



## **FARNAM JAHANIAN**

Chair, Computer Science and Engineering  
Edward S. Davidson Collegiate Professor of EECS  
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**Farnam Jahanian** is the Edward S. Davidson Collegiate Professor of Electrical Engineering and Computer Science and Chair for Computer Science and Engineering at the University of Michigan. His research interests include distributed computing, network security, and network protocols and architectures. Jahanian's research at the University of Michigan has been funded by the National Science Foundation, the US Department of Homeland Security, DARPA, the National Security Agency, the Office of Naval Research, Cisco, Intel, Google, Hitachi, Boeing, VeriSign, Hewlett-Packard, and IBM.

In October 2010, Jahanian was selected by the National Science Foundation to head its directorate for Computer & Information Science & Engineering (CISE). In this post, Jahanian will guide and manage funding for the federal agency that supports research in computer and information science and engineering. With a fiscal year 2010 budget of \$620 million, CISE accomplishes its mission through support for long-term basic research efforts, cyber infrastructure projects, and training of computing and networking professionals. He will begin his appointment at NSF on February 1, 2011 and will remain on the U-M faculty while at NSF.

Over the last two decades, Jahanian has led several large-scale research projects studying the growth and scalability of the Internet backbone routing infrastructure that have ultimately transformed how cyber threats are addressed by Internet Service Providers. In the 1990s, his research team demonstrated fundamental limitations in the core routing architecture of the Internet by uncovering the fragility of the underlying routing infrastructure. The group's seminal work on Internet routing stability and convergence has been highly influential within both the network research community and the Internet operational community. It served as a catalyst for significant changes in commercial Internet routing software implementation and impacted routing policies employed by Internet Service Providers throughout the world. This work was recently recognized with an ACM SIGCOMM Test of Time Award in 2008.

His research on Internet infrastructure and security formed the basis for the successful Internet security services company Arbor Networks, which Jahanian co-founded in 2001. During a two-year leave, serving as Arbor's President, Jahanian led the management team of the company and raised over \$33 million in two rounds of funding from venture capital firms and strategic investors. The Internet security solutions based on this work have been widely deployed by more than 300 Internet Service Providers, cable operators, content providers, and numerous mission-critical networks around the globe, and have won numerous awards in recent years. Today, 70 percent of Internet backbone transit traffic is protected by Arbor technology, demonstrating how basic university research can be uniquely central to an innovation ecosystem that drives economic growth, global competitiveness, and job creation. Arbor was acquired by Tektronix Communications, a division of Danaher, in August, 2010.

The author of over 90 published research papers, Prof. Jahanian has served on dozens of national advisory boards and government panels. He has received numerous awards for his research, teaching, and technology commercialization activities, including a National Science Foundation CAREER Award, the Amoco Teaching Award, the University of Michigan College of Engineering Teaching Excellence Award, the EECS Outstanding Faculty Achievement Award, an IEEE Service Award, an IBM Outstanding Technical Innovation Award, and the State of Michigan Governor's University Award for Commercialization Excellence. He has been an active advocate for regional economic development efforts over the last decade, working with entrepreneurs, frequently lecturing on the topic, and serving on numerous advisory boards. In 2009, he was named Distinguished University Innovator at the University of Michigan. Jahanian holds a master's degree and a Ph.D. in Computer Science from the University of Texas at Austin. He is a Fellow of ACM and IEEE.

Links:

Farnam Jahanian's University of Michigan Research Website:

<http://www.eecs.umich.edu/~farnam/>

National Science Foundation Press Release – NSF Selects Jahanian to Head CISE Directorate:

[http://nsf.gov/news/news\\_summ.jsp?cntn\\_id=117805](http://nsf.gov/news/news_summ.jsp?cntn_id=117805)

Arbor Networks – co-founded by Farnam Jahanian: <http://www.arbornetworks.com/>

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### **TECHNICAL INTERESTS**

Distributed Computing; Network Security; Network Protocols and Architectures.

### **EDUCATION**

#### UNIVERSITY OF TEXAS AT AUSTIN

Doctor of Philosophy degree in Computer Science, 1989.

