

Lixin Gao

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EDUCATION

- Ph.D.* **Computer Science, University of Massachusetts, Amherst, 1996**
Thesis Advisor: Arny Rosenberg and Ramesh Sitaraman
- M.S.* **Computer Engineering, Florida Atlantic University,**
Boca Raton, Florida, 1987
- B.S.* **Computer Science, University of Science and Technology of China,**
China, 1985
graduated from college at age of 19.

EXPERIENCE

- 2007 - Present* **Dept. of Electrical and Computer Engineering University of**
Massachusetts, Amherst
Professor
- 2000 - 2007* **Dept. of Electrical and Computer Engineering University of**
Massachusetts, Amherst
Associate Professor
- 1999 - 2000* **AT&T Research Labs and DIMACS**
Visiting Researcher
- 2000* **Microsoft Research**
Visiting Researcher
- 1996 - 2000* **Dept. of Computer Science, Smith College.**
Assistant Professor
- Aug.'90 - Aug.'96* **Dept. of Computer Science,**
University of Massachusetts, Amherst.
Research Assistant
- June'95 - Aug.'95* **IBM**
Poughkeepsie, New York.

Summer Intern

- Jan '95 - May '95* **Dept. of Computer Science, University of Massachusetts, Amherst.**
Instructor
- June'93 - Aug.'93* **Microsoft, Seattle, Washington.**
Summer Intern
- June'92 - Aug.'92* **Bellcore, Morristown, New Jersey.**
Summer Intern
- Aug '87 - Aug '90* **Bendix/King, Avionics Division, Fort Lauderdale, Florida.**
Software Engineer

AWARDS

- Outstanding Achievement in Research Award** by College of Information and Computer Sciences at the University of Massachusetts, Amherst, 2015.
- Runner up for the Best Paper Award**, 33rd IEEE. International Performance Computing and Communications Conference, 2014.
- Nominated for the Best Paper Award**, IEEE International Conference on Parallel and Distributed Systems, 2014.
- College of Engineering Outstanding Senior Faculty Award**, 2013
- ACM Fellow**, 2012
- Paper of Distinction Award, ACM Cloud Computing**, 2011
- Test of Time Award, ACM SIGMETRICS**, 2011
- IEEE Fellow**, 2010
- Chancellor's Award for Outstanding Accomplishments in "Research and Creative Activity"**, 2010
- Best Paper Award, IEEE INFOCOM**, 2010
- Alfred Sloan Fellowship**, 2003-2007.
- NSF CAREER Award**, 1999 - 2003.
- Picker Fellowship**, 1998 - 1999.

GRANTS

- NSF grant, "Network Function Virtualization Using Dynamic Reconfiguration" co-PI, \$500,000, 2015-2018.
- CISCO unrestricted grant, PI, "Big Data Analytics", \$55,000, 2015-2016.
- NSF grant, "Location-Based Forwarding and ID-Based Routing (LORIF) for the Future Internet", sole PI, \$246,000, 2014-2017.

NSF grant, “Theoretical Foundations and Distributed Frameworks for Iterative Computations on Massive Data”, sole PI, \$450,000, 2012-2015.

Narus grant, “Development of advanced and scalable analytics for massive data”, sole PI, \$70,000, unrestricted gift, 2013.

Narus grant, “Development of advanced and scalable analytics for massive data”, sole PI, \$70,000, unrestricted gift, 2012.

New England University Transportation Consortium, “Making More Value out of Transportation Data”, co-PI (Daiheng Ni, PI), \$120,240, Jun 2012- Dec 2013.

NSF grant, “Data Intensive Computing for General Relational Data Learning”, PI, \$250,000, 2010-2013.

NSF grant, “Design of Multiprocess Routing under the Hierarchical Automatic Addressing”, PI, \$65,470, 2010-2011.

NSF grant, “Interdomain X-ities: Toward Five Nines Availability in Internet Routing”, co-PI (PI, Arun Venkataramani), \$325,250, 2009-2012.

