

## Professor Jennifer Rexford

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### Education

UNIVERSITY OF MICHIGAN, COMPUTER SCIENCE & ENGINEERING, 1991–96      Ann Arbor, MI  
MSE 1993, PhD Summer 1996 (GPA: 8.4/8.0, 9=A+, 8=A, . . .)

Thesis: Tailoring router architectures to performance requirements in cut-through networks

Advisor: Professor Kang G. Shin (kgshin@eecs.umich.edu)

PRINCETON UNIVERSITY, ELECTRICAL ENGINEERING, 1987–91      Princeton, NJ  
BSE 1991, with highest honors (GPA: 4.0/4.0)

Advisor: Professor Niraj Jha (jha@ee.princeton.edu)

### Work experience

PRINCETON UNIVERSITY, COMPUTER SCIENCE DEPARTMENT, FEB 2005–      Princeton, NJ  
Full professor in the computer science department, conducting research in the field of data networking.  
Affiliated faculty in electrical engineering (May 2006–). Affiliated faculty in the Center for Information  
Technology Policy (February 2008–).

AT&T RESEARCH, INTERNET AND NETWORKING SYSTEMS, 1996–2004      Florham Park, NJ  
Technology Leader in the IP Network Management and Performance department. Created techniques  
for monitoring, traffic engineering, and router configuration deployed in AT&T's backbone networks.

AT&T BELL LABORATORIES, NETWORK SERVICES RESEARCH LAB., JUNE & OCT 1995

AT&T BELL LABORATORIES, MATHEMATICS CENTER, SUMMER 1994      Murray Hill, NJ  
Design and evaluation of efficient hardware architectures for traffic shaping and link scheduling in  
high-speed ATM (asynchronous transfer mode) networks.

AT&T BELL LABORATORIES, MATHEMATICS CENTER, SUMMER 1991      Murray Hill, NJ  
Development of parallel algorithms for evaluating routing algorithms in circuit-switched networks, with  
implementation on the MasPar MP-1.

PRINCETON UNIVERSITY, ELECTRICAL ENGINEERING DEPT., FALL 1990      Princeton, NJ  
Teaching assistant for "Computer Structure" (EE317).

AT&T BELL LABORATORIES, MATHEMATICS CENTER, SUMMER 1990      Murray Hill, NJ  
Creation of a quadruple precision floating-point library in C++.

NAVAL RESEARCH LABORATORY, PLASMA PHYSICS LAB., SUMMER 1989      Washington, D.C.  
Design of FORTRAN computer simulations for the VAX and Cray XMP.

### Recognition and honors

- ACM Fellow (2008)
- Princeton Engineering commendation list for outstanding teaching (COS 461 spring 2006, COS 461 spring 2008, COS 217 spring 2008)
- ACM Grace Murray Hopper Award for outstanding young computer professional of the year (2005)
- University of Michigan Recent Engineering Graduate Award (2005)

- MIT Technology Review TR-100 list of the top 100 innovators under the age of 35 (2004)
- Senior Member of the IEEE (2001)
- INFOCOM distinguished program committee member (2000)
- Intel Foundation graduate fellowship (1995–1996)
- Distinguished Achievement Commendation for U. Michigan CSE graduate student (1995)
- Rackham graduate fellowship for U. Michigan graduate students (1994–1995)
- Co-author of publication chosen as “best paper” in *Proc. Performance* (1993)
- Office of Naval Research graduate fellowship (1991–1994)
- National Science Foundation graduate fellowship, awarded (1991)
- AT&T Graduate Research Program for Women grant (1991–1996)
- Pyne Honor Prize for outstanding Princeton University senior (1991)
- James Hayes-Edgar Palmer Prize in Engineering graduation award (1991)
- Computer Engineering Excellence graduation award (1991)
- Phi Beta Kappa, Tau Beta Pi, and Sigma Xi

