Lili Qiu

Mailing Address

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Research Interests

Internet and wireless networking with special focus on network management, measurement, optimization, and protocol design and analysis.

Education

Ph.D. in Computer Science	Cornell University, 2001.
M.S. in Computer Science	Cornell University, 1999.
B.S. in Computer Science and Physics	University of Bridgeport, 1996.

Appointments

9/2010 – present: Associate Professor, Department of Computer Sciences, University of Texas at Austin.
1/2005 – 8/2010: Assistant Professor, Department of Computer Sciences, University of Texas at Austin.
2/2001 – 12/2004: Researcher, System and Networking Research Group, Microsoft Research, Redmond, Washington.

Honors and Awards

- ACM Distinguished Scientist, 2013.
- Faculty Fellowship #7 in Computer Science, The University of Texas at Austin, 2008-2014.
- National Science Foundation Faculty Early Career Award, 2006 - 2011.
- IEEE Senior Member, 2007.
- CRMA: Collision-Resistant Multiple Access. Best paper award finalist at ACM MobiCom 2011.
- Greedy Receivers in IEEE 802.11 Hotspots published at DSN'07 selected for fast track processing by IEEE Transactions on Dependable and Secure Computing.
- On Selfish Routing in Internet-Like Environments published at ACM SIGCOMM'03 selected for fast track processing by ACM/IEEE Transactions on Networking.
- McMullen Fellowship. 1996 - 1997, Cornell University.
- Various college scholarships and awards, University of Bridgeport, 1993 - 1996.

Departmental Service

2005 – 2006: PhD Admission Committee and Women & Minorities Committee.
2006 – 2007: PhD Admission Committee and First Bytes Outreach & Advising.
2007 – 2008: Master Admission Committee and Space Committee.
2008 – 2009: Faculty Evaluation Committee.
2009 – 2010: PhD Admission Committee.
2010 – 2011: Faculty Evaluation Committee and Chair of Undergraduate Thesis Committee.
2011 – 2014: PhD Admission Committee.

Teaching

Fall 2005: Wireless Networking Seminar (CS395T)
Spring 2006: Introduction to Wireless Networking (CS378)
Fall 2006: Wireless Networking (CS395T)
Spring 2007: Introduction to Wireless Networking (CS378)
Fall 2007: Wireless Networking (CS386W)
Fall 2008: Wireless Networking (CS386W)
Spring 2009: Introduction to Wireless Networking (CS378)
Fall 2009: Wireless Networking (CS386W)
Spring 2010: Introduction to Wireless Networking (CS378)
Fall 2010: Computer Networks (CS356)
Spring 2011: Wireless Networking (CS386W)
Summer 2011: Computer Networks (CS 356)
Fall 2011: Wireless Networking (CS386W)
Fall 2013: Wireless Networking (CS386W)
Spring 2014: Introduction to Wireless Networking (CS356R)

Current Ph.D. students: Apurv Bhartia (expected to graduate in summer 2014), Swati Rallapalli (expected to graduate in summer 2014), Yi-Chao Chen, Owais Khan, Sangki Yun, and Mubashir Adnan Qureshi.
Students graduated along with their first employments: Feng Wang (Ph.D., August 2007, Meraki Networks), Yogita Ashok Mehta (MS, May 2007, Google), Jayesh Seshadri (MS, May 2007, VMWare), Gaurav Deshpande (MS, May 2008, Microsoft), and Anand Padmanabha Iyer (MS, May 2008, Microsoft Resesarch), Mi Kyung Han (Ph.D., August 2011, Microsoft), Eric Rozner (Ph.D., December 2011, AT&T Labs).

Professional Activities

Organization committee:

- Elected officer: Vice Chair for SIGMOBILE, 2013 – 2015.
- Elected officer: Treasurer for SIGMOBILE, 2009 – 2013.
- Technical program co-chairs for ACM MobiCom 2012, SECON 2011, WICON 2006.
- General co-chairs for IEEE ICNP 2012, WICON 2007.
- Co-Chair for ACM SIGCOMM 2011 poster/demo.
- Tutorial co-chair for ACM SIGCOMM 2013.
- Area chair for IEEE ICNP 2011 and 2012.
- Editor for IEEE Transactions on Mobile Computing, 2009 – present.
- Editor for Computer Networks Journal, 2009 – present.
- Area editor for Mobile Computing and Communications Review (MC2R), 2005-2007.
- Associate editor in chief for Mobile Computing and Communication Review (MC2R) 2008-Present.

