

Aman Shaikh

Resume

AT&T Labs - Research
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Research Interests

Internet routing, network management and operations, network measurements.

Education

- **Ph.D., Computer Engineering**
University of California, Santa Cruz, CA, USA, December 2003.
Research advisor: Professor Anujan Varma
Dissertation title: Management of Routing Protocols in IP Networks
- **M.S., Computer Engineering**
University of California, Santa Cruz, CA, USA, June 2000.
Research advisor: Professor Anujan Varma
Thesis title: Analysis of Routing Protocol Stability in Congested Networks
- **B.E. (HONS) Computer Science + M.Sc. (HONS) Mathematics**
Birla Institute of Technology & Science, Pilani, India, July 1998.
(CGPA : 10.0/10.0).

Experience

- **AT&T Labs - Research, Florham Park, NJ, USA:**
 - Senior Member of Technical Staff, August 2004 – present.
 - Network Researcher (contractor), July 2003 – August 2004.
 - Student Visitor and Summer Intern, September 2000 – July 2003.
- **Lucent Bell Labs, Holmdel, NJ, USA:** Visitor, July 1999 – August 1999.
- **University of California, Santa Cruz, CA, USA:** Research Assistant, September 1998 – June 2003.
- **Tata Elxsi (India) Ltd., Bangalore, India:** Trainee, January 1998 – June 1998.
- **Indian Space Research Organization (ISRO), Ahmedabad, India:** Trainee, May 1995 – July 1995.

Publications

- **Humpty Dumpty: Putting iBGP Back Together Again.** Ashley Flavel, Jeremy McMahon, Aman Shaikh, Matthew Roughan, Nigel Bean. Proc. IFIP/TC6 Networking, May 2009.
- **Quantifying the Extent of IPv6 Deployment.** Elliott Karpilovsky, Alexandre Gerber, Dan Pei, Jennifer Rexford, Aman Shaikh. Proc. Passive and Active Measurement (PAM) conference, April 2009.
- **Impact of Hot-Potato Routing Changes in IP Networks.** Renata Teixeira, Aman Shaikh, Timothy G. Griffin, Jennifer Rexford. IEEE/ACM Transactions on Networking (ToN), February 2009.
- **Troubleshooting Chronic Conditions in Large IP Networks.** Ajay Mahimkar, Jennifer Yates, Yin Zhang, Aman Shaikh, Jia Wang, Zihui Ge, Cheng Tien Ee. Proc. ACM CoNEXT, December 2008.
- **Where's Waldo? Practical Searches for Stability in iBGP.** Ashley Flavel, Matthew Roughan, Nigel Bean, Aman Shaikh. Proc. IEEE International Conference on Network Protocols (ICNP), October 2008.
- **Wresting Control from BGP: Scalable Fine-grained Route Control.** Patrick Verkaik, Dan Pei, Tom Scholl, Aman Shaikh, Alex C. Snoeren, Jacobus E. van der Merwe. Proc. USENIX Annual Technical Conference, June 2007.
- **Measurement Informed Route Selection.** Nick Duffied, Kartik Gopalan, Michael Hines, Aman Shaikh, Jacobus E. van der Merwe. Passive and Active Measurement Conference (PAM) Poster, April 2007.
- **Avoiding Instability during Graceful Shutdown of Multiple OSPF Routers.** Aman Shaikh, Rohit Dube, Anujan Varma. IEEE/ACM Transactions on Networking (ToN), Volume 14, Number 3, Pages 532-542, June 2006.
- **Case Study: Resilient Backbone Design for IPTV Services.** Meeyoung Cha, Gagan Choudhury, Jennifer Yates, Aman Shaikh, Sue Moon. In Workshop on IPTV Services over World Wide Web, May 2006.
- **Placing Relay Nodes for Intra-Domain Path Diversity.** Meeyoung Cha, Sue Moon, Chong-Dae Park, Aman Shaikh. In the *Proc. IEEE INFOCOM*, April 2006.
- **Design and Implementation of a Routing Control Platform.** Matthew Caesar, Donald Caldwell, Nick Feamster, Jennifer Rexford, Aman Shaikh, Jacobus van der Merwe. In the *Proc. USENIX Symposium on Networked Systems Design and Implementation (NSDI)*, May 2005.
- **Positioning Relay Nodes in ISP Networks.** Meeyoung Cha, Sue Moon, Chong-Dae Park, Aman Shaikh. *IEEE INFOCOM Poster*, March 2005.
- **Network Sensitivity to Hot-Potato Disruptions.** Renata Teixeira, Aman Shaikh, Timothy G. Griffin, Geoffrey M. Voelker. In the *Proc. ACM SIGCOMM*, August 2004.