### **Keynote, plenary, and distinguished lectures**

- “VROOM: Virtual ROuters On the Move,” Juniper Distinguished Speaker Series, October 2008.
- “Rethinking Internet Traffic Management Using Optimization Theory,” University of Toronto Networking Seminar, September 2008.
- “Building a Strong Foundation for a Future Internet,” Invited Lecture, ACM Symposium on Theory of Computing, May 2008.
- “Building a Strong Foundation for a Future Internet,” Distinguished Lecture, National Science Foundation, May 2008.
- “Rethinking Internet Traffic Management Using Optimization Theory,” Computer Science and Engineering Colloquium, University of Washington, January 2008.
- “VINI: Virtual Network Infrastructure,” Invited Talk, CoNext Student Workshop, December 2007.
- “VINI: Virtual Network Infrastructure,” Invited Talk, Grace Hopper Celebration of Women in Computing, October 2007.
- “VINI: Virtual Network Infrastructure,” Distinguished Seminar, Northwestern University, electrical engineering and computer science department, May 2007.
- “VINI: Virtual Network Infrastructure,” Cray Lecture Series, University of Minnesota, computer science department, April 2007.
- “GENI: Global Environment for Network Innovations,” Overlay Network Symposium in Tokyo, Japan, December 2006.
- “Stable Internet Routing Without Global Coordination,” Distinguished Lecture, Purdue University, computer science department, September 2006.
- “GENI: Global Environment for Network Innovations,” keynote talk, EuroNGI and ITG Workshop on “Visions of Future Generation Networks,” July/August 2006.
- “Stable Internet Routing Without Global Coordination,” Distinguished Lecture, Carnegie Mellon University school of computer science, February 2006.

- “Economic Incentives in Interdomain Routing,” invited talk, ACM Conference on Electronic Commerce, June 2005.

### **Professional leadership**

- Defense Science Study Group (2010-2011)
- NSF CISE Advisory Committee (2009–2011)
- *Communications of the ACM* Editorial Board (2009–present)
- GENI/NetSE Science Council (2007–present)
- Academic Quality Assessment Review for UMass-Amherst Computer Science department (2007)
- Award committee for ACM Grace Murray Hopper Award (2007–2009)
- Co-organizer of DIMACS Special Focus on Algorithmic Foundations of the Internet (2007-2010)
- Networking and Information Technology Technical Advisory Group for the President’s Council of Advisors on Science and Technology (2006–2007)
- Computing Research Association board of directors (2005–2008)
- NSF GENI planning group and backbone working group (2005–2007)
- ACM Council (2004–2006, 2007–2008)
- Chair of ACM SIGCOMM (2003–2007)
- DARPA Information Science and Technology Study Group (2003–2006)
- ACM Membership Services Board (2004)
- ACM SIGMETRICS Board of Directors (2003–2005)
- ACM SIGCOMM Technical Advisory Committee (2002–2003)
- NRC committee on “The Internet Under Crisis Conditions: Learning from September 11” (2002)
- Editorial board of *IEEE/ACM Transactions on Networking* (2000–2004)
- Co-editor of *IEEE Journal on Selected Areas in Communications* issue on “Internet Proxy Services” (2001/2002)
- Advisory council for Electrical Engineering department at Princeton University (2002–2004)

### **Technical Advisory Boards**

- Deutsche Telekom Laboratories Advisory Board (2007–present)
- Pollere TMOS Technical Advisory Group (2006–2009)
- AlterPoint Technical Advisory Board (2006–present)
- Arbor Networks Technical Advisory Board (2003–present)
- MentorNet Advisory board (1999–2003)

### **Conference committees**

- Steering committee for Networked Systems Design and Implementation (2009–)
- Area program committee chair for ICNP (2009)
- Program committee co-chair for NSDI (2009)
- Program committee co-chair for Asian Internet Engineering Conference (2008)
- Program committee co-chair of ACM SIGCOMM Workshop on Programmable Routers for the Extensible Services of Tomorrow (2008)
- Steering committee for CoNext (2005–2007)
- Program committee co-chair for ACM SIGCOMM (2004)
- Program committee co-chair for ACM SIGMETRICS (2003)
- Co-organizer of Workshop on Internet Routing Evolution and Design (2003)
- Steering committee of the Internet Measurement Workshop (2001–2003)
- International vice-chair for the Americas for IEEE INFOCOM (2001)
- Co-organizer of DIMACS workshop on multimedia streaming (2000)
- Financial co-chair for IEEE INFOCOM (1999)