Master of Science in Computer Science, Minor in Electrical Engineering, 1987.

#### UNIVERSITY OF TEXAS AT SAN ANTONIO

Bachelor of Science in Mathematics, Computer Science, and System Design, May 1982,  
Summa cum Laude.

### **PROFESSIONAL EXPERIENCE**

#### UNIVERSITY OF MICHIGAN

Chair, Computer Science and Engineering (July 2007–Present)

Professor, EECS Department (2001–Present)

Director, Software Systems Research Lab (1997–2000)

Associate Professor, EECS Department (1995–2001)

Assistant Professor, EECS Department (1993–1995)

#### ARBOR NETWORKS

Chairman of the Board, 2003 – Present

Founder and Chief Scientist, 2000 – 2002 (on leave from UM)

#### IBM T.J. WATSON RESEARCH CENTER

Senior Manager, Research Division, 1991-1993.

Research Staff Member, 1989-1991

#### UNIVERSITY OF TEXAS AT AUSTIN (1984 - 1989)

Research Assistant with the Real-Time Systems Group.

#### MICROSOFTWARE DEVELOPMENT ASSOCIATES, INC. (1982 - 1983)

Systems analyst responsible for design and development of application software.

## HONORS AND AWARDS

- Fellow of the Association for Computing Machinery (ACM).
- Fellow of the Institute of Electrical and Electronics Engineers (IEEE).
- Distinguished University Innovator Award, University of Michigan, 2009.
- ACM SIGCOMM Test of Time Award, 2008.
- Governor's University Award for Commercialization Excellence (U-ACE), 2005.
- EECS Outstanding Faculty Achievement Award, University of Michigan, 2005.
- Ernst & Young Entrepreneur of the Year Finalist, 2003.
- Amoco Faculty Teaching Award, University of Michigan, 2000.
- IBM Faculty Development Award, 2000.
- DARPA Innovation Award, Fault-Tolerant Networking Program, 2000.
- College of Engineering Teaching Excellence Award, University of Michigan, 1998.
- The Smithsonian-ComputerWorld Innovation Awards: UARC project, 1998.
- IBM University Partnership Program Research Award, 1998.
- ACM SIGCOMM Best Student Paper Award (Craig Labovitz), 1997.
- EECS Department Teaching Excellence Award, University of Michigan, 1996.
- National Science Foundation CAREER Award, 1995.
- Eta Kappa Nu Honor Society EECS Professor of the Year, 1995.
- IEEE Service Award, 1993.
- IBM Research Division Award, 1992.
- IBM Outstanding Technical Innovation Group Award, 1992.
- Elected vice president of UTSA chapter of Upsilon Pi Epsilon honor society, 1981-1982.
- Elected to Eta Kappa Nu, Phi Kappa Phi and Alpha Chi honor societies.
- More than 20 [company and innovation awards](#) granted to Arbor Networks since 2001 including *Techworld Award for Security Product Of The Year*, *Information Security Product Award*, and *Inc 500 Award*.