Technical program committee member:

- ACM SIGCOMM (2008 - 2009, 2011, 2012)
- ACM MOBICOM (2005 - 2014)
- ACM MobiHoc (2010 - 2012, 2014)
- USENIX NSDI (2014)
- IEEE INFOCOM (2003, 2004, 2007–2010, 2013, 2014)
- IEEE ICNP (2009 - 2011)

- IEEE ICDCS (2006-2007, 2009, 2014)
- IEEE International Conference on Sensor and Ad Hoc Communications and Networks SECON (2004 - 2007, 2009)
- COMSNETS (2010–2011)
- Wireless Internet (2005-2007)
- ACM Multimedia 2004
- Internet Measurement Conference (IMC) (2004, 2011)
- IWQoS (2004, 2006)
- Passive and Active Measurement Conference (PAM 2007)
- Web Caching Workshop 2005, ACM Workshop on Foundation of Mobile Computing (DIAL-M-POMC 2005)
- Advanced Architectures and Algorithms for Internet Delivery and Applications (AAA-IDEA 2005, 2006)
- ACM SIGCOMM Asia Workshop 2005
- Practical Aspects of Performance Analysis (PAPA 2002)

Research Support

- Collaborative Research: Extreme Densification of Wireless Networks. CNS-1343383. National Science Foundation, co-PI, 1/2014 – 12/2017. $733,500.
- Optimized Layered Integrated Video Encoding. Google Faculty Research Award. Single PI, 2013. $50,000.
- Mobile Network Research. Narus Inc. Single PI. 2013. $30,000.
- Mobile Network Research. Narus Inc. Single PI. 2012. $30,000.
- CIF: Small: Compressive Network Analytics, Research Grant CCF-1117009, National Science Foundation, co-PI, 09/01/2011–08/31/2014, $500,000.
- Managing White Space Spectrum. Microsoft Research. Single PI. 2011. $50,000.
- MSR Software Radio Academic Program. Microsoft Research. Single PI. 2010. SORA Hardware Kits.
- NeTS: Small: From Sensing To Sharing Across Networks In White Space, Research Grant CNS-1017549, National Science Foundation, PI, 09/1/2010 – 08/31/2013, $470K.
- NeTS: Small: Predictable Optimization of Opportunistic Communication, Research Grant CNS-0916106, National Science Foundation, PI, 08/1/2009 – 07/31/2012, $499991.
- NetSE: Small: Multi-Resolution Analysis of Network Matrices, Research Grant CNS-0916309, National Science Foundation, co-PI, 09/01/2009 – 08/31/2012, $499996.
- CAREER: Towards Self-Managing Wireless Networks using M3, Research Grant CNS-0546755, National Science Foundation, PI, 06/01/2006 – 05/31/2011 ($400K).
- Collaborative Research: NeTS-NBD: Traffic Engineering in an Uncertain World, Research Grant CNS-0627020, National Science Foundation, co-PI, 09/01/2006 – 08/31/2009 ($497K).
- Achieving Resilience in Wireless Mesh Networks. Microsoft Research, single PI, 05/01/2005 – 12/31/2007 ($15K cash + $20K equipment).
- Wireless Networking and Communications Group (WNCG) Grants, 2005-2014 (˜ $100K).

Refereed Publications

The following papers can be downloaded from http://www.cs.utexas.edu/∼lili/papers/papers.html. There are 65 refereed publications, most of which are in highly selective conferences and journals (7 ACM SIGCOMM, 7 ACM MOBICOM, 10 IEEE INFOCOM, 4 ACM SIGMETRICS, 7 IEEE ICNP, 7 ToN, 2 TMC, 2 ICDCS, and 1 each in IEEE Security and Privacy, NSDI, DSN.) Google scholar citations: 6714, and h-index: 38.