- Program committee member for

- 2010 USENIX Symposium on Networked Systems Design and Implementation, ACM SIGCOMM
- 2009 COMSNETS, ACM SIGCOMM, WREN, VISA, PRESTO
- 2008 Passive and Active Measurement Conference
- 2007 Latin America Networking Conference, ACM SIGCOMM, Internet Network Management Workshop
- 2006: USENIX Symposium on Networked Systems Design and Implementation, ACM SIGCOMM, North American Network Operators Group
- 2005: ACM SIGCOMM MineNet Workshop, Latin America Networking Conference, Internet Measurement Conference, SIGCOMM Workshop on Hot Topics in Networking
- 2004: USENIX Symposium on Networked Systems Design and Implementation
- 2003: IEEE International Conference on Network Protocols, ACM SIGCOMM Workshop on Models, Methods, and Tools for Reproducible Network Research
- 2002: ACM SIGMETRICS, ACM SIGCOMM, ITC Specialist Seminar on Internet Traffic Engineering and Traffic Management, International Conference on Dependable Systems and Networks
- 2001: ACM SIGMETRICS, ACM SIGCOMM
- 2000: ACM SIGMETRICS, IEEE INFOCOM, IEEE Global Internet Symposium, SPIE/ACM Conference on Multimedia Computing and Networking, Real-Time Applications Symposium
- 1999: Workshop on Internet Applications, International Conference on Distributed Computing Systems, SPIE/ACM Conference on Multimedia Computing and Networking
- 1998: IEEE INFOCOM, Real-Time Systems Symposium, International Conference on Parallel Processing

## Research grants

“Fast BGP convergence,” Cisco Collaborative Research Initiative, \$80,000, 2008-2009.

“Fixing the reliability problem in network software from its root,” NSF NeTS Grant CNS-0831646, PI Matt Caesar, co-PIs: Yuanyuan Zhou and Jennifer Rexford. Princeton amount: \$350,000, 2008-2012.

“Hosting virtual networks on multi-core platforms,” Intel Corporation, PI: Jennifer Rexford. Princeton amount: \$210,000, 2007-2010.

“Network traffic anomaly detection,” Thomson, Inc. PI: Jennifer Rexford. Total amount of gift: \$50,000, 2007-2008.

“Towards a theoretical foundation of network architectures,” NSF Networking Technology and Systems (NeTS) Grant CNS-0720570, PI: Ness Shroff, co-PIs: Mung Chiang, Jennifer Rexford, Xiaojun Lin, Sanjay Shakkottai, and R. Srikant. Princeton amount: \$420,000, 2007-2010.

“Towards a theoretical foundation of network architectures,” NSF Theoretical Foundation (TF) Grant CCF-0635034. PI: Ness Shroff, co-PIs: Mung Chiang, Jennifer Rexford, Xiaojun Lin, Sanjay Shakkottai, and R. Srikant. Total amount: \$400,000, Princeton amount: \$133,000, 2006-2007.

“Network traffic anomaly detection,” Thomson, Inc. PI: Jennifer Rexford. Total amount of gift: 40,000 euro, 2006.

“Development of VINI: A virtualized network infrastructure,” PI: Larry Peterson, co-PI: Jennifer Rexford. NSF Major Research Instrumentation (MRI) Grant CNS-0619434. Total amount: \$1,971,560, 2006-2009.

“CABO: Concurrent Architectures are Better than One,” NSF Networking Technology and Systems (NeTS) Grant CNS-0626771. PI: Nick Feamster, co-PIs: Lixin Gao and Jennifer Rexford. Total amount: \$900,000, Princeton amount: \$300,000, 2006-2010.

“Facility for experimental network architecture research,” NSF GENI Concept/Development Grant CNS-0631422. PI: Larry Peterson, co-PI: Jennifer Rexford. Total amount: \$774,693, 2006-2007.

“Infrastructure for Experimental Network Architecture Research,” NSF Networking Technology and Systems (NeTS) Grant CNS-0540815. PI: Larry Peterson, co-PI: Jennifer Rexford. Total amount: \$441,348, 2005-2006.

“Managability of IP routing protocols,” Cisco Systems: Cisco University Research Program (URP) Grant GH072605. PI: Jennifer Rexford, co-PI Mung Chiang. Total amount of gift: \$91,000, 2005-2006.

“Network X-ities: Foundations and applications,” NSF Networking Technology and Systems (NeTS) Grant CNS-0519880. PI: Jennifer Rexford, Co-PIs: Mung Chiang, James Kurose, and Don Towsley. Total amount: \$1,335,000, Princeton amount: \$654,562, 2005-2009.