NSF grant, “XPLR: Network Virtualization Using Dynamic FPGA Reconfiguration,” co-PI (PI, Tessier) \$358,000, 2008- 2011.

NSF grant, PI, “NeTS-FIND: CABO: Concurrent Architectures are better than one”, \$300,000, 2006 - 2010.

NSF grant, PI, “NeTS-FIND: A Framework for Manageability in Future Routing Systems”, \$250,000, 2006 - 2009 .

Intel Corp, sole PI, \$6,410, Equipment donation, 2007

Intel Corp, sole PI, \$25,000, unrestricted gift, 2006

Narus, sole PI, \$25,000, unrestricted gift, 2006.

Alfred Sloan Foundation, sole PI, \$40,000, 2003 - 2007.

Agilent Labs, sole PI, “Router Testing”, \$25,000, 2003–present

NSF grant, co-PI, “ITR: Hyerion-next generation measurement infrastructure and application use”, \$2,700,000, 2003-2008

PI, NSF grant, “SENSORS: Energy Efficient Communication in Sensor Networks”, \$250,000, 2003-2007.

NSF ITR: Collaborative Research, co-PI, Don Towsley, PI, Jim Kurose, co-PI, “Scalable Quality-of-Service Control for the Next Generation Internet,” \$1,800,000, 2000 - 2006,

NSF grant, sole PI, “On Enhancing the Stability and Scalability of the Internet Routing,” \$271,000, 2002 - 2007.

NSF CAREER grant, sole PI, “Providing Interactive VOD Services in Multicast Networks,” \$200,000, 1999 - 2005.

NSF grant, co-PI, Jim Kurose, PI, Aura Ganz, co-PI, Mani Krishna, co-PI, Krithi Ramamritham, co-PI, “Curriculum Development and Infrastructure for an Advanced Systems Laboratory,” \$500,000, 2000 - 2005.

Air Force Research Lab, sole PI, “On Assessment of Internet Infrastructure Security”, \$70,000, 2002 - 2004.

NSF grant, PI, "Continuous Media Proxy Services in Wide-Area Networks," \$193,228, 1999-2003.

NSF Instrumentation and Laboratory Improvement (ILI) grant, co-PI, Dominique Thiebaut, PI, "A High Performance Processing Lab," \$45,436. June 1997 - May 1998.

NSF grant, sole PI, "Providing Interactive VOD Services for Popular Videos," \$17,975. Sept. 1997 - Feb. 1998.

Journal Publication

62. Jiangtao Yin, Lixin Gao, Mark Zhang, "Scalable Distributed Nonnegative Matrix Factorization with Block-wise Updates", IEEE Transactions on Knowledge and Data Engineering.

61. Jiangtao Yin, Yanfeng Zhang, Lixin Gao, "Accelerating Distributed Expectation-Maximization Algorithms with Frequent Updates", Journal of Parallel and Distributed System. Volume 111, January 2018, Pages 65-75, <https://doi.org/10.1016/j.jpdc.2017.07.005>

60. Jiali You, Hanxing Xue, Lixin Gao, Guoqiang Zhang, Yu Zhuo, Jinlin Wang, "Predicting the Online Performance of Video Service Providers on the Internet", Multimedia Tools and Applications. 2017. DOI 10.1007/s11042-017-4460-0.

59. Zhigang Wang, Ge Yu, Yubin Bao, Yu Gu, Lixin Gao, "An I/O-efficient and Adaptive Fault-tolerant Framework for Distributed Graph Computations", Distributed and Parallel Databases 35(2): 177-196 (2017). DOI:10.1007/s10619-017-7192-2

58. Jiahui Jin, Junzhou Luo, Samamon Khemmarat, Lixin Gao, "Querying Web-Scale Knowledge Graphs Through Effective Pruning of Search Space", IEEE Trans. Parallel Distrib. Syst. 28(8): 2342-2356 (2017)

57. Samamon Khemmarat, Lixin Gao, "Predictive and Personalized Drug Query System", IEEE J. Biomedical and Health Informatics 21(4): 1146-1155 (2017)

56. Renjie Zhou, Samamon Khemmarat, Lixin Gao, Jian Wan, Jilin Zhang, Yuyu Yin, Jun Yu, "Boosting Video Popularity through Keyword Suggestion and Recommendation Systems", Elsevier Neurocomputing Journal. Volume 205 Issue C, September 2016, Pages 529-541.