## RESEARCH PROJECTS

- *“In-Cloud Security Services for Mobile Devices,”* National Science Foundation, Farnam Jahanian (PI), Michael Bailey, 2009-2012.
- *“Virtual Center for Network and Security Data,”* Department of Homeland Security, Farnam Jahanian (PI), Michael Bailey, Morley Mao (UM); Paul Barford (U. Wisconsin); Nick Femster (Georgia Tech); Manish Karir (Merit Network), 2005-2010.
- *“Botnet Attribution and Removal: from Axioms to Theories to Practice,”* ONR MURI Award, Wenke Lee (PI), Nick Femster, David Dagon (Georgia Tech); Kang Shin, Farnam Jahanian, Mike Bailey (UM); Christopher Kruegel, Giovanni Vigna (UCSB); John Mitchell (Stanford), 2009-2014.
- *“In-Cloud Security for Mobile Devices,”* Google, Farnam Jahanian (PI), 2009.
- *“Topology-Aware Internet Threat Detection Using Pervasive Darknets,”* National Science Foundation, Farnam Jahanian (PI) and Jignesh Patel, 2006-2010.
- *“CLEANSE: Cross-Layer Large-Scale Efficient Analysis of Network Activities to SECure the Internet,”* National Science Foundation, Wenke Lee (PI), Nick Femster, David Dagon, Mustaque Ahmad (Georgia Tech); Farnam Jahanian, Mike Bailey (UM); Mike Reiter, Fabian Monrose (UNC), 2008-2012.
- *“New Frameworks for Detecting and Minimizing Information Leakage in Anonymized Network Data,”* Department of Homeland Security, Fabian Monrose (PI) Johns Hopkins University; Farnam Jahanian and Michael Bailey (UM); Mike Reiter (CMU), 2008-2010.
- *“Collaborative Research: Enabling Security and Network management Research for Future Networks,”* National Science Foundation, Morley Mao (PI), Farnam Jahanian (UM); Wenke Lee and Nick Femster (Georgia Tech); Manish Karir (Merit Network); Southern Crossroads, 2008-2011.
- *“Detecting and Dismantling Botnet Command and Control Infrastructure using Behavioral Profilers and Bot Informants,”* Department of Homeland Security, Farnam Jahanian (PI), Morley Mao (UM); Greg Travis (Indiana University); Manish Karir (Merit Network), 2006-2008..
- *“Internet Motion Sensor,”* Gift from Intel Corporation, Farnam Jahanian (PI), 2006-present.
- *“Internet Motion Sensor,”* Gift from Cisco Systems, Farnam Jahanian (PI), 2006.
- *“Distributed Systems Instructional Infrastructure,”* Intel Corporation Equipment Grant, 2004. Farnam Jahanian (PI).
- *“Multi-Tiered Distributed Indication, Warning and Defense System,”* Sponsored by ARDA, Farnam Jahanian (PI) and Peter Chen, 2003-2004.

- “*Lighthouse Project: Detecting and Surviving Large-Scale Network Infrastructure Attacks,*” Sponsored by DARPA, Farnam Jahanian (PI) and Paul Howell (Merit Network)., 1999-2003.
- “*Internet Infrastructure Scalability and Stability,*” Intel Corporation, 1999-2000. Farnam Jahanian (PI).
- “*IPMA Project: Internet Performance Measurement & Analysis,*” National Science Foundation, Craig Labovitz (Merit Network) and Farnam Jahanian (Co-PI), 1997-2000.
- “*Experimentation with Multi-Threaded, Distributed Routing Technology in the Internet,*” National Science Foundation, Farnam Jahanian (PI) and Craig Labovitz (Merit Network), 1997-2000.
- “*Development of Ultra High Speed Next Generation Internet Technology,*” Sponsored by Hitachi Corporation, Farnam Jahanian (PI), Craig Labovitz and Hirabaru Masaki (Merit Network), 1999-2000.
- “*Middleware Services for Collaboratives on Wide-Area Networks,*” Sponsored by Intel Corporation, 1997-2000. Farnam Jahanian (PI).
- “*The SPARC Project: Collaborative Knowledge-Work Environments for Team Science,*” National Science Foundation KDI Initiative, Dan Atkins (PI), Gary Olson, Farnam Jahanian, Tim Killeen and Atul Prakash, 1998 – 2001.
- Network Infrastructure Equipment Gift, CISCO Systems, 1999.
- “*IBM UPP: Networking Support for Adaptive Internet-based Applications,*” IBM, Farnam Jahanian and Brian Noble, 1998.
- “*ARMADA Project: Building Scalable Real-Time Fault-Tolerant Systems for Embedded Applications,*” Sponsored by DARPA, Kang Shin (PI), Farnam Jahanian and Peter Chen, 1995-99.
- National Science Foundation *CAREER Award*, 1995-1999. Farnam Jahanian.
- “*End-to-End Performance Studies of Web-Based Groupware and Collaborative Applications over the Internet,*” Sponsored by Hewlett-Packard Company, Farnam Jahanian (PI) and Sugih Jamin, 1997-1998.
- “*Integrated Execution Simulation and Monitoring Environment for the Modechart Toolset,*” Naval Research Laboratories, 1996 - 1998, Farnam Jahanian (PI).
- “*Enabling Multimedia-Based Collaboration over Computer networks,*” Sponsored by the AT&T Foundation, Atul Prakash (PI) and Farnam Jahanian.
- “*Probing and fault Injection of Distributed Real-Time Protocols,*” Office of Naval Research, 1994-1997, Farnam Jahanian (PI).