“A clean slate 4D approach to network-wide control and management,” NSF Networking Technology and Systems (NeTS) Grant CNS-0519885. PI: Hui Zhang, co-PIs: Jennifer Rexford, Albert Greenberg, Geoffrey Xie. Total amount: \$1,400,000, Princeton amount: \$499,800, 2005-2009.

“Incrementally deployable security for interdomain routing,” ARO-HSARPA Grant 1756303. PI: Jennifer Rexford, co-PI: Joan Feigenbaum. Total amount: \$407,483, 2005-2008.

### **PhD student graduates**

- Wen Xu (PhD summer 2009), on “MIRO: Multi-path Interdomain ROuting,” joined Google in July 2006
- Sharon Goldberg (PhD summer 2009, co-advised with Boaz Barak), on “Towards Securing Interdomain Routing on the Internet,” started one-year post-doc at Microsoft Research in August 2009 before joining Boston University as an assistant professor in August 2010
- Haakon Ringberg (PhD summer 2009), on “Privacy-Preserving Collaborative Network Anomaly Detection,” joined Google NYC in August 2009
- Elliott Karpilovsky (PhD summer 2009), on “Reducing Memory Requirements for Routing Protocols,” joined Google in fall 2009
- Changhoon Kim (PhD summer 2009), on “Scalable and Efficient Self-Configuring Networks,” joined Microsoft Azure group in July 2009
- Yi Wang (PhD spring 2009), on “A Principled Approach to Managing Routing in Large ISP Networks,” joined Google in July 2009
- Jiayue He (PhD spring 2008, co-advised with Mung Chiang), on “Rethinking Traffic Management: Design of Optimizable Networks,” joined McKinsey in August 2008

### **University service**

- Director of Graduate Studies, Computer Science Department (2009–present)
- Committee on the Future of Climate and Environmental Sciences at Princeton (2008–2009)
- Committee on Grading (2008–2011)
- Diversity Council (2008–2009)
- Target of Opportunity committee (2007-2008)

- Engineering School diversity committee (2005–), chair (fall 2007–)
- Engineering/Math/Physics integrated course for first-year engineering students (2005–2009), director (fall 2008–)
- Engineering School dean search committee (spring 2006)
- Advisor for first-year engineering students (2005–2006 and 2007–2008 academic years)

**Books** Balachander Krishnamurthy and Jennifer Rexford, *Web Protocols and Practice: HTTP/1.1, Networking Protocols, Caching, and Traffic Measurement*, Addison-Wesley, May 2001.

Yvonne Ng and Jennifer Rexford, editors, *She's an Engineer? Princeton Alumnae Reflect*, Princeton University, 1993.

### Book chapters

Jiayue He, Jennifer Rexford, and Mung Chiang, “Design for optimizability: Traffic management of a future Internet,” chapter in *Algorithms for Next Generation Architectures*, to appear.

Jennifer Rexford, “Route optimization in IP networks,” chapter in *Handbook of Optimization in Telecommunications*, Springer Science and Business Media, February 2006.

Matthias Grossglauser and Jennifer Rexford, “Passive traffic measurement for IP operations,” pp. 91–120, *The Internet as a Large-Scale Complex System*, Oxford University Press, 2005.

### Tutorials

Presented tutorial on “Internet Routing” at Microsoft Research India Summer School on Networking (June 2009).

Co-presented full-day tutorial on “Traffic Measurement for IP Operations” at ACM SIGCOMM’01 (August 2001) and KRNETH’03 (June 2003), and half-day tutorials at IPAM (March 2002), INFOCOM’02 (June 2002), and the IMA (January 2004).

Co-presented full-day tutorial on “Web Protocols and Workloads” at ACM SIGCOMM’99 (September 1999) and WWW’00 (May 2000).

### Journal papers and magazine articles

Yi Wang, Ioannis Avramopoulos, and Jennifer Rexford, “Design for configurability: Rethinking interdomain routing policies from the ground up,” *IEEE Journal on Selected Areas in Communications*, April 2009.

David Maltz, Jibin Zhan, Gisli Hjalmtýsson, Albert Greenberg, Jennifer Rexford, Geoffrey Xie, and Hui Zhang, “Structure preserving anonymization of router configuration data,” *IEEE Journal on Selected Areas in Communications*, April 2009.