55. Samamon Khemmarat, Lixin Gao, "Fast Top-K Path-based Relevance Query on Massive Graphs", IEEE Transactions on Knowledge and Data Engineering 28 (5), 1189-1202 May 2016

54. Renjie Zhou, Samamon Khemmarat, Lixin Gao, Jian Wan, Jilin Zhang, "How YouTube Videos are Discovered and Its Impact on Video Views", Multimedia Tools and Applications, Volume 75 Issue 10, May 2016, Pages 6035-6058.

53. Li Guo, Guoyi Zhao, Jin-Rong Xu; Corby Kistler, Lixin Gao, Li-Jun Ma, "Compartmentalized Gene Regulatory Network of the Pathogenic Fungus *Fusarium graminearum*", New Phytologist, volume 211, issue 2 (July 2016).

52. Xiang Cheng, Sen Su, Lixin Gao, Jiangtao Yin, "Co-ClusterD: A Distributed Framework for Data Co-Clustering with Sequential Updates", *IEEE Transactions on Knowledge and Data Engineering* (2015), Issue 12, Dec. 2015
51. Q. Gao, F. Wang, and L. Gao, "Routing-Policy Aware Peering for Large Content Providers", *Computer Communications* (2015), August, Volume 67, pp. 23-33.
50. Yang Song, Arun Venkataramani and Lixin Gao, "Identifying and Addressing Reachability and Policy Attacks in "Secure" BGP", *IEEE/ACM Transactions on Networking*, January 2016, Issue 99. ISSN: 1063-6692.
49. Q. Gao, F. Wang, and L. Gao, "Quantifying AS Path Inflation by Routing Policies", *International Journal of Future Generation Communication and Networking*, January 2016, Vol 9, No. 1, pp. 167-187.
48. Xueyi Zhao, Xi Li, Zhongfei Zhang, Chunhua Shen, Lixin Gao, Xuelong Li, "Scalable Linear Visual Feature Learning Via Online Parallel Nonnegative Matrix Factorization", *IEEE Transactions on Neural Networks and Learning Systems*, Nov. 2015, Issue, 99.
47. Li Guo, Andrew Breakspear, Guoyi Zhao, Lixin Gao, H. Corby Kistler, Jin-Rong Xu, and Li-Jun Ma, "Conservation and divergence of the cyclic adenosine monphosphate-protein kinase A (cAMP-PKA) pathway in two plant-pathogenic fungi *Fusarium graminearum* and *F. verticillioides*", *Molecular Plant Pathology*. Vol 17 Issue 2, February, 2016
46. Jiangtao Yin, Yong Liao, Mario Baldi, Lixin Gao, Antonio Nucci, "GOM-Hadoop: A Distributed Framework for Efficient Analytics on Ordered Datasets", *Journal of Parallel and Distributed Computing*, Volume 83, September 2015, Pages 58-69.
45. Wang Chunlei, Zhang Yanfeng, Zhao Changkuan, Yu Ge, Lixin Gao, "Asyn-SimRank: An Asynchronous Large-Scale SimRank Algorithm", *Journal of Computer Research and Development*, Vol. 52, Issue(7):1567-1579, July 2015.
44. Qi Li, Mingwei Xu, Yuan Yang, Lixin Gao, Yong Cui, and Jianping Wu, "Safe and Practical Energy-Efficient Detour Routing in IP Networks", *IEEE/ACM Transactions on Networking (ToN)*. Dec. 2014, Vol 22, Number 6.
43. Q. Gao, F. Wang, L. Gao, "Optimal Algorithms for Computing Policy-Conforming Paths in the Internet" *Applied Mathematics & Information Sciences*, Volume 8, No. 4, July 2014.
42. Yanfeng Zhang, Qixin Gao, Lixin Gao, and Cuirong Wang, "Maiter: An Asynchronous Graph Processing Framework for Delta-based Accumulative Iterative Computation", *IEEE Transactions on Parallel and Distributed Systems*, Vol 25, No. 8. August 2014.
41. Deepak Unnikrishnan, Ramakrishna Vadlamani, Yong Liao, Jrmie Crenne, Lixin Gao, Russell Tessier, "Reconfigurable Data Planes for Scalable Network Virtualization," *IEEE Transactions on Computers*, Dec 2013.