- **The Case for Separating Routing from Routers.** Nick Feamster, Hari Balakrishnan, Jennifer Rexford, Aman Shaikh, Jacobus van der Merwe. In the *Proc. ACM SIGCOMM workshop on Future Directions in Network Architecture (FDNA)*, August 2004.
- **Dynamics of Hot-Potato Routing in IP Networks.** Renata Teixeira, Aman Shaikh, Timothy G. Griffin, Jennifer Rexford. In the *Proceedings of the ACM SIGMETRICS*, June 2004.
- **OSPF Monitoring: Architecture, Design and Deployment Experience.** Aman Shaikh, Albert Greenberg. In the *Proceedings of the USENIX Symposium on Networked System Design and Implementation (NSDI)*, March 2004.
- **An Efficient Algorithm for OSPF Subnet Aggregation.** Aman Shaikh, Dongmei Wang, Guangzhi Li, Jennifer Yates, Charles Kalmanek. In the *Proceedings of the International Conference on Network Protocols (ICNP)*, November 2003.
- **A Case Study of OSPF Behavior in a Large Enterprise Network.** Aman Shaikh, Chris Isett, Albert Greenberg, Matthew Roughan, Joel Gottlieb. In the *Proceedings of the ACM SIGCOMM Internet Measurement Workshop (IMW)*, November 2002.
- **Avoiding Instability during Graceful Shutdown of OSPF.** Aman Shaikh, Rohit Dube, Anujan Varma. In the *Proceedings of the IEEE INFOCOM*, June 2002.
- **An OSPF Topology Server: Design and Evaluation.** Aman Shaikh, Mukul Goyal, Albert Greenberg, Raju Rajan, K. K. Ramakrishnan. *IEEE Journal on Selected Areas in Communications (J-SAC)*, Vol. 20, no 4, May 2002.
- **Experience in Black-box OSPF Measurement.** Aman Shaikh, Albert Greenberg. In the *Proceedings of the ACM SIGCOMM Internet Measurement Workshop (IMW)*, November 2001.
- **Routing Stability in Congested Networks: Experimentation and Analysis.** Aman Shaikh, Lampros Kalampoukas, Rohit Dube, Anujan Varma. In the *Proceedings of the ACM SIGCOMM*, August 2000.

Standard Documents

- **Benchmarking Basic OSPF Single Router Control Plane Convergence.** Vishwas Manral, Russ White and Aman Shaikh. IETF Request for Comments (RFC) 4061, April 2005.
- **OSPF Benchmarking Terminology and Concepts.** Vishwas Manral, Russ White and Aman Shaikh. IETF Request for Comments (RFC) 4062, April 2005.
- **Considerations When Using Basic OSPF Convergence Benchmarks.** Vishwas Manral, Russ White and Aman Shaikh. IETF Request for Comments (RFC) 4063, April 2005.

Presentations

- **Industrial Issues in Software Performance.** Panel and Discussion on Industrial Issues in Software Performance, Workshop on Software and Performance (WOSP), Princeton University, NJ, USA, June 2008.
- **Towards a Well-Managed Next Generation Internet!** Panel Discussion: Hot Research Topics in Next Generation Internet, New York Area Systems/Networking Summit, New York University, NY, USA, November 2006.
- **Happy Network Administrators \Rightarrow Happy Packets \Rightarrow Happy Users.** Position Statement, Workshop on Internet Routing Evolution and Design (WIRED), Atlanta, GA, USA, October 2006.
- **Peering Dragnet: Examining BGP Routes Received from Peers.** North American Network Operators' Group (NANOG), St. Louis, MO, USA, October 2006.
- **Operations and Management of IP Networks: What Researchers Should Know.** ACM SIGCOMM Tutorial along with Albert Greenberg, Philadelphia, PA, USA, August, 2005.
 - AT&T Labs - Research, Florham Park, NJ, USA, September, 2005.
 - Princeton University, Princeton, NJ, USA, August 2005.
- **Route Control Platform: Making an AS Look and Act like One Router.**
 - Invited presentation at DA-IICT (Dhirubhai Ambani - Institute of Information and Communication Technology), Gandhinagar, Gujarat, India, January, 2005.
 - IEEE Computer Communications Workshop (CCW) Bonita Springs, FL, USA, October 2004.
- **OSPF Monitor: Architecture, Design and Deployment Experience.** USENIX Symposium on Networked Systems Design and Implementation (NSDI), San Francisco, CA, USA, March 2004.
- **An Efficient Algorithm for OSPF Subnet Aggregation.** IEEE International Conference on Network Protocols (ICNP), Atlanta, GA, USA, November 2003.
- **Position Statement.** Workshop on Internet Routing Evolution and Design (WIRED), Mount Hood, OR, USA, October 2003.
- **A Case Study of OSPF Behavior in a Large Enterprise Network.** ACM SIGCOMM Internet Measurement Workshop (IMW), Marseille, France, November 2002.
- **Avoiding Instability during Graceful Shutdown of OSPF.** IEEE INFOCOM, New York City, NY, USA, June 2002.
- **Experience in Black-box OSPF Measurement.** ACM SIGCOMM Internet Measurement Workshop (IMW), San Francisco, CA, USA, November 2001.
- **Routing Stability in Congested Networks: Experimentation and Analysis.** ACM SIGCOMM, Stockholm, Sweden, August 2000.

Skills

- **Languages:** C, C++, Java, Perl, Tcl/Tk, Pascal
- **Operating Systems:** Linux, FreeBSD and other Unix variants, Windows
- **Networking Software:** GateD, Zebra/Quagga, ns2, CSIM

Professional Activities

- Program Committee member: IEEE ICNP 2009, IEEE INFOCOM 2009, IEEE INFOCOM 2007, CoNEXT Student Workshop 2006, IEEE INFOCOM 2006, IEEE Globecom ISET Workshop 2006
- IEEE member since 2001
- ACM SIGCOMM member since 2001