## DOCTORAL COMMITTEES CHAIRED

- Wu-chi Feng – August 96  
“Video-on-Demand services: Efficient Transportation and Decompression of Variable Bit Rate Video”
- Scott Dawson – December 97  
“Message Level Fault Injection in Distributed Systems”
- Monica Brockmeyer – May 99  
“Monitoring, Testing, and Abstractions of Real-Time Specifications”
- Craig Labovitz – August 99  
“Scalability of Internet Backbone Routing Infrastructure”
- Hengming Zou – December 99  
“Dynamic Active-Passive Replication”
- G. Robert Malan – May 2000  
“Transparent Measurement and Manipulation of Internet Protocols”
- Scott Johnson – December 2001  
“Scalable Group Composition”
- David Watson – May 2004  
“Measurement and Analysis of Routing Protocol Behavior on Production Networks”
- Junghee Han – December 2004  
“Enhancing End-to-end Availability and Performance by Leveraging Internet Redundancy”
- Michael D. Bailey – May 2006  
“A Scalable Hybrid Network Monitoring Architecture for Measuring, Characterizing, and Tracking Internet Threat Dynamics”
- Evan Cooke – May 2007  
“Exposing Internet Address Use to Enhance Network Security”
- Sushant Sinha – August 2009  
“Context-Aware Network Security”
- 25+ doctoral dissertation committees (1993-2009)

## TEACHING ASSIGNMENTS

<b>Term</b>	<b>EECS Course</b>	<b>Enrollment</b>	<b>Class Score</b>	<b>Instructor Score</b>
Fall 93	682: Special Topic	28	4.71	4.89
Winter 94	582: Adv. OS	22	4.28	4.80
Fall 94	482: Intro OS	89	4.70	4.84
Winter 95	482: Intro OS	108	4.60	4.86
Fall 95	682: Special Topic	26	4.42	4.78
Winter 96	380: Data Structures	76	4.38	4.87
Fall 96	682: Distributed Syst	27	4.65	4.89
Winter 97	482: Intro OS	83	4.40	4.90
Fall 97	591: Distributed Syst	41	4.21	4.70
Winter 98	482: Intro OS	125	4.33	4.69
Fall 98	591: Distributed Syst	38	4.18	4.46
Winter 99	482: Intro OS	125	4.57	4.85
Fall 00	591: Distributed Syst	40	4.40	4.64
Fall 01	281: Data Structures	54	4.16	4.64
Winter 03	591: Distributed Syst	34	4.25	4.65
Fall 03	498: Intro Dist Syst	14	4.78	4.96
Winter 04	591: Distributed Syst	26	4.63	4.80
Fall 04	281: Data Structures	54	4.25	4.82
Winter 05	591: Distributed Syst	22	4.00	4.77
Fall 05	498: Intro Dist Syst	21	4.83	4.96
Winter 06	591: Distributed Syst	22	4.55	4.77
Fall 06	496: Major Design	132	3.95	4.74
Winter 07	591: Distributed Syst	23	4.67	4.88
Fall 07	496: Major Design	128	4.22	4.71
Fall 08	496: Major Design	115	4.65	4.90
Fall 09	496: Major Design	170	4.60	4.85

- Supervised 25+ undergraduates in my research group since joining UM.