40. Yanfeng Zhang, Qixin Gao, Lixin Gao, and Cuirong Wang, "PrIter: A Distributed Framework for Prioritized Iterative Computations", IEEE Transactions on Parallel and Distributed Systems. Vol 24, Issue 9, Sept 2013.
39. Weibo Chu, Xiaohong Guan, Zhongmin Cai, Lixin Gao, "Real-time Volume Control for Interactive Network Traffic Replay", Computer Networks. Volume 57, Issue 7, May 2013, 1611-1629
38. Yong Liao, Jiangtao Yin, Dong Yin, Lixin Gao, "DPillar: Dual-Port Server Interconnection Network for Large Scale Data Centers", Computer Networks Journal, May 2012. Pages 2132-2147.
37. Yanfeng Zhang, Qixin Gao, Lixin Gao, Cuirong Wang, "iMapReduce: A Distributed Computing Framework for Iterative Computation", Journal of Grid Computing, March 2012. Volume 10, Number 1 (2012), 47-68.
36. Samamon Khemmarat, Renjie Zhou, Dilip Kumar Krishnappa, Lixin Gao, and Michael Zink, "Watching User Generated Videos with Prefetching", Elsevier journal on Signal Processing: Image Communication, Volume 27, Number 4, April 2012. Pages 187-198.
35. Dong Yin, Deepak Unnikrishnan, Yong Liao, Lixin Gao and Russell Tessier, "Customizing Virtual Networks with Partial FPGA Reconfiguration", ACM SIGCOMM Computer Communications Review, Vol 41, Issue 1, January 2011
34. E. Kwong, L. Gao, R. Guerin, Z-L. Zhang, "On the Feasibility and Efficacy of Protection Routing in IP Networks" IEEE/ACM Transactions on Networking (ToN), Oct. 2011 vol 19, Number 5. Pages 1543-1556.
33. Yong Liao, Dong Yin, and Lixin Gao, "Network Virtualization Substrate with Parallelized Data Plane", Elsevier Computer Communications, August 2011, Vol 34, Issue 13, 1549-1558.
32. Yong Liao, Lixin Gao, Roch Guerin, and Zhi-Li Zhang, "Safe Inter-domain Routing under Diverse Commercial Agreements", IEEE/ACM Transactions on Networking (ToN), Dec 2010, Vol 18, Num 6, page 1829-1840.
31. Vinod Namboodiri, Lixin Gao, "Energy-Efficient VoIP over Wireless LANs", IEEE Transactions on Mobile Computing, Vol. 9, No. 4., pp. 566-581, April 2010.
30. Vinod Namboodiri, Lixin Gao, "Energy-Aware Tag Anti-Collision Protocols for RFID Systems", IEEE Transactions on Mobile Computing, January 2010, Vol 9, Number 1, page 44-59.
29. J. Fan, R. Keralapura, O. Wu, A. Nucci, L. Gao, "Protocol Oblivious Classification of Multimedia Traffic", Security and Communication Networks, Nov 2009.
28. H. Peterson, S. Sen, J Chandrashekar, L. Gao, R. Guerin, Z.-L. Zhang, "Message-Efficient Dissemination for Loop-Free Centralized Routing", ACM Computer Communication Review, July 2008, Vol. 38, Num 3. pp. 65-74.
27. Feng Wang and Lixin Gao, "On Inferring and Characterizing Internet Routing Policies", Journal of Communications and Networks, Special Issue on Routing, Path Computation and Traffic Engineering in Future Internet, Volume 9, Issue 4, December 2007, pp 350-355.

