

Edward D. Lazowska
October 2002

Personal

Born in Washington, D.C., August 3, 1950. Married; 2 children

Education

Ph.D. in Computer Science, University of Toronto, 1977

M.Sc. in Computer Science, University of Toronto, 1974

A.B. in Computer Science (independent concentration), Brown University, 1972

Employment

University of Washington, Department of Computer Science & Engineering

Bill & Melinda Gates Chair in Computer Science, 2000-

Department Chair, 1993-2001

Professor, 1986-

Associate Professor, 1982-86

Assistant Professor, 1977-82

University of California, San Diego, Department of Computer Science & Engineering

Visiting Scholar, 2001-02

Digital Equipment Corporation, Systems Research Center

Visiting Scientist, 1984-85

Stanford University, Department of Computer Science

Visiting Scholar, 1984-85

Research Interests

Computer systems: modeling and analysis, design and implementation, distributed and parallel systems

Representative Recognition

Named to "GT 25" (national leaders of information technology in state government) by *Government Technology* magazine, 2002

Elected to the National Academy of Engineering, 2001

Fellow of the American Association for the Advancement of Science, 2001

Bill & Melinda Gates Chair in Computer Science, University of Washington, 2000-

Named to "BAM 100" (one hundred Brown University alumni who had the greatest impact on the twentieth century), 2000

University of Washington Brotman Award for Instructional Excellence (Departmental), 1999

University of Washington Outstanding Public Service Award, 1998

Alliance for Education "A+ Partnership Award" for Outstanding Contributions to the Seattle Public Schools, 1997

University of Washington Annual Faculty Lecturer, 1996

Fellow of the Institute of Electrical and Electronics Engineers, 1996

Fellow of the Association for Computing Machinery, 1995

Award paper, ACM SIGCOMM '93 Symposium

Award paper, 1993 Machnix Workshop

Award paper, 13th ACM Symposium on Operating Systems Principles (1991)

Award paper, 12th ACM Symposium on Operating Systems Principles (1989)

Award paper, 1989 ACM SIGMETRICS Conference on Measurement and Modeling of Computer Systems

Award paper, 1985 ACM SIGMETRICS Conference on Measurement and Modeling of Computer Systems

Award paper, 7th ACM Symposium on Operating Systems Principles (1979)

Representative Recent Grants

Intel Corporation, 2002-03. Principal Investigator, *Laboratory Upgrade for UW CSE*, \$250,000

Intel Corporation, 2000. Principal Investigator, *Gigabit-to-the-Desktop Initiative*, \$155,000 (100% allowance on equipment)

National Science Foundation, 2000-04. Co-Principal Investigator (with T. Duchamp), Grant No. DUE-9987159: *Increasing Student Success in Engineering and the Mathematical Sciences at the University of Washington*, \$220,000+\$295,000

National Science Foundation, 1999-2001. Co-Principal Investigator (with C. Pu, C. Brown, W. Hersh, D. Steere), Grant No. ANI-9975992: *High Performance Metropolitan and Internet2 Connectivity for Portland Oregon Research Institutions*, \$1,228,000 (including 55% institutional contribution)

Intel Corporation, 1997. Co-Principal Investigator (with G. Lake and G. Zick), *Technology for Higher Education 2000* (campus-wide project), \$5,900,000 (100% allowance on equipment)

National Science Foundation, 1996-98. Co-Principal Investigator (with S. Corbato, T. Gray, and C. Stubbs), Grant No. NCR-9617039: *vBNS Connectivity for the University of Washington*, \$904,000 (including 60% UW contribution)

Intel Corporation, 1996, 1997. Co-Principal Investigator (with B. Bershad, M. Soma, and G. Zick), *Enhancing the Engineering Curriculum on the PC Platform*, \$925,000 for 1996, \$1,500,000 for 1997 (100% allowance on equipment)

IBM Corporation, 1994-95. Co-Principal Investigator (with B. Bershad), *System Structure for Advanced Processors*, \$750,000 (100% allowance on equipment)

Intel Corporation, 1993-94. Co-Principal Investigator (with G. Zick), *Collaborative Research in High Performance Computing*, \$761,000 (100% allowance on equipment)

National Science Foundation, 1992-97. Co-Principal Investigator (with H. Levy and J. Zahorjan), Grant No. CCR-9200832: *System Support for High Performance Computing*, \$1,984,000 (including 20% UW contribution)

National Science Foundation, 1992-96. Co-Principal Investigator (with R. Anderson, A. Borning, T. DeRose, H. Levy, D. Notkin, L. Snyder, S. Tanimoto, and J. Zahorjan), Grant No. CDA-9123308: *High Performance Parallel/Distributed Computing* (II Program), \$1,765,000 (including 25% UW contribution)

National Aeronautics and Space Administration, 1992-95. Investigator (with L. Adams, R. Anderson, J. Bardeen, R. Carlberg, C. Hogan, G. Lake (PI), W. Petersen, and L. Snyder), *Large Scale Structure and Galaxy Formation*, \$1,549,000