## **SELECTED INVITED TALKS AND KEYNOTES (2003-Present)**

- “The Evolving Nature of Internet Threats,” Department of Homeland Security Science, Technology and Policy Briefing, December 2009.
- “Securing the Internet Cloud: Challenges and Opportunities ,” Invited Talk, Chinese-American Networking Symposium (CANS), Beijing, 2009.
- “Crossing from Academia to Entrepreneurship and Economic Development” MiSN Homeland Security Market Leadership Conference, October, 2009.
- Panel on “Dependability in the cloud: Challenges and opportunities.” IEEE Dependable Systems and Networks Conference (DSN), June 2009.
- “Managing the Growth of New Ventures,” UM Ross School of Business, April 2009.
- "The Evolution of Internet Threats: A Case for Security in the Network Cloud." School of Informatics Colloquium, Indiana University, January 2009.
- "A Case for Security in the Network Cloud." Invited Talk, AT&T Labs, Dec 2008.
- “Crossing from Academia to Entrepreneurship” Defense Industry Symposium, November 2008.
- “A Case for Security Services in the Network Cloud,” Invited Talk, Department of Computer Science, University of Toronto, March 2008.
- “The Evolution of Internet Threats,” Invited Talk, RSA Conference, Tokyo, Japan, April 2007.
- “A Perspective-Aware Approach to Internet Security in the Botnet Era,” ITI Distinguished Lecture, University of Illinois at Urbana-Champaign, January 2007.
- “A Perspective-Aware Approach to Internet Security in the Botnet Era,” Invited Talk, Computer Science Colloquium Series, Cornell University, November 2006.
- "The Evolution of Internet Threats," Invited Talk, Johns Hopkins Information Security Institute, November 2006.
- “Measuring, Characterizing, and Tracking Internet Threats,” Invited Talk, Intel Network Monitoring and Security Workshop, Hillsboro, Oregon, November 2006.
- NSF Invitational Workshop on Future Directions for the CyberTrust Program, Pittsburgh, PA, October 2006.
- “University & Industry Technology Commercialization Strategies: The Secrets to Success” Presentations and Panel with Howard Bell, Steve Forrest and Rangaramanujam Kannan, Michigan Technology Conference, September 2006.
- “Enter the Botnet: An Introduction to the Post-Worm Era,” ARO-DARPA-DHS Invitational Workshop on Botnets, Washington, DC, June 2006.

- “Emerging Technologies,” Michigan Growth Capital Symposium, Ann Arbor, MI, May 2006.
- “The Changing Internet Ecology: Confronting Security and Operational Challenges by Mining Network Data,” Keynote Presentation, ACM Workshop on mining network data (MineNet), September 2005.
- “Backbone Attack Detection and Mitigation Methodologies” Tutorial, ACM SIGCOMM Conference, Philadelphia, PA, Sept. 2005.
- “Internet Motion Sensor,” Invited Talk, Intel FM Innovation Centre, June 2005.
- “Worm research and Internet Motion Sensors,” Colloquium for Information System Security Education, Georgia Tech University, June 2005.
- “Measuring, Characterizing, and Tracking Internet Threat Dynamics,” US–Japan Critical Information Infrastructure Protection Workshop, Sponsored by National Science Foundation and Japan Science and Technology Agency, Washington, DC, September 2004.
- “Entrepreneurship: Building a Successful Venture,” Presentation and Panel, Entrepalooza 2004: Expanding the Horizons of Entrepreneurship, Sept. 2004.
- “The Changing Internet Ecology: New Threats to Infrastructure Security,” Invited Talk, Trans-European Research and Education Networking Association, Rhodes, Greece, May 2004.
- “The Changing Internet Ecology: New Threats to Infrastructure Security,” Invited Talk, Computer Science Department, Yale University, April 2004.
- "Research Solutions for the Practitioner," Invited Talk, Cyber Conflict Studies Association, National Defense University, Washington DC, March 2004.
- “eBarbarians at the Gate -The State of Network Security,” Panel Chair, FuturTech Conference, University of Michigan Business School, January 2004.
- “The Changing Internet Ecology: New Threats to Infrastructure Security,” Keynote Address, National Science Foundation Cyber Trust PI Meeting, Washington DC, August 2003.
- “UM's Role in Technology and Economic Development,” Presentations and Panel at the ITZone Forum with Mary Sue Coleman, Rick Snyder and Mike Klein, June 2003.
- “Network Engineering Case Study: Advanced Network Security Solutions,” Internet2 Member Meeting, Indianapolis, IN, October 2003.
- “Distributed Denial-of-Service Attacks,” Invited Talk, Internet2 Technical Meeting, Miami, FL, February 2003.
- DARPA CoNE Program, “Fleet Battle Experiment and Joint Warrior Interoperability,” Invited Presentation and Demonstration, July 2003.