26. J. Xia, Lixin Gao, and T. Fei, "On Measuring Persistent Forwarding Loops", *International Journal of Computer and Telecommunications Networking*, vol 51/17 (2007) pp 4780-4796.
25. Feng Wang, Jian Qiu, Lixin Gao, and Jia Wang, "On Understanding Transient Interdomain Routing Failures", *IEEE/ACM Transactions on Networking*, June 2009, Vol 17, Number 3.
24. V. Namboodiri, Lixin Gao, and Ramakrishna Janaswamy, "Power Efficient Topology Control for Static Wireless Networks with Switched Beam Directional Antennas", *Elsevier Ad Hoc Networks*, Vol. 6, No. 2, April 2008. Pages 287-306.
23. Nick Feamster, Lixin Gao, and Jennifer Rexford, "How to lease the Internet in your spare time," in the Editorial Zone of *ACM SIGCOMM Computer Communications Reviews*, p.61-64, January 2007.
22. Vinod Namboodiri, and Lixin Gao, "Prediction Based Routing for Vehicular Ad Hoc Networks", *IEEE Transactions on Vehicular Technology*, Volume 56, Issue 4, July 2007 Page(s):2332 - 2345.
21. Joon Ho Cho, Qu Zhang, and Lixin Gao "A Comparison of Frequency-Division Systems to Code-Division Systems in Overloaded Multiple-Access Channels", *IEEE Transactions on Communications*, February 2008 Volume: 56, Issue: 2, p. 289-298
20. J. Xia, S. Vangala, J. Wu, Lixin Gao, and Kevin Kwiat. "An Effective Architecture and Algorithm for Detecting Worms with Various Scan Techniques". *Journal of Computer Security*, pp. 359-387, in Volume 14, Number 4, Oct 2006.
19. Cliff C. Zou, Weibo Gong, Don Towsley, and Lixin Gao. "Monitoring and Early Detection for Internet Worms". *IEEE/ACM Trans. Networking*, Oct. 2005, Vol 13, No. 5, Page 961-974.
18. M. Agarwal, J. H. Cho, L. Gao, and J. Wu, "Energy Efficient Broadcast in Wireless Ad Hoc Networks with Hitch-hiking," appeared in *ACM/Kluwer MONET* (special issue on Energy Constraints and Lifetime Performance in Wireless Sensor Networks), December 2005, Volume 10, Number 6, Page 897 - 910,
17. Z.-L. Zhang and Z. Duan and Y.T. Hou and L. Gao "Decompling QoS Control from Core Routers: A Novel Bandwidth Broker Architecture for Scalable Support of Guaranteed Services", *IEEE Transactions on Parallel and Distributed Computing*, Vol. 1, Number 2, February 2004.
16. Qian Zhang, Zhe Xiang, Wenwu Zhu, and Lixin Gao, "Cost-based cache replacement and server selection for multimedia proxy across wireless Internet", *IEEE Trans. on Multimedia*, Vol 6, Number 4, August 2004, Page 587-598
15. Y. Guo, L. Gao, D. Towsley, S. Sen, "Smooth Workload Adaptive Broadcast", *IEEE Trans. on Multimedia*, Vol 6, April 2004, pp387-395.
14. T. Bu, L. Gao and D. Towsley, "On Characterizing BGP Routing Table Growth", *Computer Networks Journal*, Volume 45, Issue 1, 15 May 2004, Pages 45-54.