Digital Equipment Corporation, 1990-93. Co-Principal Investigator (with H. Levy), Research Agreement #1076: *Operating System Support for Contemporary Multi-Computers*, \$960,000 (80% allowance on \$1,200,000 in equipment)

National Science Foundation, 1989-92. Co-Principal Investigator (with H. Levy), Grant No. CCR-8907666: *Amber: Programming Support for Networks of Multiprocessors*, \$343,000

National Science Foundation, 1987-92. Project Director and Co-Principal Investigator (with J.-L. Baer, H. Levy, L. Snyder, W. Ruzzo, S. Tanimoto, and J. Zahorjan), Grant No. CCR-8619663: *Effective Use of Parallel Computing* (CER Program), \$4,808,000 (including 25% UW contribution)

National Science Foundation, 1987-91. Co-Principal Investigator (with J. Zahorjan), Grant No. CCR-8703049: *Performance of Parallel Systems*, \$320,000

Representative Recent Professional Activities

Computer Science and Telecommunications Board of the National Research Council, 1996-2002

Chair, NSF Advisory Committee for Computer and Information Science and Engineering, 1998-99; Member, 1995-2000

Information Science and Technology (ISAT) Study Group of the Defense Advanced Research Projects Agency, 1998-2001; Vice Chair (Chair-designate), 2002-

Corporate Technical Advisory Boards: Microsoft Research, 1991-; Voyager Capital, 1996-; E-Quill, 2000-02; Ignition, 2000-; Frazier Technology Ventures, 2000-; Madrona Venture Group, 2000-; Impinj, 2001-

Corporate Boards of Directors: Data I/O Corp., 1996-; Lguide.com, 1999-

Organizational Boards of Directors: Washington Software Alliance, 1996-; Computing Research Association, 1995- (Chair, 1997-2001; Chair, Government Affairs Committee, 1992-97 and 2001-); Technology Alliance of Washington, 2000- (Council member, 1995-2000; Vice President, 2001-03); ACM Council, 2000-; Lakeside School, 2001-

State of Washington Information Services Board, 1995-

National Academy of Engineering Peer Committee for Computer Science & Engineering, 2002-05; Vice Chair (Chair-designate), 2003

ACM Distinguished Dissertation Award Committee, 2002-

National Research Council Committee on Science and Technology for Countering Terrorism: Panel on Information Technology, 2001-02

National Research Council Committee on Improving Learning with Information Technology, 2001-02

National Research Council Committee on Research Horizons in Networking, 2000-01

Chair, ACM A.M. Turing Award Committee, 1999; Member, 1996-2001

National Science Foundation 50th Anniversary Public Advisory Committee, 1998-99

National Research Council Committee to Review the Multi-Agency HPCC Program ("Brooks/Sutherland Committee"), 1994-95

Chair, university-level review committees for Georgia Institute of Technology College of Computing (2002), Princeton Univ. Dept of CS (1999), Univ. of Virginia Dept. of CS (1999), Rice Univ. Dept. of CS (1998)

Standing advisory committees for Georgia Institute of Technology College of Computing, Univ. of Virginia Dept. of CS, Hong Kong Univ. of Science & Technology Dept. of CS, National College of Ireland Program in Informatics, University of Washington Cell Systems Initiative

Editor, *IEEE Transactions on Computers*, 1988-94

Chair, Committee of Examiners, GRE Computer Science Test, 1986-90; Member, 1982-90

Chair, ACM Special Interest Group on Measurement and Evaluation (SIGMETRICS), 1985-89

IFIP Working Group 7.3 on Computer System Modeling, 1986-

Representative Recent Departmental and University Activities

Chair, Department of Computer Science & Engineering, 1993-2001

Chair, University Advisory Committee for Academic Technology, 1990-2000

Search Committee for the Dean of the College of Education, 1999-2000

Chair, Committee to Review the Department of Statistics, 1998-99

Search Committee for the Dean of the Information School, 1997-98

Committee on the Future of the Graduate School of Library and Information Science, 1996-97

Committee on the Deanship of the College of Arts and Sciences, 1994

Chair, Committee to Review the Proposed Ph.D. Program in Molecular Biotechnology, 1994

Committee to Review the Performance of the Dean of Engineering, 1992-93

Student Supervision

19 Ph.D. completed, 23 M.S. completed. Recent Ph.D. students:

John K. Bennett, 1988 (Rice University -> University of Colorado)

Haim E. Mizrahi, 1988 (co-supervised with J.-L. Baer) (Raphael (Israel))

David B. Wagner, 1989 (University of Colorado -> Principia Consulting)

Brian N. Bershad, 1990 (co-supervised with H. Levy) (Carnegie Mellon University -> University of Washington) (NSF PYI Award, NSF PFF Award, and ONR YI Award recipient)

Yi-Bing Lin, 1990 (Bell Communications Research -> National Chiao-Tung University (Taiwan))

Mark S. Squillante, 1990 (IBM T.J. Watson Research Center)