Renata Teixeira, Aman Shaikh, Tim Griffin, and Jennifer Rexford, “Dynamics of hot-potato routing in IP networks,” *IEEE/ACM Transactions on Networking*, volume 16, number 6, December 2008.

Josh Karlin, Stephanie Forrest, and Jennifer Rexford, “Autonomous security for Autonomous Systems,” *Computer Networks*, special issue on Complex Computer and Communications Networks, volume 52, number 15, October 2008.

Minlan Yu, Yung Yi, Jennifer Rexford, and Mung Chiang, "Rethinking virtual network embedding: Substrate support for path splitting and migration," *ACM SIGCOMM Computer Communications Review*, April 2008.

Jiayue He and Jennifer Rexford, "Towards Internet-wide multipath routing," *IEEE Network*, March 2008.

Steve Bellovin, Matt Blaze, Whitfield Diffie, Susan Landau, Peter Neumann, and Jennifer Rexford, "Risking communications security: Potential hazards of the 'Protect America Act,'" *IEEE Security and Privacy*, January/February 2008, pp. 24-33.

Renata Teixeira, Timothy G. Griffin, Mauricio G. C. Resende, and Jennifer Rexford, "TIE Breaking: Tunable interdomain egress selection," in *IEEE/ACM Transactions on Networking*, August 2007.

Jiayue He, Ma'ayan Bresler, Mung Chiang, and Jennifer Rexford, "Towards multi-layer traffic engineering: Optimization of congestion control and routing," in *IEEE Journal on Selected Areas in Communications*, June 2007.

Nick Feamster and Jennifer Rexford, "Network-wide prediction of BGP routes," in *IEEE/ACM Transactions on Networking*, April 2007.

Larry Peterson, Tom Anderson, Dan Blumenthal, Dean Casey, David Clark, Deborah Estrin, Joe Evans, Dipankar Raychaudhuri, Mike Reiter, Jennifer Rexford, Scott Shenker, and John Wroclawski, "GENI design principles," in *IEEE Computer*, September 2006.

Renata Teixeira and Jennifer Rexford, "Managing routing disruptions in Internet Service Provider networks," *IEEE Communications Magazine*, March 2006.

Matt Caesar and Jennifer Rexford, "BGP policies in ISP networks," *IEEE Network Magazine*, special issue on interdomain routing, November/December 2005.

Albert Greenberg, Gisli Hjalmtysson, David A. Maltz, Andy Meyers, Jennifer Rexford, Geoffrey Xie, Hong Yan, Jibin Zhan, and Hui Zhang, "A clean slate 4D approach to network control and management," *ACM SIGCOMM Computer Communications Review*, October 2005.

Joel Gottlieb, Albert Greenberg, Jennifer Rexford, and Jia Wang, "Automated provisioning of BGP customers," *IEEE Network Magazine*, November/December 2003.

Nick Feamster, Jay Borcenhagen, and Jennifer Rexford, "Guidelines for interdomain traffic engineering," *ACM SIGCOMM Computer Communications Review*, October 2003.

Bernard Fortz, Jennifer Rexford, and Mikkel Thorup, "Traffic engineering with traditional IP routing protocols," *IEEE Communication Magazine*, October 2002.

Lixin Gao and Jennifer Rexford, "Stable Internet routing without global coordination," *IEEE/ACM Transactions on Networking*, December 2001, pp. 681-692.

Anja Feldmann and Jennifer Rexford, "IP network configuration for intradomain traffic engineering," *IEEE Network Magazine*, September/October 2001, pp. 46-57.

Anja Feldmann, Albert Greenberg, Carsten Lund, Nick Reingold, Jennifer Rexford, and Fred True, "Deriving traffic demands for operational IP networks: Methodology and experience," *IEEE/ACM Transactions on Networking*, June 2001, pp. 265-279.

Anees Shaikh, Jennifer Rexford, and Kang Shin, "Evaluating the impact of stale link state on quality-of-service routing," *IEEE/ACM Transactions on Networking*, April 2001, pp. 162-176.

Sung-Whan Moon, Jennifer Rexford, and Kang Shin, "Scalable hardware priority queue architectures for high-speed packet switches," *IEEE Transactions on Computers*, November 2000, pp. 1215-1227.

Ramon Caceres, et al., "Measurement and analysis of IP network usage and behavior," *IEEE Communications Magazine*, May 2000.