13. L. Gao and Z.-L. Zhang and D. Towsley, "Catching and Selective Catching: Efficient Latency Reduction Techniques for Delivering Continuous Multimedia Streams", *IEEE/ACM Transactions on Networking*, Dec 2003, Vol 11, Number 6, pp 884-894.
12. H.S. Bassali, K.M. Kamath, R.B. Hosamani, and Lixin Gao, "Topology-Aware Algorithms for Proxy Placement in the Internet", *Journal of Computer Networks*, Feb 2003, Vol 26 Issue 3.
11. Chunhong Zhang, Yuan Gao, Lixin Gao, "An Approach to Seeking Policy Disputes Based on Dispute Cycle Avoidance and Configuration Guideline", *Telecommunication Systems*, Volume 24, Numbers 2-4, October 2003, pp 293-322.
10. Michael K. Bradshaw, Bing Wang, Subhabrata Sen, Lixin Gao, Jim Kurose, Prashant Shenoy, and Don Towsley, "Periodic Broadcast and Patching Services - Implementation, Measurement, and Analysis in an Internet Streaming Video Testbed ", *ACM Multimedia Systems Journal*, Special Issue on Multimedia Distribution, Vol. 9, Issue 1, pp. 78-93, July, 2003.
9. L. Gao and J. Kurose and D. Towsley "Efficient Schemes for Broadcasting Popular Videos", *ACM Multimedia System Journal*, July 2002, Vol 8, 284-294.
8. L. Gao and J. Rexford, "Stable Internet Routing Without Global Coordination", *IEEE/ACM Transactions on Networking*, December 2001. Vol. 9, No. 6, 733-745.
7. L. Gao, "On Inferring Autonomous System Relationships in the Internet", *IEEE/ACM Transactions on Networking*, December 2001. Vol. 9, No. 6, 681-692.
6. L. Gao and D. Towsley, "Threshold-Based Multicast for Continuous Media Delivery", *IEEE Transactions on Multimedia*, December 2001. Vol. 3 No. 4, 405-414.
5. J. Miller and L. Gao, "Creating A Subpoena-Proof Diary: A Technological Solution to A Legal Problem", *Journal of Information Law & Technology*, October 2001, Issue 3.
4. A. Vigneron and L. Gao and M.J. Golin and B. Li and G.F. Italiano, "An Algorithm for Finding a k-Median in a Directed Tree", *Information Processing Letters*, 74, 81-88, 2000.
3. L. Gao, A.L. Rosenberg and R.K. Sitaraman, "Optimal Architecture-Independent Scheduling Fine-grain Tree-Sweep Computations", *IEEE Transactions on Parallel and Distributed Systems*, Aug. 1999. Volume: 10 Issue: 8, 813 -824.
2. M. Barrows, L. Gao, D. Gregory, A.L. Rosenberg and P.R. Cohen, "An Empirical Study of Dynamic Scheduling on Rings of Processors", *Parallel Computing*, 25, 1063-1079, 1999.
1. L. Gao and A.L. Rosenberg "Toward efficient scheduling of evolving computations on rings of processors", *J. Parallel and Distr. Comput.*, 38, 92-100. 1996

Book Chapter

1. Feng Wang and Lixin Gao, "Interdomain Routing and Reliability", invited chapter to the book "Guide to Reliable Internet Services and Applications", editors, Charles R. Kalmanek, Sudip Misra and Richard Yang, published by Springer, 2009.
2. Yanfeng Zhang, Qixin Gao, Lixin Gao, and Cuirong Wang, "iMapReduce: Extending MapReduce for Iterative Computation", invited chapter to the book "Large Scale and Big Data: Processing and Management" editors, Sherif Sakr and Mohamed Medhat Gaber. to be published by CRC Press, 2014.
3. Yang Song, Lixin Gao, Arun Venkataramani, "CDN Pricing and Investment Strategies under Competition", invited chapter to the book "Smart Data Pricing", editors, Carlee Joe-Wong, Soumya Sen, Mung Chiang, to be published by John Wiley & Sons, 2013.
4. Yanfeng Zhang, Qixin Gao, Lixin Gao, and Cuirong Wang, "Asynchronous Computation Model for Large-Scale Iterative Computations", book chapter in "Cloud Computing for Data Intensive Applications" editors, Andy Li and Judy Qiu, Springer, 2014.

