

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–), the Center for Information Technology Policy (February 2008–), the Princeton Environmental Institute (March 2011–), and the Princeton Institute for Computational Science and Engineering (September 2014–). Gordon Y. S. Wu Professor in Engineering (July 2012–). Acting department chair (fall 2013), department chair (July 2015–).

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 SIGCOMM Award for Lifetime Contributions (2018)
- Applied Networking Research Prize for "Performance Characterization of a Commercial Video Streaming Service" (2018)

- IEEE Fellow (2018)
- National Academy of Inventors (2017)
- SOSR'17 Best Paper Award for "Concise encoding of flow attributes in SDN switches" (2017)
- NCWIT Harrold and Notkin Research and Graduate Mentoring Award (2017)
- ACM Athena Lecturer Award (2016)
- SOSR'16 Best Paper Award for "CacheFlow: Dependency-aware rule-caching for software-defined networks" (2016)
- Applied Networking Research Prize for "Central control over distributed routing" (2015)
- NSDI'16 Community Award for "An industrial-scale software defined Internet exchange point" (2016)
- N2Women list of "10 Women You Should Know In Networking and Communications" (2015)
- SIGCOMM "Best Paper" Award for "Central control over distributed routing" (2015)
- SIGCOMM "Test of Time" Award for "A clean slate 4D approach to network control and management" (2015)
- NSDI "Test of Time Award" for "Design and implementation of a Routing Control Platform" (2015)
- Applied Networking Research Prize for "Distributed route aggregation on the global network" (selected 2014, presented at IETF-93 in July 2015)
- National Academy of Engineering, elected member (2014)
- GigaOM list of "Ten Cloud Trailblazers" (2013)
- American Academy of Arts & Sciences, elected member (2013)
- NSDI'13 Community Award, for "Composing software-defined networks" (2013)
- NSDI'12 Community Award, honorable mention, for "Serval: An end-host stack for service-centric networking" (2012)
- SIGMETRICS "Test of Time" award (2011)
- SIGMETRICS "Best Student Paper" award (2011)
- Princeton Graduate Mentoring Award (2011)
- 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

- ACM Athena Lecturer talk at Microsoft (November 2017)

- ACM Athena Lecturer keynote talk at Grace Hopper Celebration of Women in Computing (October 2017)
- ACM Athena Lecturer keynote talk at SIGCOMM'17 (August 2017)
- "Programming Abstractions for Software-Defined Networks," Mary Jean Harrold Memorial Lecture, Georgia Tech (November 2015)
- "Putting the 'Inter' in 'Internet'," distinguished lecture, University of Pennsylvania (November 2014)
- "Enabling Innovation Inside the Network," distinguished lecture, Texas A&M (April 2014)
- "Enabling Innovation Inside the Network," distinguished lecture, University of Minnesota (February 2014)
- "Enabling Innovation Inside the Network," distinguished lecture, Columbia University (October 2013)
- "Enabling Innovation Inside the Network," distinguished lecture, University of Delaware (March 2013)
- "Enabling Innovation Inside the Network," distinguished lecture, University of Maryland (December 2012)
- "Enabling Innovation Inside the Network," distinguished lecture, Boston University (February 2012)
- "Enabling Innovation Inside the Network," distinguished lecture, University of Illinois at Urbana-Champaign (February 2012)
- "Programming Languages for Programmable Networks," Principles of Programming Languages (January 2012)
- "The Networking Philosopher's Problem," CoNext Student Workshop, November 2010
- "'Hashing Out' the Future of Enterprise and Data Center Networks," Distinguished Lecture, Rutgers Electrical and Computer Engineering Department, December 2009
- "Stable Internet Routing Without Global Coordination," Computer Science and Economics Day, New York Academy of Sciences, November 2009
- "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 Lecture, Cornell University, September 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