Anja Feldmann, Albert Greenberg, Carsten Lund, Nick Reingold, and Jennifer Rexford, "NetScope: Traffic engineering for IP networks," *IEEE Network Magazine*, March/April 2000, pp. 11-19.

Subhabrata Sen, Jennifer Rexford, Jayanta Dey, Jim Kurose, and Don Towsley, "Online smoothing of variable-bit-rate streaming video," *IEEE Transactions on Multimedia*, March 2000, pp. 37-48.

Wu-chi Feng and Jennifer Rexford, "Performance evaluation of smoothing algorithms for transmitting prerecorded variable-bit-rate video," *IEEE Transactions on Multimedia*, September 1999, pp. 302-313.

Jennifer Rexford and Don Towsley, "Smoothing variable-bit-rate video in an internetwork," *IEEE/ACM Transactions on Networking*, April 1999, pp. 202-215.

Anja Feldmann, Jennifer Rexford, and Ramon Caceres, "Efficient policies for carrying Web traffic over flow-switched networks," *IEEE/ACM Transactions on Networking*, December 1998, pp. 673-685.

Jennifer Rexford, John Hall, and Kang G. Shin, "A router architecture for real-time point-to-point networks," *IEEE Transactions on Computers*, October 1998, pp. 1088-1101.

Ashish Mehra, Jennifer Rexford, and Farnam Jahanian, "Design and evaluation of a window-consistent replication service," *IEEE Transactions on Computers*, September 1997, pp. 986-996.

Jennifer Rexford, Flavio Bonomi, Albert Greenberg, and Albert Wong, "Scalable architectures for integrated traffic shaping and link scheduling in high-speed ATM switches," *IEEE Journal on Selected Areas in Communications*, June 1997, pp. 938-950.

Jennifer Rexford, Wu-chang Feng, James Dolter, and Kang G. Shin, "PP-MESS-SIM: A flexible and extensible simulator for evaluating multicomputer networks," *IEEE Transactions on Parallel and Distributed Systems*, January 1997, pp. 25-40.

Albert Greenberg, Andrew Odlyzko, Jennifer Rexford, and David Espinosa, "Fast parallel solution of fixed point equations for the performance evaluation of circuit-switched networks," *Performance Evaluation*, May 1994, pp. 67-81.

Jennifer Rexford and Niraj K. Jha, "Algorithm-based fault tolerance for floating-point operations in massively parallel systems," *IEEE Transactions on Parallel and Distributed Systems*, June 1994, pp. 649-653.

James Chen, Jennifer Rexford, and Y. C. Lee, "Fractal boundaries in magnetotail particle dynamics," *Geophysical Research Letters*, July 1990, pp. 1049-1052.

### **Conference publications**

Eric Keller, Minlan Yu, Matthew Caesar, and Jennifer Rexford, "Virtually eliminating router bugs," in *Proc. CoNext*, December 2009.

Minlan Yu and Jennifer Rexford, "BUFFALO: Bloom Filter Forwarding Architecture for Large Organizations," in *Proc. CoNext*, December 2009.

Yaping Zhu, Jennifer Rexford, Shubho Sen, and Aman Shaikh, "Impact of prefix-match changes on IP reachability," in *Proc. Internet Measurement Conference*, October 2009.

Yi Wang, Michael Schapira, and Jennifer Rexford, "Neighbor-Specific BGP: More flexible routing policies while improving global stability," in *Proc. ACM SIGMETRICS*, June 2009.

Wenjie Jiang, Rui Zhang-Shen, Jennifer Rexford, and Mung Chiang, "Cooperative content distribution and traffic engineering in an ISP network," in *Proc. ACM SIGMETRICS*, June 2009.

Andreas Haeberlen, Ioannis Avramopoulos, Jennifer Rexford, and Peter Druschel, "NetReview: Detecting when interdomain routing goes wrong," in *Proc. Networked Systems Design and Implementation*, April 2009.

Elliott Karpilovsky, Alexandre Gerber, Dan Pei, Jennifer Rexford, and Aman Shaikh, "Quantifying the extent of IPv6 deployment," in *Proc. Passive and Active Measurement Conference*, April 2009.

Changhoon Kim, Matthew Caesar, Alexandre Gerber, and Jennifer Rexford, "Revisiting route caching: The world should be flat," in *Proc. Passive and Active Measurement Conference*, April 2009.