1. Wei Dong, Swati Rallapalli, Rittwik Jana, Lili Qiu, K. K. Ramakrishnan, and Yin Zhang. Double Auctions for Dynamic Spectrum Allocation. To appear in Proc. of IEEE INFOCOM, 2014 (acceptance ratio = 19.4%).

2. Wei Dong, Swati Rallapalli, Rittwik Jana, Lili Qiu, K. K. Ramakrishnan, Leonid V. Razoumov, Yin Zhang, Tae Won Cho. iDEAL: Incentivized Dynamic Cellular Offloading via Auctions. To appear in IEEE/ACM Transactions on Networking, 2014.

3. Fine-grained Spectrum Adaptation in WiFi Networks. Sangki Yun, Daehyeok Kim and Lili Qiu. In Proc. of ACM MobiCom, Miami, FL, September 2013 (acceptance ratio = 13.4%).

4. Muhammad Owais Khan, Vacha Dave, Yi-Chao Chen, Oliver Jensen, Lili Qiu, Apurv Bhartia, Swati Rallapalli. Model-Driven Energy-Aware Rate Adaptation. In Proc. of ACM MobiHoc, Bangalore, India, July 2013 (acceptance ratio = 10.2%).

5. Swati Rallapalli, Qiang Ma, Han Hee Song, Mario Baldi, S. Muthukrishnan, Lili Qiu. Modeling the value of information granularity in targeted advertising. In Proc. of W-PIN+NetEcon Workshop held in conjunction with ACM SIGMETRICS, Pittsburg, PA, USA, June 2013.

6. Wei Dong, Swati Rallapalli, Rittwik Jana, Lili Qiu, K. K. Ramakrishnan, Leonid V. Razoumov, Yin Zhang, Tae Won Cho. iDEAL: Incentivized Dynamic Cellular Offloading via Auctions. In Proc. of IEEE INFOCOM, April 2013 (acceptance ratio = 17%).

7. Yi-Chao Chen, Nick Duffield, Lili Qiu, Jia Wang. Event Detection using Customer Care Calls. In Proc. of IEEE INFOCOM, April 2013 (acceptance ratio = 17%).

8. Sangki Yun, Lili Qiu, Apurv Bhartia. Multi-point to Multi-point MIMO in Wireless LANs. In Proc. of INFOCOM Mini-Conference, April 2013 (acceptance ratio = 24%).

9. Swati Rallapalli, Wei Dong, Gene Moo Lee, Yi-Chao Chen, Lili Qiu. Analysis and Applications of Smartphone User Mobility. In Proc. of NetSciCom Workshop held in conjunction with INFOCOM 2013, Turin, Italy, April 2013.

10. Gene Moo Lee, Swati Rallapalli, Wei Dong, Yi-Chao Chen, Lili Qiu, Yin Zhang. Mobile Video Delivery via Human Movement. In Proc. of SECON 2013, New Orleans, LA, USA, June 2013 (acceptance ratio = 18.2%).

11. Matthew Roughan, Yin Zhang, Walter Willinger and Lili Qiu, Spatio-Temporal Compressive Sensing and Internet Traffic Matrices (Extended Version), in IEEE/ACM Transactions on Networking, vol. 20, no. 3, pages 662-676, June 2012.

12. Wei Dong, Swati Rallapalli, Taewon Cho, Rittwik Jana, Lili Qiu, K. K. Ramakrishnan, L. Razoumov, Yin Zhang. Incentivized cellular offloading via auctions. In Proc. of the seventh ACM international workshop on Mobility in the Evolving Internet Architecture, Aug. 2012 (Keynote).

13. Eric Rozner, Mi Kyung Han, Lili Qiu, and Yin Zhang, Model-driven Optimization of Opportunistic Routing. IEEE/ACM Transactions on Networking, April 2013.

14. Han Hee Song, Berkant Savas, Tae Won Cho, Vacha Dave, Zhengdong Lu, Inderjit Dhillon, Yin Zhang, and Lili Qiu, Clustered Embedding of Massive Social Networks, in Proceedings of 2012 ACM SIGMETRICS Conference, London, United Kingdom, June 2012 (acceptance ratio = 15.3%).