Sung K. Chung, 1990 (co-supervised with D. Notkin) (IBM T.J. Watson Research Center (postdoc))
Thomas E. Anderson, 1991 (co-supervised with H. Levy) (University of California, Berkeley -> University of Washington)
(NSF PYI Award, NSF PFF Award, and Sloan Research Fellowship recipient)
B. Clifford Neuman, 1992 (USC Information Sciences Institute)
Edward W. Felten, 1993 (co-supervised with J. Zahorjan) (Princeton University) (NSF YI Award and Sloan Research
Fellowship recipient)
Chandramohan A. Thekkath, 1994 (co-supervised with H. Levy) (DEC Systems Research Center)
Robert Bedichek, 1994 (co-supervised with H. Levy) (MIT (postdoc) -> Transmeta Corp.)
Michael Rabinovich, 1994 (AT&T Bell Laboratories)
Jeffrey S. Chase, 1995 (co-supervised with H. Levy) (Duke University)
Dylan J. McNamee, 1996 (co-supervised with H. Levy) (Oregon Graduate Institute)
Brian Pinkerton, 2000 (co-supervised with J. Zahorjan) (Consultant)

Representative Publications

- E. Lazowska, J. Zahorjan, G. Graham, and K. Sevcik. *Quantitative System Performance: Computer System Analysis Using Queueing Network Models*. Prentice-Hall, 1984.
- D. Eager, E. Lazowska, and J. Zahorjan. Adaptive Load Sharing in Homogeneous Distributed Systems. *IEEE Trans. on Software Engr. SE-12,4* (May 1986).
- D. Eager, E. Lazowska, and J. Zahorjan. A Comparison of Receiver-Initiated and Sender-Initiated Adaptive Load Sharing. *Performance Evaluation 6* (1986). (Award Paper, 1985 ACM SIGMETRICS Conf.)
- D. Eager, J. Zahorjan, and E. Lazowska. Speedup vs. Efficiency in Parallel Systems. *IEEE Trans. on Computers 38,3* (March 1989).
- T. Anderson, E. Lazowska, and H. Levy. The Performance Implications of Thread Management Alternatives for Shared-Memory Multiprocessors. *IEEE Trans. on Computers 38,12* (Dec. 1989). (Award paper, 1989 ACM SIGMETRICS Conf.)
- J. Chase, F. Amador, E. Lazowska, H. Levy, and R. Littlefield. The Amber System: Parallel Programming on a Network of Multiprocessors. *Proc. 12th ACM Symp. on Operating Systems Principles* (Dec. 1989).
- B. Bershad, T. Anderson, E. Lazowska, and H. Levy. Lightweight Remote Procedure Call. *ACM Trans. on Computer Systems 8,1* (Feb. 1990). (Award paper, 12th ACM Symp. on Operating Systems Principles.)
- T. Anderson and E. Lazowska. Quartz: A Tool for Tuning Parallel Program Performance. *Proc. ACM SIGMETRICS Conf. on Measurement and Modeling of Computer Systems* (May 1990).
- T. Anderson, H. Levy, B. Bershad, and E. Lazowska. The Interaction of Architecture and Operating System Design. *Proc. 4th International Conf. On Architectural Support for Programming Languages and Operating Systems* (April 1991).
- B. Bershad, T. Anderson, E. Lazowska, and H. Levy. User-Level Interprocess Communication for Shared Memory Multiprocessors. *ACM Trans. on Computer Systems 9,2* (May 1991).
- T. Anderson, B. Bershad, E. Lazowska, and H. Levy. Scheduler Activations: Effective Kernel Support for the User-Level Management of Parallelism. *ACM Trans. on Computer Systems 10,1* (Feb. 1992). (Award paper, 13th ACM Symp. on Operating Systems Principles.)
- C. Thekkath, T. Nguyen, E. Moy, and E. Lazowska. Implementing Network Protocols at User Level. *IEEE/ACM Trans. on Networking 1,5* (Oct. 1993). (Award paper, ACM SIGCOMM '93 Symp.)
- M. Vernon, E. Lazowska, and S. Personick, eds. *R&D for the NII: Technical Challenges*. EDUCOM, May 1994.
- C. Thekkath, H. Levy, and E. Lazowska. Separating Data and Control Transfer in Distributed Operating Systems. *Proc. 6th International Conf. On Architectural Support for Programming Languages and Operating Systems* (Oct. 1994).
- J. Chase, H. Levy, M. Feeley, and E. Lazowska. Sharing and Protection in a Single Address Space Operating System. *ACM Trans. on Computer Systems 12,4* (Nov. 1994).
- G. Voelker, H. Jamrozik, M. Vernon, H. Levy, and E. Lazowska. Managing Server Load in Global Memory Systems. *Proc. ACM SIGMETRICS Conf. on Measurement and Modeling of Computer Systems* (June 1997).
- T. Alberg, W. Finkbeiner, E. Lazowska, and D. Rosen. *Policy Initiatives to Increase the Availability of Advanced Telecommunications Services Throughout Washington State*. Technology Alliance of Washington, 1998.

Recent Invited Presentations

50 in the past decade, including 30 Distinguished Lecturer Series, Keynote Speaker, or other special event

World Wide Web and Email

<http://lazowska.cs.washington.edu>; lazowska@cs.washington.edu