Jennifer Rexford and Joan Feigenbaum, "Incrementally-deployable security for interdomain routing," extended abstract, *Proc. Cybersecurity Applications and Technologies for Homeland Security*, March 2009.

Umar Javed, Martin Suchara, Jiayue He, and Jennifer Rexford, "Multipath protocol for delay-sensitive traffic," invited paper, in *Proc. International Conference on COMMunication Systems and NETWORKS (COMSNETS)*, January 2009.

Jiayue He, Rui Zhang-Shen, Ying Li, Cheng-Yen Lee, Jennifer Rexford, and Mung Chiang, "DaVinci: Dynamically Adaptive Virtual Networks for a Customized Internet," *Proc. CoNext*, December 2008.

Jing Fu and Jennifer Rexford, "Efficient IP-address lookup with a shared forwarding table for multiple virtual routers," *Proc. CoNEXT*, December 2008.

Yi Wang, Eric Keller, Brian Biskeborn, Jacobus van der Merwe, and Jennifer Rexford, "Virtual routers on the move: Live router migration as a network-management primitive," *Proc. ACM SIGCOMM*, August 2008.

Changhoon Kim, Matthew Caesar, and Jennifer Rexford, "Floodless in SEATTLE: A scalable Ethernet architecture for large enterprises," *Proc. ACM SIGCOMM*, August 2008.

Sharon Goldberg, David Xiao, Eran Tromer, Boaz Barak, and Jennifer Rexford, "Path-quality monitoring in the presence of adversaries," *Proc. ACM SIGMETRICS*, June 2008.

Shao Liu, Rui Zhang-Shen, Wenjie Jiang, Jennifer Rexford, and Mung Chiang, "Performance bounds for peer-assisted live streaming," *Proc. ACM SIGMETRICS*, June 2008.

Dahai Xu, Mung Chiang, and Jennifer Rexford, "Link-state routing with hop-by-hop forwarding can achieve optimal traffic engineering," *Proc. IEEE INFOCOM*, April 2008.

Jiayue He, Martin Suchara, Ma'ayan Bresler, Jennifer Rexford, and Mung Chiang, "Rethinking Internet traffic management: From multiple decompositions to a practical protocol," *Proc. CoNext*, December 2007.

Haakon Ringberg, Augustin Soule, Jennifer Rexford, and Christophe Diot, "Sensitivity of PCA for traffic anomaly detection," *Proc. ACM SIGMETRICS*, June 2007.

Dahai Xu, Mung Chiang, and Jennifer Rexford, "DEFT: Distributed Exponentially-weighted Flow Splitting," in *Proc. IEEE INFOCOM*, May 2007.

Sharon Goldberg and Jennifer Rexford, "Security vulnerabilities and solutions for packet sampling," invited paper, in *Proc. IEEE Sarnoff Symposium*, April/May 2007.

Augustin Soule, Haakon Ringberg, Fernando Silveira, Jennifer Rexford, and Christophe Diot, "Detectability of traffic anomalies in two adjacent networks," in *Proc. Passive and Active Measurement Conference*, April 2007.

Elliott Karpilovsky and Jennifer Rexford, "Using Forgetful Routing to control BGP table size," *Proc. CoNext*, December 2006.

Jiayue He, Mung Chiang, and Jennifer Rexford, "Can congestion control and traffic engineering be at odds?" *Proc. IEEE GLOBECOM*, November/December 2006. Winner of Best Student Paper award.

Josh Karlin, Stephanie Forrest, and Jennifer Rexford, "Pretty Good BGP: Improving BGP by cautiously adopting routes," *Proc. IEEE International Conference on Network Protocols*, November 2006.

Andy Bavier, Nick Feamster, Mark Huang, Larry Peterson, and Jennifer Rexford, "In VINI Veritas: Realistic and controlled network experimentation," in *Proc. ACM SIGCOMM*, September 2006.

Wen Xu and Jennifer Rexford, "MIRO: Multi-path Interdomain ROuting," in *Proc. ACM SIGCOMM*, September 2006.

Jiayue He, Mung Chiang, and Jennifer Rexford, "TCP/IP interactions based on congestion price: Stability and optimality," in *Proc. International Conference on Communications*, June 2006.

Ming Zhang, Yaoping Ruan, Vivek Pai, and Jennifer Rexford, "How DNS misnaming distorts Internet topology mapping," in *Proc USENIX Annual Technical Conference*, May/June 2006.