15. Tianji Li, Mi Kyung Han, Apurv Bhartia, Lili Qiu, Eric Rozner, Yin Zhang, and Brad Zarikoff. CRMA: Collision-Resistant Multiple Access. In Proc. of ACM MobiCom, Las Vegas, NV, Sept. 2011 (Best paper award finalist) (acceptance ratio = 13.5%).

16. Apurv Bhartia, Yi-Chao Chen, Swati Rallapalli, and Lili Qiu. Harnessing Frequency Diversity in Wi-Fi Networks. In Proc. of ACM MobiCom, Las Vegas, NV, Sept. 2011 (acceptance ratio = 13.5%).

17. Eric Rozner, Mi Kyung Han, Lili Qiu, Yin Zhang. Accurate Model-Driven Optimization of Opportunistic Routing. In Proc. of ACM SIGMETRICS, San Jose, CA, June 2011 (acceptance ratio = 14.7%).

18. Mi Kyung Han, Apurv Bhartia, Lili Qiu, and Eric Rozner. Optimized Overlay Opportunistic Routing. In Proc. of ACM MobiHoc, Paris, France, May 2011 (acceptance ratio = 19.7%).

19. Wei Dong, Vacha Dave, Lili Qiu, and Yin Zhang. Secure Friend Discovery in Mobile Social Networks. In Proc. of IEEE INFOCOM, Shanghai, China, April 2011 (acceptance ratio = 16%).

20. Upendra Shevade, Yi-Chao Chen, Lili Qiu, Yin Zhang, Vinoth Chandar, Mi Kyung Han, Han Hee Song, and Yousuk Seung. Enabling High-Bandwidth Vehicular Content Distribution. In Proc. of CoNEXT, Philadelphia, Pennsylvania, USA, November 30 - December 3, 2010 (acceptance ratio = 19.1%).

21. Swati Rallapalli, Lili Qiu, Yin Zhang, and Yi-Chao Chen, Exploiting Temporal Stability and Low-Rank Structure for Localization in Mobile Networks. In Proc. of the 16th Annual International Conference on Mobile Computing and Networking (MobiCom 2010), Chicago, Illinois, USA, September 2010 (acceptance ratio = 14.2%).

22. Ye Wang, Hao Wang, Ajay Mahimkar, Richard Alimi, Yin Zhang, Lili Qiu and Yang Richard Yang, R3: Resilient Routing Reconfiguration. In Proc. of the ACM SIGCOMM Conference, New Delhi, India, August-September 2010 (acceptance ratio = 12%).

23. Tianji Li, Douglas Leith and Lili Qiu. Opportunistic Routing for Interactive Traffic in Wireless Networks. In Proc. of IEEE ICDCS, Genoa, Italy, June 2010 (acceptance ratio = 14.4%).

24. Mi Kyung Han and Lili Qiu. Greedy Receivers in IEEE 802.11 Hotspots: Impacts and Detection. IEEE Transactions on Dependable and Secure Computing. 2009.

25. Yun Mao, Feng Wang, Lili Qiu, Simon Lam, and Jonathan Smith. S4: Small State and Small Stretch Compact Routing Protocol for Large Static Wireless Networks, IEEE/ACM Transactions on Networking, August 2010.

26. Han Hee Song, Tae Won Cho, Vacha Dave, Yin Zhang and Lili Qiu, Scalable Proximity Estimation and Link Prediction in Online Social Networks, In Proc. of the ACM/USENIX Internet Measurement Conference (IMC '09), Chicago, IL, USA, November 2009 (acceptance ratio = 22.4%).

27. Yin Zhang, Matthew Roughan, Walter Willinger and Lili Qiu, Spatio-Temporal Compressive Sensing and Internet Traffic Matrices, in Proceedings of the ACM SIGCOMM Conference, Barcelona, Spain, August 2009 (acceptance ratio = 10.0%).

28. Eric Rozner, Jayesh Seshadri, Yogita Ashok Mehta, and Lili Qiu. SOAR: Simple Opportunistic Adaptive Routing Protocol for Wireless Mesh Networks. IEEE Transactions on Mobile Computing. 2009.

29. Han Hee Song, Lili Qiu and Yin Zhang. NetQuest: A Flexible Framework for Large-Scale Network Measurement. ACM/IEEE Transactions on Networking, 2009 (An extended version of SIGMETRICS'06 paper).