## REPRESENTATIVE PROFESSIONAL ACTIVITIES AND SERVICES

### *Recent Broad Memberships and Advisory Committees*

- Arbor Networks, Chairman of the Board.
- Twilio Inc., Advisory Board Member.
- Internet2 External Relations Advisory Council (ERAC), Member, 2007 – present.
- UM Center for Entrepreneurship, Advisory Board, 2008 – present.
- IEEE Dependable Systems and Networks, Steering Committee, 2008 – present.
- External Review Panel, Office of Naval Research, Information Technology Division, 2002, 2007, 2010.
- Early Stage Partners Advisory Board, 2007 – present.
- Michigan Innovation Board Member, 2009 – present.
- IFIP Working Group 10.4 on Dependable Computing and Fault-Tolerance, Member.
- Search Committee, Internet2 CTO and VP Research and Development, 2009.
- National Advisory Board, UM Office of Technology Transfer, 2006 – present.
- Wayne State University, Computer Science Department Advisory Committee Member, 2005 – present.
- Ann Arbor IT Zone, Board Member, 2004 – 2008.
- Dartmouth Inst. of Security Technology Studies, Advisory Committee, 2004 –2006.
- Member of NSF Working Group on “Future Scenarios for Networking Research and Associated Infrastructure Support.”

### *Significant Editorship and Technical Committees*

- General Chair, IEEE Int. Conf. on Dependable Systems and Networks (DSN), 2010.
- Student Forum Chair, IEEE Int. Conf. on Dependable Systems and Networks, 2007.
- Program Chair, ACM Workshop on Recurring Malcode (WORM), 2006.
- Chair, IFIP Workshop on "Infrastructure Security and Operational Challenges of Service Provider Networks," June 2006.
- Co-chair, 2nd EU-US Workshop on "Cyber Trust: System Dependability and Security," April 2006.
- Program Chair, IEEE Int. Conf. on Dependable Systems and Networks (DSN), 2002.
- Program Committee Vice Chair, Fault-Tolerance Track, 21st ICDCS, 2000.
- Publicity Chair, IEEE Int. Conf. On Dependable Systems and Networks, 2000.
- Elected member of IFIP Working Group 10.4 on Dependable Computing, 1998.
- Editor, IEEE Transactions on Computer, 1995-99.
- Associate Editor, Real-Time Systems Journal, 1997-present.
- Chair, DARPA Working Group on Integrated High-Conf. Computing, 1998-99.
- Program Committee Vice-Chair, Distributed Real-Time Systems, 16th ICDCS, 1996.
- General Chair - 15th IEEE Real-Time Systems Symposium, 1994.
- Program Chair - 14th IEEE Real-Time Systems Symposium, 1993.
- Over 30 program committees of technical conferences and symposia, including:
  - 2009 ACM/Usenix Symposium on Networked Systems Design and Implementation.
  - 2009, 2010 IEEE Symposium on Security and Privacy.
  - 2008, 2009 ACM Computer and Communications Security Conference.
  - 2007 IEEE Internet Measurement Conference.
  - 2001, 2002, 2003, 2005, 2007, 2008, 2009 IEEE International Conf. on Dependable Systems and Networks.
  - 2005-2008 International Symposium Recent Advances in Intrusion Detection (RAID).

