W. Felten. IEEE Transactions on Parallel and Distributed Computing, February 1997.

Java Security: Hostile Applets, Holes and Antidotes. Gary McGraw and Edward Felten. John Wiley and Sons, New York, 1996.

Implementation and Performance of Integrated Application-Controlled File Caching, Prefetching and Disk Scheduling. Pei Cao, Edward W. Felten, Anna R. Karlin, and Kai Li. ACM Transactions on Computer Systems, Nov 1996.

Early Experience with Message-Passing on the SHRIMP Multicomputer. Richard D. Alpert, Angelos Bilas, Matthias A. Blumrich, Douglas W. Clark, Stefanos Damianakis, Cezary Dubnicki, Edward W. Felten, Liviu Iftode, and Kai Li. Proc. of 23rd Intl. Symposium on Computer Architecture, 1996.

A Trace-Driven Comparison of Algorithms for Parallel Prefetching and Caching. Tracy Kimbrel, Andrew Tomkins, R. Hugo Patterson, Brian N. Bershad, Pei Cao, Edward W. Felten, Garth A. Gibson, Anna R. Karlin, and Kai Li. Proc. of 1996 Symposium on Operating Systems Design and Implementation.

Simplifying Distributed File Systems Using a Shared Logical Disk.Robert A. Shillner and Edward W. Felten. Princeton University technical report TR-524-96.

Java Security: From HotJava to Netscape and Beyond. Drew Dean, Edward W. Felten, and Dan S. Wallach. Proc. of 1996 IEEE Symposium on Security and Privacy.

Integrated Parallel Prefetching and Caching. Tracy Kimbrel, Pei Cao, Edward W. Felten, Anna R. Karlin, and Kai Li. Proc. of 1996 SIGMETRICS Conference.

Contention and Queueing in an Experimental Multicomputer: Analytical and Simulation-based Results. Wenjia Fang, Edward W. Felten, and Margaret Martonosi. Princeton University technical report TR-508-96.

Software Support for Virtual Memory-Mapped Communication. Cezary Dubnicki, Liviu Iftode, Edward W. Felten, and Kai Li. Proc. of Intl. Parallel Processing Symposium, April 1996.

Protected, User-Level DMA for the SHRIMP Network Interface. Matthias A. Blumrich, Cezary Dubnicki, Edward W. Felten, and Kai Li. Proc. of 2nd Intl. Symposium on High-Performance Computer Architecture, Feb. 1996

Improving Release-Consistent Shared Virtual Memory using Automatic Update. Liviu Iftode, Cezary Dubnicki, Edward W. Felten, and Kai Li. Proc. of 2nd Intl. Symposium on High-Performance Computer Architecture, Feb. 1996

Design and Implementation of NX Message Passing Using SHRIMP Virtual Memory Mapped Communication. Richard D. Alpert, Cezary Dubnicki, Edward W. Felten, and Kai Li. Princeton University technical report TR-507-96.

Synchronization for a Multi-Port Frame Buffer on a Mesh-Connected Multicomputer. Bin Wei, Gordon Stoll, Douglas W. Clark, Edward W. Felten, and Kai Li. Parallel Rendering Symposium, Oct. 1995.

A Study of Integrated Prefetching and Caching Strategies. Pei Cao, Edward W. Felten, Anna R. Karlin, and Kai Li. Proc. of 1995 ACM SIGMETRICS Conference. Best Paper award.

Evaluating Multi-Port Frame Buffer Designs for a Mesh-Connected Multicomputer. Gordon Stoll, Bin Wei, Douglas W. Clark, Edward W. Felten, Kai Li, and Patrick Hanrahan. Proc. of 22nd Intl. Symposium on Computer Architecture.

Virtual Memory Mapped Network Interface Designs. Matthias A. Blumrich, Cezary Dubnicki, Edward W. Felten, Kai Li, and Malena Mesarina. IEEE Micro, 15(1):21-28, February 1995.

Dynamic Tree Searching. Steve W. Otto and Edward W. Felten. In "High Performance Computing", Gary W. Sabot, ed., Addison Wesley, 1995.

Implementation and Performance of Application-Controlled File Caching Pei Cao, Edward W. Felten, and Kai Li. Proc. of 1st Symposium on Operating Systems Design and Implementation, pages 165-178, November y1994.

Application-Controlled File Caching Policies. Pei Cao, Edward W. Felten, and Kai Li. Proc. of USENIX Summer 1994 Technical Conference, pages 171-182, 1994.

Virtual Memory Mapped Network Interface for the SHRIMP Multicomputer. Matthias A. Blumrich, Kai Li, Richard D. Alpert, Cezary Dubnicki, Edward W. Felten, and Jonathan S. Sandberg. ISCA '94.

Protocol Compilation: High-Performance Communication for Parallel Programs. Edward W. Felten. Ph.D. dissertation, Dept. of Computer Science and Engineering, University of Washington, August 1993.

Building Counting Networks from Larger Balancers. Edward W. Felten, Anthony LaMarca, and Richard Ladner. Univ. of Washington technical report UW-CSE-93-04-09.

Performance Issues in Non-Blocking Synchronization on Shared-Memory Multiprocessors. Juan Alemany and Edward W. Felten. Proceedings of Symposium on Principles of Distributed Computing, 1992.

Improving the Performance of Message-Passing Applications by Multithreading. Edward W. Felten and Dylan McNamee. Proceedings of Scalable High-Performance Computing Conference (SHPCC), 1992.

The Case for Application-Specific Communication Protocols. Edward W. Felten. Univ. of Washington technical report TR-92-03-11.

A Centralized Token-Based Algorithm for Distributed Mutual Exclusion. Edward W. Felten and Michael Rabinovich. Univ. of Washington technical report TR-92-02-02.

Issues in the Implementation of a Remote Memory Paging System. Edward W. Felten and John Zahorjan. Univ. of Washington technical report TR-91-03-09.

A Highly Parallel Chess Program. Edward W. Felten and Steve W. Otto. 1988 Conference on Fifth Generation Computer Systems.

ADDITIONAL PUBLICATIONS OF
EDWARD W. FELTEN

1. Gary McGraw and Edward Felten. Understanding the keys to Java security: the sandbox and authentication, JavaWorld 2(5), May 1997. (http://www.javaworld.com/javaworld/jw-05-1997/jw-05-security.html)

2. Gary McGraw and Ed Felten. The dark side of executable content, NetscapeWorld 2(2), February 1997. (http://www.netscapeworld.com/netscapeworld/nw-02-1997/nw-02-appletsecurity.html)

3. Gary McGraw and Edward Felten. Java Security: Hostile Applets, Java Report 2(2), February 1997.

4. Gary McGraw and Edward Felten. Core Programming column, Java Security and Type Safety, Byte Magazine, January, 1997, pages 63-64. (http://www.byte.com/art/9701/sec5/art4.htm)