30. Anand Padmanabha Iyer, Gaurav Deshpande, Eric Rozner, Apurv Bhartia, and Lili Qiu. Fast Resilient Jumbo Frames in Wireless LANs. Proc. of IEEE IWQoS, Charleston, SC, June 2009.

31. Yi Li, Lili Qiu, Yin Zhang, Ratul Mahajan, and Eric Rozner. Predictable Performance Optimization for Wireless Networks. In Proc. of ACM SIGCOMM, Seattle, WA, USA, August 2008 (acceptance ratio = 12.2%).

32. Upendra B. Shevade, Han Hee Song, Lili Qiu and Yin Zhang. Incentive-Aware Routing in DTNs. In Proc. of ICNP, Orlando, FL, USA, October 2008 (acceptance ratio = 16.3%).

33. Sabyasachi Roy, Himabindu Pucha, Zheng Zhang, Y. Charlie Hu, and Lili Qiu. Overlay Node Placement: Analysis, Algorithms and Impact on Applications. To appear in ACM/IEEE Transactions on Networking, 2008 (An extended version of ICDCS'7 paper).

34. Eric Rozner, Anand Padmanabha Iyer, Yogita Mehta, Lili Qiu, Mansoor Jafry. ER: Efficient Retransmission Scheme for Wireless LANs. To appear in Proc. of CoNext, NY, NY, Dec. 2007 (acceptance ratio = 20.3%).

35. Yi Li, Lili Qiu, Yin Zhang, Ratul Mahajan, Zifei Zhong, Gaurav Deshpande and Eric Rozner, Effects of Interference on Throughput of Wireless Mesh Networks: Pathologies and a Preliminary Solution. To appear in Proc. of HotNets-VI, Atlanta, GA, USA, Nov. 2007 (acceptance ratio = 17.74%).

36. Eric Rozner, Yogita Mehta, Aditya Akella, and Lili Qiu. Traffic-Aware Channel Assignment in Enterprise Wireless LANs. To appear in Proc. of ICNP, Oct. 2007 (acceptance ratio = 14.5%).

37. Lili Qiu, Yin Zhang, Feng Wang, Mi Kyung Han and Ratul Mahajan, Modeling Wireless Interference: A General Model and its Empirical Validation. To appear in Proc. of ACM MOBICOM, Sept. 2007 (acceptance ratio = 11.1%).

38. Sabyasachi Roy, Himabindu Pucha, Zheng Zhang, Y. Charlie Hu, and Lili Qiu. Overlay Node Placement: Analysis, Algorithms and Impact on Applications. In Proc. of IEEE ICDCS, Jul. 2007 (acceptance ratio = 13.4%).

39. Mi Kyung Han, Brian Overstreet, and Lili Qiu. Greedy Receivers in IEEE 802.11 Hotspots. In Proc. of IEEE/IFIP International Conference on Dependable Systems and Networks (DSN), Jun. 2007.

40. Yi Li, Yin Zhang, Lili Qiu, and Simon Lam. SmartTunnel: Achieving Reliability in the Internet. IEEE INFOCOM, May 2007 (acceptance ratio = 18.0%).

41. Yun Mao, Feng Wang, Lili Qiu, Simon Lam, and Jonathan Smith. S4: Small State and Small Stretch Routing Protocol for Large Wireless Sensor Networks. In Proc. of the 4th USENIX Symposium on Networked System Design and Implementation (NSDI 2007), Cambridge, Massachusetts, Apr. 2007 (acceptance ratio = 23.8%).

42. Paramvir Bahl, Mohammad T. Hajiaghayi, Kamal Jain, Vahab Mirrokni, Lili Qiu, and Amir Saberi. Cell Breathing in Wireless LANs: Algorithms and Evaluation. IEEE Transactions on Mobile Computing, Feb. 2007.

43. Feng Wang, Lili Qiu, and Simon Lam. Probabilistic Region-based Localization for Wireless Networks. ACM Mobile Computing and Communications Review (MC2R) Special Issue on Localization, Jan. 2007.

44. Lili Qiu, Paramvir Bahl, Ananth Rao, and Lidong Zhou. Troubleshooting Wireless Mesh Networks. SIGCOMM Computer Communication Review (CCR), Oct. 2006.