### ***National Science Foundation Review Panels, 2000-2010***

- CAREER Panel, NSF CISE Directorate.
- Site Visit Member, Research Infrastructure, CISE Directorate.
- Site Visit Member, Science and Technology Center.
- SBIR Panel, CISE Directorate.
- NSF Infrastructure Panel, CISE Directorate.
- Combined Research-Curriculum Development Panel, Engineering Directorate.
- Operating Systems and Compiler Panel, CISE Directorate.
- Cyber Security ITR, CISE Directorate.
- NeTS Networking of Sensor Systems, CISE Directorate.
- CyberTrust Program, CISE Directorate.
- Trustworthy Computing Program, CISE Directorate.
- FIND Panel, NSF CISE Directorate.
- Site Visit Member, TRUST, CISE Directorate.

## **MAJOR UNIVERSITY COMMITTEE ASSIGNMENTS**

### ***College and University-level Assignments***

- University IT Governance Council, 2010.
- IOE Chair Search Advisory Committee, Chair, 2008-2009.
- OVPR Committee on UM Research Cyber Infrastructure, 2007.
- OVPR Committee on Enhancing Industry Relationships: Faculty Advisory Group on Industry and Technology Transfer, 2006–2007.
- Search Committee, CoE/Office of Technology Transfer and Commercialization, 2007–2008.
- UM Office of Technology Transfer National Advisory Board, 2006–present.
  - Chair, Committee on “Business Engagement Center,” Fall 2007
- Chair, EECS Internal Review Committee, Chair, 2004.
- University IT Security Council, 2004 – present.
- University Digital Strategies Council, 2003–2005
- Faculty Advisory Board, CoE Technology Transfer and Commercialization, 2002–2004.
- President’s Commission on Information Revolution, 2000–2001.
  - Chair, subcommittee on IT Infrastructure.
  - Co-chair with John Laird, subcommittee on Research.
- CAEN/College of Engineering IT Advisory Committee, 2003–2005.
- Cisco Systems Merit Scholarship Selection Committee, 2003.
- Faculty Associate to OVPR, IBM Relationship, 1997–2000.
- Rackham Panel on Life Beyond Graduate School. 1999.
- CoE Capital Campaign Retreat, 1999.
- College of Engineering Information Technology Advisory Committee, 1996–1997.
- Member, EECS Departmental Review Committee, 1996–1997.

### ***Department-level Assignments***

- Chair, CSE Division, 2007–present.
- Chair, Executive Committee, CSE Division, 2007–present.
- EECS Awards and Honors Committee, 2007–present.
- Faculty Search Committee, CSE Division, 2005–present.
- Executive Committee, Computer Science and Engineer, 2003–05.
- Faculty Advisor, Eta Kappa Nu Honor Society, 1995-1999, 2005-2008.

- Director of Software Systems Lab, 1997-2000.
- Faculty Search Committee, CSE Division, 1997-2000.
- Fellowships and Financial-aid Chair, Computer Science & Engineering, 1994-98.
- Graduate Admissions Committee, 1994-98.
- EECS Department Graduate Affairs Committee, 1994-98.