- Sloan Foundation Computer Science Committee (2017–2020)
- National Academy of Engineering Computer Science Peer Committee (2016–)
- Computing Community Consortium (2014–), executive committee (2016–)
- Open Networking Foundation, Board (2014–2017)
- Open Networking Foundation, Technical Advisory Group (2013–2016)
- ACM Queue, Board member (2013–2014)
- IEEE/ACM Transactions on Networking, Editor-at-Large (2013–)
- Member, Open Internet Advisory Committee of the FCC, and chair of the Mobile Broadband working group (2012–2014)
- Co-chair, FCC Working Group on Secure Interdomain Routing (2011–2013)
- Defense Science Study Group (2010-2011)
- NSF CISE Advisory Committee (2009–2013), co-chair (2011-2014)
- *Communications of the ACM* Editorial Board (2009–2010)
- GENI/NetSE Science Council (2007–present)
- Steering committee of *IEEE/ACM Transactions on Networking* (2008-2009)
- 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, 2010–2013)
- 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

- Barefoot Networks (2015–)
- Waltz Networks (2015–)
- Gencore Systems (2013–)
- Deutsche Telekom Laboratories Advisory Board (2007–2011)
- Pollere TMOS Technical Advisory Group (2006–2009)
- AlterPoint Technical Advisory Board (2006–2009)
- Arbor Networks Technical Advisory Board (2003–2010)
- MentorNet Advisory board (1999–2003)

Conference committees

- Program committee co-chair for ACM SIGCOMM Workshop on Self-Driving Networks (2018)
- Program committee co-chair for Symposium on SDN Research (2015)
- Steering committee for Workshop on Hot Topics in Software Defined Networks (2012–2013)
- Program committee co-chair for Hot Topics in Software Defined Networks (2012)
- Steering committee for Workshop on Cellular Networks (2012–)
- Steering committee for Networked Systems Design and Implementation (2009–2016)
- 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

- 2018 ACM SIGCOMM Workshop on In-Network Computing
- 2017 SIGCOMM Workshop on Hot Topics in Networking
- 2014 USENIX Symposium on Networked Systems Design and Implementation
- 2013 SIGCOMM Workshop on Hot Topics in Software Defined Networks, Workshop on Rigorous Protocol Engineering, ACM SIGCOMM Workshop on Hot Topics in Middleboxes and Network Function Virtualization
- 2012 SIGCOMM Workshop on Cellular Networks, Hot Topics in Security, Free and Open Communication on the Internet, Asian Internet Engineering Conference
- 2011 SIGCOMM Workshop on Hot Topics in Networking, Latin America Networking Conference, Workshop on Rigorous Protocol Engineering, USENIX Workshop on Free and Open Communications on the Internet
- 2010 USENIX Symposium on Networked Systems Design and Implementation, ACM SIGCOMM, VISA, Workshop on Network Embedded Management and Applications
- 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

PhD student graduates

- Xin Jin (PhD June 2016) on “Dynamic Control of Software-Defined Networks,” started postdoc at UC Berkeley in July 2016 before joining Johns Hopkins University as an assistant professor in fall 2017
- Srinivas Narayana (PhD May 2016) on “Declarative Network Path Queries”, started postdoc at MIT in July 2016 before joining Rutgers as an assistant professor in fall 2018
- Nanxi Kang (PhD December 2015) on “Flexible Enterprise Network Management on Commodity Switches,” started at Databricks in February 2016
- Peng Sun (PhD May 2015), on “Integrating Network Management for Cloud Computing Services,” started at VMware in summer 2015