45. Eric Rozner, Jayesh Seshadri, Yogita Ashok Mehta, and Lili Qiu. Simple Opportunistic Routing in Wireless Mesh Networks. Second IEEE Workshop on Wireless Mesh Networks. Sept. 2006.

46. Eric Rozner, Yogita Ashok Mehta, Aditya Akella, and Lili Qiu. Traffic-Aware Channel Assignment in Wireless LANs. MOBICOM SRC Poster, Sept. 2006.

47. Hao Wang, Haiyong Xie, Lili Qiu, Richard Yang, Yin Zhang, and Albert Greenberg. COPE: Traffic Engineering in Dynamic Networks. In Proc. of ACM SIGCOMM, Sept., 2006 (acceptance ratio = 12.4%).

48. Han Hee Song, Lili Qiu, and Yin Zhang. NetQuest: A Flexible Framework for Large-Scale Network Measurement. In Proc. of ACM SIGMETRICS, Jun. 2006 (acceptance ratio = 13.8%).

49. Lili Qiu, Yang Richard Yang, Yin Zhang, and Scott Shenker. On Selfish Routing in Internet-Like Environments (an extended version of SIGCOMM'03 paper). ACM/IEEE Transactions on Networking, Jun. 2006.

50. Kamal Jain, Jitendra Padhye, Venkata N. Padmanabhan, and Lili Qiu. Impact of Interference on Multi-hop Wireless Network Performance (an extended version of MOBICOM'03 paper). Wireless Networks (WINET), 2005.

51. Fang Fang, Lili Qiu, and Andrew B. Whinston. On Profitability and Efficiency of Wireless Mesh Networks. In the Proc. of 15th Workshop on Information Technologies and Systems (WITS), Las Vegas, Nevada, Dec. 2005.

52. Sharad Agarwal, Jitendra Padhye, Venkat Padmanabhan, Lili Qiu, Ananth Rao, and Brian Zill. Estimation of Link Interference in Static Multihop Wireless Networks. In Proc. of Internet Measurement Conference (IMC), New Orleans, LA, Oct. 2005.

53. Z. Morley Mao, Lili Qiu, Jia Wang, and Yin Zhang. On AS-level Path Inference. *In Proc. of ACM SIGMETRICS*, Banff, Canada, Jun. 2005 (acceptance ratio = 13.1%).

54. Lili Qiu, Victor Bahl, Ananth Rao, Lidong Zhou. Troubleshooting Multihop Wireless Networks. *In Proc. of ACM SIGMETRICS* (extended abstract), Banff, Canada, Jun. 2005 (acceptance ratio = 21.5%).

55. Hao Wang, Haiyong Xie, Lili Qiu, Avi Silberschatz, and Yang Richard Yang. Optimal ISP Subscription for Internet Multihoming: Algorithm Design and Implication Analysis. *In Proc. of IEEE INFOCOM*, Miami, FL, Mar. 13-17, 2005 (acceptance ratio = 17.2%).

56. Ranveer Chandra, Lili Qiu, Kamal Jain, and Mohammad Mahdian. Optimizing the Placement of Integration Points in Multihop Wireless Networks. *In Proc. of 12th International Conference on Network Protocols (ICNP)*, Berlin, Germany, Oct. 2004 (acceptance ratio = 15.5%).

57. Haiyong Xie, Richard Yang, Lili Qiu, and Yin Zhang. On Self Adaptive Routing in Dynamic Environments. *In Proc. of 12th International Conference on Network Protocols (ICNP)*, Berlin, Germany, Oct. 2004 (acceptance ratio = 15.5%).

58. Atul Adya, Victor Bahl, and Lili Qiu. Characterizing Web Workload for Mobile Clients. Invited book chapter in Content Networking in the Mobile Internet, John Wiley & Sons, Sept. 2004.

59. Atul Adya, Victor Bahl, Ranveer Chandra, and Lili Qiu. Architecture and Techniques for Diagnosing Faults in IEEE 802.11 Infrastructure Networks. *In Proc. of ACM MOBICOM*, Philadelphia, PA, Sept. 2004 (acceptance ratio = 8.0%).