Ioannis Avramopoulos and Jennifer Rexford, "Stealth probing: Efficient data-plane security for IP routing," in *Proc. USENIX Annual Technical Conference*, May/June 2006.

Jennifer Rexford, "Network protocols designed for optimizability," invited paper, *Proc. Conference on Information Sciences and Systems*, March 2006.

Matthew Caesar, Donald Caldwell, Nick Feamster, Jennifer Rexford, Aman Shaikh, and Jacobus van der Merwe, "Design and implementation of a Routing Control Platform," *Proc. Networked Systems Design and Implementation*, May 2005.

Jian Wu, Z. Morley Mao, Jennifer Rexford, and Jia Wang, "Troubleshooting BGP disruptions in a large IP network," *Proc. Networked Systems Design and Implementation*, May 2005.

Geoffrey Xie, Jibin Zhang, David Maltz, Hui Zhang, Albert Greenberg, Gisli Hjalmytsson, and Jennifer Rexford, "On static reachability analysis of IP networks," *Proc. IEEE INFOCOM*, March 2005.

David Maltz, Jibin Zhan, Geoffrey Xie, Hui Zhang, Gisli Hjalmysson, Albert Greenberg, and Jennifer Rexford, "Structure preserving anonymization of router configuration data," *Proc. Internet Measurement Conference*, October 2004.

Nick Feamster, Z. Morley Mao, and Jennifer Rexford, "BorderGuard: Detecting cold potatoes from peers," *Proc. Internet Measurement Conference*, October 2004.

Renata Teixeira, Aman Shaikh, Tim Griffin, and Jennifer Rexford, "Dynamics of hot-potato routing in IP networks," *Proc. ACM SIGMETRICS*, June 2004.

Nick Feamster, Jared Winick, and Jennifer Rexford, "A model of BGP routing for network engineering," *Proc. ACM SIGMETRICS*, June 2004.

Zhuoqing Morley Mao, David Johnson, Jennifer Rexford, Jia Wang, and Randy H. Katz, "Scalable and accurate identification of AS-level forwarding paths," *Proc. IEEE INFOCOM*, March 2004.

Zhuoqing Morley Mao, Jennifer Rexford, Jia Wang, and Randy Katz, "Towards an accurate AS-level traceroute tool," *Proc. ACM SIGCOMM*, August 2003.

Lakshminarayanan Subramanian, Sharad Agarwal, Jennifer Rexford, and Randy H. Katz, "Characterizing the Internet hierarchy from multiple vantage points," *Proc. IEEE INFOCOM*, June 2002.

Lixin Gao, Tim Griffin, and Jennifer Rexford, "Inherently safe backup routing with BGP," *Proc. IEEE INFOCOM*, April 2001.

Anja Feldmann, Albert Greenberg, Carsten Lund, Nick Reingold, Jennifer Rexford, and Fred True, "Deriving traffic demands for operational IP networks: Methodology and experience," *Proc. ACM SIGCOMM*, August/September 2000.

Lixin Gao and Jennifer Rexford, "Stable Internet routing without global coordination," *Proc. ACM SIGMETRICS*, June 2000.

Stephane Gruber, Jennifer Rexford, and Andrea Basso, "Protocol considerations for a prefix-caching proxy for multimedia streams," *Proc. World Wide Web Conference*, May 2000.

Anees Shaikh, Jennifer Rexford, and Kang Shin, "Load-sensitive routing of long-lived IP flows," *Proc. ACM SIGCOMM*, September 1999.

Subhabrata Sen, Jennifer Rexford, and Don Towsley, "Proxy prefix caching for multimedia streams," *Proc. IEEE INFOCOM*, March 1999.

Edith Cohen, Balachander Krishnamurthy, and Jennifer Rexford, "Efficient algorithms for predicting requests to Web servers," *Proc. IEEE INFOCOM*, March 1999.

Anees Shaikh, Jennifer Rexford, and Kang Shin, "Evaluating the overheads of source-directed quality-of-service routing," *Proc. International Conference on Network Protocols*, October 1998.

Edith Cohen, Balachander Krishnamurthy, and Jennifer Rexford, "Improving end-to-end performance of the Web using server volumes and proxy filters," *Proc. ACM SIGCOMM*, August-September 1998, pp. 241-253.

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