- Wenjie Joe Jiang (PhD February 2012, co-advised with Mung Chiang), on “Wide-Area Traffic Management for Cloud Services,” started at Google in February 2012
- Eric Keller (PhD August 2011), on “Refactoring Router Software to Minimize Disruption”, started post-doc at UPenn in September 2011 before joining University of Colorado as an assistant professor in summer 2012
- Yaping Zhu (PhD August 2011), on “Minimizing Wide-Area Performance Disruptions in Interdomain Routing,” started at Google in October 2011
- Minlan Yu (PhD August 2011) on “Scalable Management of Enterprise and Data-Center Networks,” started one-year post-doc at UC Berkeley in August 2011 before joining USC as an assistant professor in summer 2012, then joined Yale University as an assistant professor in fall 2016, and the joined Harvard as an associate professor in January 2018
- Martin Suchara (PhD summer 2011), on “Reliable Internet Routing,” joined UC Berkeley as a post-doctoral researcher in July 2011, joined IBM Research as a Post-doctoral Scholar in 2013
- 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, before promotion to associate professor (with tenure) in April 2015
- 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, joined Barefoot Networks in April 2014
- Yi Wang (PhD spring 2009), on “A Principled Approach to Managing Routing in Large ISP Networks,” joined Google in July 2009, joined AdChina in April 2011, and founded start-up company Liu Li Shuo in September 2012
- Jiayue He (PhD spring 2008, co-advised with Mung Chiang), on “Rethinking Traffic Management: Design of Optimizable Networks,” joined McKinsey in August 2008, then joined ezHome

MSE student graduates

- Michael Kranch (MSE May 2015), on “Upgrading HTTPS Mid-Air: An Empirical Study of Strict Transport Security and Public Key Pinning”
- Dushyant Arora (MSE May 2013), on “Proactive Routing in Scalable Data Centers with PARIS,” joined Arista Networks, fall 2013
- Jacopo Cesareo (MSE May 2012), on “Optimizing Implicit Proxy Placement to Evade Traffic Filters,” joined Arista Networks, fall 2012

- Dmitry Drutskoy (MSE May 2012), on “Software-Defined Network Virtualization with FlowN,” joined Elysium Digital in summer 2012
- Robert Harrison (MSE May 2011, co-advised with David Walker), on “Frenetic: A Network Programming Language,” joined the U.S. Military Academy (West Point) as an instructor in June 2011
- Richard Wang (MSE May 2011), on “OpenFlow-based Load Balancing Gone Wild,” joined Carnegie Mellon University as a PhD student in fall 2011

University service

- Infrastructure Master Plan Advisory Group (2015–present)
- Chair of Computer Science department (2015–present)
- Princeton Entrepreneurship Council (2015–present)
- Faculty Advisory Committee on Diversity (2015–present)
- School of Engineering Self-Study Committee (2014–2015)
- Princeton Entrepreneurship Advisory Committee (2014–2015)
- Advisory Committee on Appointments and Advancements (2013–2014 academic year)
- Search committee for the director of the Genomics Institute (2013–2014 academic year)
- Acting chair of Computer Science (summer and fall 2013)
- CIO Search Committee (2012)
- Honorary Degrees Committee (2011–2014)
- Faculty Advisor, Princeton Women in Computer Science undergraduate group (2010–present)
- Undergraduate Academic Advisor, AB program, Forbes College (2010–2012)
- Committee on the President’s Award for Distinguished Teaching (2010)
- 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 2007–2009)
- Engineering/Math/Physics integrated course for first-year engineering students (2005–2009), director (fall 2008–spring 2011)
- 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

Pamela Zave and Jennifer Rexford, “The design space of network mobility,” in *SIGCOMM eBook on Recent Advances in Networking*, Volume 1, 2013.

Jiayue He, Jennifer Rexford, and Mung Chiang, “Design for optimizability: Traffic management of a future Internet,” chapter in *Algorithms for Next Generation Architectures*, Springer, March 2010.

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

Pamela Zave and Jennifer Rexford, “The compositional architecture of the Internet,” to appear in *Communications of the ACM*.

Nanxi Kang, Ori Rottenstreich, Sanjay Rao, and Jennifer Rexford, “Alpaca: Compact Network Policies with Attribute-Encoded Addresses,” in *IEEE/ACM Transactions on Networking*, volume 25, issue 3, June 2017.

Joao L. Sobrinho, Laurent Vanbever, Franck Le, Andre Sousa, and Jennifer Rexford, “Scaling the Internet routing system through distributed route aggregation,” in *IEEE/ACM Transactions on Networking*, December 2016.

Sharon Goldberg, David Xiao, Eran Tromer, Boaz Barak and Jennifer Rexford, “Path-quality monitoring in the presence of adversaries: The secure sketch protocols,” in *IEEE/ACM Transactions on Networking*, volume 23, number 6, December 2015.