60. David Kiyoshi Goldenberg, Lili Qiu, Haiyong Xie, Yang Richard Yang, and Yin Zhang. Optimizing Cost and Performance for Multihoming. *In Proc. of ACM SIGCOMM*, Portland, OR, Aug. 2004 (acceptance ratio = 9.1%).

61. Kamal Jain, Jitendra Padhye, Venkata N. Padmanabhan, and Lili Qiu. Impact of Interference on Multi-hop Wireless Network Performance. *In Proc. of ACM MOBICOM*, San Diego, CA, Sept. 2003 (acceptance ratio = 9.6%).

62. Lili Qiu, Yang Richard Yang, Yin Zhang, and Scott Shenker. On Selfish Routing in Internet-Like Environments. *In Proc. of ACM SIGCOMM*, Aug. 2003 (acceptance ratio = 10.3%). Selected for fast track processing by ACM/IEEE Transactions on Networking.

63. Yan Chen, Lili Qiu, Weiyu Chen, Luan Nguyen, Randy H. Katz. Efficient Adaptive Web Replication through Content Clustering. *IEEE Journal on Selected Areas in Communications (J-SAC), Special Issue on Internet and WWW Measurement, Mapping and Modeling*, 2003.

64. Venkata N. Padmanabhan, Lili Qiu, and Helen Wang. Server-based Inference of Internet Performance. *In Proc. of IEEE INFOCOM*, San Francisco, CA, Mar. 2003 (acceptance ratio = 20.8%).

65. Yan Chen, Lili Qiu, Weiyu Chen, Luan Nguyen, Randy H. Katz. Clustering Web Content for Efficient Replication. *In Proc. of 10th International Conference on Network Protocols (ICNP'2002)*, Paris, France, Nov. 2002 (acceptance ratio = 14.7%).

66. Venkata N. Padmanabhan, Lili Qiu, and Helen Wang. Passive Network Tomography Using Bayesian Inference. *In Proc. of Internet Measurement Workshop (IMW)*, Marseille, France, Nov. 2002.

67. Yi-Min Wang, Lili Qiu, Dimitris Achlioptas, Gautam Das, Paul Larson and Helen J. Wang. Subscription Partitioning and Routing in Content-based Publish/Subscribe Networks. *In Proc. of 16th International Symposium on DIStributed Computing (DISC'02)*, Toulouse, France, Oct. 2002.

68. Atul Adya, Paramvir Bahl, and Lili Qiu. Characterizing Alert and Browse Services for Mobile Clients. *In Proc. of USENIX Annual Technical Conference*, Monterey, CA, Jun. 2002 (acceptance ratio = 23.4%).

69. Lili Qiu, Victor Bahl, Atul Adya. The Effect of First-Hop Wireless Bandwidth Allocation on End-to-End Network Performance. *In Proc. of NOSSDAV*, Miami Beach, FL, May 2002.

70. Qi Sun, Dan Simon, Yi-min Wang, Wilf Russell, Venkata N. Padmanabhan, and Lili Qiu. Statistical Identification of Encrypted Web Browsing Traffic. *In Proc. of IEEE Symposium on Security and Privacy*, Oakland, CA, May 2002.

71. Venkata N. Padmanabhan and Lili Qiu. Network Tomography using Passive End-to-End Measurements. *In Proc. of DIMACS Workshop on Internet and WWW Measurement, Mapping and Modeling*, Piscataway, NJ, Feb. 2002.

72. Lili Qiu, George Varghese, and Subhash Suri. Fast Firewall Implementations for Software and Hardware-based Routers. *In Proc. of 9th International Conference on Network Protocols (ICNP'2001)*, Riverside, CA, USA, Nov. 2001 (acceptance ratio = 22.9%). The full version of the paper is published as Microsoft Research Technical Report MSR-TR-2001-61.

73. Atul Adya, Paramvir Bahl, Lili Qiu. Analyzing Browse Patterns of Mobile Clients. *In Proc. of ACM SIGCOMM Internet Measurement Workshop (IMW)*, San Francisco, CA, USA, Nov. 2001.