## REPRESENTATIVE MEDIA EXPOSURE

- **MIT Technology Review.** August 26, 2008. “[Moving Security to the Cloud](#)”  
An article on recent Cloud-AV research.
- **Virtualization.com.** March 24, 2008. Article covering recent research result from our group on virtual machine migration vulnerability.  
<http://virtualization.com/news/2008/03/24/live-virtual-machine-migration-vulnerability/>
- **CNN.com,** March 7, 2008. Article quoting data from Arbor Networks that peer-to-peer traffic accounts for about a third of all Internet traffic.  
<http://www.cnn.com/2008/TECH/03/27/comcast.bittorrent/index.html>
- **Ann Arbor Business Review.** March 27, 2008. Article on UM/CoE Entrepreneurial Opportunities Day.  
[http://blog.mlive.com/ann\\_arbor\\_business\\_review/2008/03/entrepreneurship\\_jobs\\_event\\_dr.html](http://blog.mlive.com/ann_arbor_business_review/2008/03/entrepreneurship_jobs_event_dr.html)
- **SC Magazine.** “[Two vulnerabilities found in VMware virtualization products.](#)”  
Interview with my student Jon Oberheide on our new result on virtual machine vulnerability. Feb. 25, 2008.
- **ACM TechNews.** April 10, 2006. “Thinking Beyond the Box” based on article published on April 6, 2006 in Michigan Daily.
- **The Wall Street Journal,** May 29, 2005. Article on confronting large-scale denial-of-service attacks. <http://online.wsj.com/article/SB111196539614190462.html>
- **USA Today.** October 17, 2005. Article discusses federal (research) funding and its long-lasting impact to the private sector.  
[http://www.usatoday.com/money/smallbusiness/2005-10-17-fed-contractors-usat\\_x.htm](http://www.usatoday.com/money/smallbusiness/2005-10-17-fed-contractors-usat_x.htm)
- **The Wall Street Journal.** March 28, 2005. “[Firms Join Forces Against Hackers](#)”
- **eWEEK.** March 28, 2005. An article on how ISPs across the world formed an alliance to automate the way real-time data on cyber-attacks.  
<http://www.eweek.com/c/a/Security/Vendors-Join-Forces-to-Fingerprint-Hacker-Attacks/>
- **Inc Technology.** 2004. Inc. 500 Interview on Internet Security Threats.  
<http://technology.inc.com/security/articles/200608/arbor.html>
- **www.chinaview.cn,** March 29, 2005. “[Communication firms join forces to confront hacker attacks](#)”
- **Detroit News.** April 18, 2004. “Arbor Networks software keeps hackers at bay.”
- **Business Wire.** July 15, 2003. “Arbor Networks Strengthens Network Security Portfolio with Eight New Pending Patents.”
- **Crain's Detroit Business.** July 8, 2002. Article on Internet2 consortium.  
[http://www.accessmylibrary.com/coms2/summary\\_0286-25607822\\_ITM](http://www.accessmylibrary.com/coms2/summary_0286-25607822_ITM)

## SELECTED REFEREED PUBLICATIONS 1994-2010

- Eric Wustrow, Manish Karir, Michael Bailey, Farnam Jahanian, Geoff Houston, “Internet Background Radiation Revisited,” ACM/USENIX Internet Measurement Conference, Melbourne, Australia, Nov. 2010.
- Craig Labovitz, Scott Ikle-Johnson, Danny McPherson, Jon Oberheide and Farnam Jahanian, “Internet Inter-Domain Traffic,” in the Proceedings of ACM SIGCOMM, August 2010.
- Yunjing Xu, Michael Bailey and Farnam Jahanian, “CANVuS: Context-Aware Network Vulnerability Scanning,” 13th International Symposium on Recent Advances in Intrusion Detection (RAID), Ottawa, CA, Sept. 2010.
- *Sushant Sinha, Michael Bailey, and Farnam Jahanian*, “Improving SPAM Blacklisting through Dynamic Thresholding and Speculative Aggregation,” 17th Annual Network & Distributed System Security Symposium (NDSS'10), San Diego, CA, March 2010.
- Jon Oberheide and Farnam Jahanian, “When Mobile is Harder Than Fixed: Demystifying Security Challenges in Mobile Environments,” Eleventh Workshop on Mobile Computing Systems and Applications (HotMobile), Annapolis, MD, Feb. 2010.
- Jon Oberheide, Michael Bailey, and Farnam Jahanian. “PolyPack: An Automated Online Packing Service for Optimal Antivirus Evasion,” 3rd USENIX Workshop on Offensive Technologies (WOOT '09), Montreal, Canada, August 2009.
- Jon Oberheide, Evan Cooke, and Farnam Jahanian, “If It Ain't Broke, Don't Fix It: Challenges and New Directions for Inferring the Impact of Software Patches,” Workshop on Hot Topics in Operating Systems (HotOS XII), May 2009.
- Sushant Sinha, Michael Bailey, and Farnam Jahanian, “One Size Does Not Fit All: 10 Years of Applying Context Aware Security,” in Proceedings of the 2009 IEEE International Conference on Technologies for Homeland Security (HST '09), Waltham, MA, May 2009.
- Jon Oberheide, Evan Cooke, and Farnam Jahanian, “CloudAV: N-Version Antivirus in the Network Cloud,” Proc. of the 17th USENIX Security Symposium, July 2008.
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