Peter Peresini, Maciej Kuzniar, Marco Canini, Daniele Venzano, Dejan Kostic, and Jennifer Rexford, “Systematically testing OpenFlow controller applications,” in *Computer Networks, Special Issue on Software-Defined Networking*, volume 92, 2015, pages 270–286.

Peng Sun, Minlan Yu, Michael J. Freedman, Jennifer Rexford, and David Walker, “HONE: Joint host-network traffic management in software-defined networks,” in the *Journal of Network and Systems Management*, special issue on software-defined networking, February 2015.

Sharon Goldberg, Michael Schapira, Peter Hummon, and Jennifer Rexford, “How secure are secure interdomain routing protocols?” in *Computer Networks*, volume 70, number 9, pages 260–287, September 2014.

Amitabha Ghosh, Sangtae Ha, Edward Crabbe, and Jennifer Rexford, “Scalable multi-class traffic management in data-center backbone networks,” in *IEEE Journal on Selected Areas in Communications*, special issue on Networking Challenges in Cloud Computing Systems, volume 31, number 12, December 2013.

Nate Foster, Michael J. Freedman, Arjun Guha, Rob Harrison, Naga Praveen Katta, Christopher Monsanto, Joshua Reich, Mark Reitblatt, Jennifer Rexford, Cole Schlesinger, Alec Story, and David Walker, “Languages for software-defined networks,” in *IEEE Communications Magazine*, volume 51, number 2, February 2013.

Anduo Wang, Limin Jia, Wenchao Zhou, Yiqing Ren, Boon Thau Loo, Jennifer Rexford, Vivek Nigam, Andre Scedrov, and Carolyn Talcott, “FSR: Formal analysis and implementation toolkit for safe inter-domain routing,” in *IEEE/ACM Transactions on Networking*, volume 20, issue 6, pages 1814–1827, December 2012.

Elliott Karpilovsky, Matthew Caesar, Jennifer Rexford, Aman Shaikh, and Jacobus van der Merwe, “Practical network-wide compression of IP routing tables,” in *IEEE Transactions on Network and Service Management*, volume 9, number 4, December 2012.

Joe W. Jiang, S.-H. Gary Chan, Mung Chiang, Jennifer Rexford, D. Tony Ren, Bin Wei, “Global 1Mbps peer-assisted streaming: Fine-grain measurement of a configurable platform,” in *IEEE Transactions on Multimedia*, volume 14, issue 5, October 2012.

Yaping Zhu, Benjamin Helsley, Jennifer Rexford, Aspi Siganporia, and Sridhar Srinivasan, “LatLong: Diagnosing wide-area latency changes for CDNs,” in *IEEE Transactions on Network and Service Management*, volume 9, number 1, September 2012.

Steven M. Bellovin, Scott O. Bradner, Whitfield Diffie, Susan Landau, and Jennifer Rexford, “Can it really work? Problems with extending EINSTEIN 3 to critical infrastructure,” *Harvard Law School, National Security Journal*, volume 3, issue 1, 2012.

Dahai Xu, Mung Chiang, and Jennifer Rexford, “Link-state routing with hop-by-hop forwarding can achieve optimal traffic engineering,” in *IEEE/ACM Transactions on Networking*, volume 19, number 6, December 2011.

Minlan Yu, Xin Sun, Nick Feamster, Sanjay Rao, and Jennifer Rexford, “A survey of VLAN usage in campus networks,” in *IEEE Communications Magazine*, July 2011.

Changhoon Kim, Matthew Caesar, and Jennifer Rexford, “SEATTLE: A scalable Ethernet architecture for large enterprises,” in *ACM Transactions on Computer Systems*, volume 29, number 1, February 2011.

Kevin Butler, Toni Farley, Patrick McDaniel, and Jennifer Rexford, “A survey of BGP security issues and solutions,” in *Proceedings of the IEEE*, January 2010.

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 Hjalmtysson, 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.

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