74. Lili Qiu, Yin Zhang, and Srinivasan Keshav. Understanding the Performance of Many TCP Flows. *Computer Networks* (formerly called Computer Networks and ISDN Systems), Vol. 37, pp. 227 - 306, 2001.

75. Lili Qiu, George Varghese, and Subhash Suri. Fast Firewall Implementations for Software and Hardware-based Routers. *In Proc. of ACM SIGMETRICS 2001* (extended abstract), Cambridge, Mass, USA, Jun. 2001.

76. Lili Qiu, Venkata N. Padmanabhan, and Geoffrey M. Voelker. On the Placement of Web Server Replicas. *In Proc. of IEEE INFOCOM 2001*, Anchorage, AK, USA, Apr. 2001 (acceptance ratio = 23.1%).

77. Venkata N. Padmanabhan and Lili Qiu. The Content and Access Dynamics of a Busy Web Site: Findings and Implications. *In Proc. of ACM SIGCOMM 2000*, Stockholm, Sweden, Aug. 2000 (acceptance ratio = 10.9%).

78. Yin Zhang, Lili Qiu, and Srinivasan Keshav. Speeding Up Short Data Transfers: Theory, Architectural Support, and Simulation Results. *In Proc. of NOSSDAV 2000*, Chapel Hill, North Carolina, USA, Jun. 2000.

79. Venkata N. Padmanabhan and Lili Qiu. The Content and Access Dynamics of a Busy Web Server. *Extended abstract in Proc. of ACM SIGMETRICS 2000*, Santa Clara, CA, USA, Jun. 2000.

80. Jonathan Rosenberg, Lili Qiu, and Henning Schulzrinne. Integrating Packet FEC into Adaptive Voice Playout Buffer Algorithms on the Internet. *In Proc. of IEEE INFOCOM 2000*, Tel Aviv, Israel, Mar. 2000 (acceptance ratio = 26.1%).

81. Lili Qiu, Yin Zhang, and Srinivasan Keshav. On Individual and Aggregate TCP Performance. *In Proc. of 7th International Conference on Network Protocols (ICNP'99)*, Toronto, Canada, Nov. 1999 (acceptance ratio = 27.5%).

82. Lili Qiu and Li Li. Contour Extraction of Moving Objects. *In Proc. of 14th International Conference on Pattern Recognition*, Brisbane, Australia, 1998.

Patents Issued

1. Lili Qiu, Kamal Jain, Ranveer Chandra, Mohammad Mahdian. Method for determining placement of internet taps in wireless neighborhood networks. US Patent 8,315,196. Issued on Feb. 17, 2004.

2. Zhuoqing Morley Mao, Lili Qiu, Jia Wang, Yin Zhang. Method and apparatus for inferring network paths. US Patent 8,155,126. Issued on Nov. 30, 2005.

3. Yi-Min Wang, Qixiang Sun, Daniel R. Simon, Wilfred Russell, Lili Qiu, and Venkata N. Padmanabhan. System and Method for Evaluating and Enhancing Source Anonymity for Encrypted Web Traffic. US Patent No. 7,096,200. Issued Aug. 22, 2006.

4. Yi-Min Wang, Lili Qiu, Chad E. Verbowski, Dimitrios Achlioptas, Gautam Das, and Paul Larson. Summary-based Routing for Content-based Event Distribution Networks. US Patent No. 7,200,675. Issued Apr. 3, 2007.

5. Atul Adya, Paramvir Bahl, Ranveer Chandra, Lili Qiu. Collaboratively locating disconnected clients and rogue access points in a wireless network. US Patent 8,086,227. Issued on Nov. 15, 2007.

6. Kamal Jain, Jitendra Padhye, Venkata N. Padmanabhan, and Lili Qiu. Model and method for computing performance bounds in multi-hop wireless networks. US Patent 7,860,506. Issued on Nov. 18, 2008.

7. Kamal Jain, Jitendra Padhye, Venkata N. Padmanabhan, and Lili Qiu. Model and method for computing performance bounds in multi-hop wireless networks (II). US Patent No. 7,469,143, Issued on December 23, 2008.

8. Venkata N. Padmanabhan and Lili Qiu. Method and system for identifying lossy links in a computer network – Linear Optimization. US Patent No. 7,421,510. Issued September 2, 2008.

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