Conference Publications

119. Jiali You, Yu Zhuo, Lixin Gao, Guoqiang Zhang, Hanxing Xue, Jinlin Wang: Analyzing and Forecasting the Performance of Video Service Providers. AINA 2017: 182-188
118. Wang, Feng, Yusuke Fukushima, Kenji Fujikawa, Abu Hena Al Muktedir, Ved P. Kaffe, Xiaozhe Shao, Hiroaki Harai, and Lixin Gao, "Implementation of Location-based Routing and ID-based Forwarding Architecture for Internet of Things", IEEE Globecom 2017.
117. Zhigang Wang, Lixin Gao, Yu Gu, Yubin Bao, Ge Yu, "FSP: Towards Flexible Synchronous Parallel Framework for Expectation-Maximization based Algorithms on Cloud", ACM Symposium on Cloud Computing, Sept. 2017. Acceptance rate: 23%.
116. Timothy VanEtten, Amy Williams, Jiahuan Deng, Feng Wang and Lixin Gao, "SoC-based Implementation of a Lightweight Label Switching Router", ITC conference on Ubiquitous, software-based, and sustainable networks and services, Sept. 2017.
115. Xuzhi Zhang, Xiaozhe Shao, George Provelengios, Naveen Kumar Dumpala, Lixin Gao and Russell Tessier, "Scalable Network Function Virtualization for Heterogeneous Middleboxes" The 25th IEEE International Symposium on Field-Programmable Custom Computing Machines, April 2017
114. Xiaozhe Shao, Lixin Gao, Hao Zhang, "CoGS: Enabling Distributed Network Functions with Global States", 3rd IEE Conference on Network Softwarization, July, 2017.
113. Feng Wang, Xiaozhe Zhao, Lixin Gao, Hiroaki Harai, Kenji Fujikawa, "Towards Reliable and Lightweight Source Switching for Datacenter Networks", INFOCOM 2017. Acceptance rate: 21%.

112. Feng Wang, Xiaozhe Zhao, Lixin Gao, Hiroaki Harai, Kenji Fujikawa, "Towards Variable Length Addressing for Scalable Internet Routing", 35th IEEE – International Performance Computing and Communications Conference, Dec 2016. Acceptance rate: 25.5%.
111. Zhigang Wang, Lixin Gao, Yu Gu, Yubin Bao, Ge Yu, "A Fault-Tolerant Framework for Asynchronous Iterative Computations in Cloud Environments", ACM Symposium on Cloud Computing, Oct. 2016. Acceptance rate: 25%.
110. Jiangtao Yin, Lixin Gao, "Asynchronous Distributed Incremental Computation on Evolving Graphs", The European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases. Sept. 2016 Acceptance rate: 28%.
109. Kenji Fujikawa, Hiroaki Harai, Feng Wang, and Lixin Gao, "Design and Implementation of Variable-Length Locator Allocation Protocol for Scalable Internet Addressing", The 21st Asia-Pacific Conference on Communications, Oct 2015.
108. Yusuke Fukushima, Ved P. Kafle, Kenji Fujikawa, Tomoji Tomuro, Hiroaki Harai, Feng Wang, and Lixin Gao, "Mobile and Multihomed Host Architecture for Supporting New Network-layer Forwarding Mechanism", The 10th International Conference on Future Internet Technologies, June 2016.
107. Xiaozhe Shao, Feng Wang, Lixin Gao, and Kenji Fujikawa and Hiroaki Harai, "Distributed Encoding for Multiple-inherited Locators to Accommodate Billions of Objects in the Internet", IEEE International Conference on Distributed Computing Systems, June 2016.
106. Samamon Khemmarat, Lixin Gao, "Supporting Drug Prescription via Predictive and Personalized Query System", International Conference on Pervasive Health, May 2015.
105. Jiahui Jin, Samamon Khemmarat, Lixin Gao and Junzhou Luo, "Querying Web-Scale Information Networks Through Bounding Matching Scores", the 24th International Conference in World Wide Web, May 2015.
104. Feng Wang, Lixin Gao, Xiaozhe Zhao, Hiroaki Harai, Kenji Fujikawa, "Compact Location Encodings for Scalable Internet Routing", IEEE INFOCOM, April 2015.
103. Meng Shen, Lixin Gao, Ke Xu, Liehuang Zhu, "Achieving Bandwidth Guarantees in Multi-Tenant Cloud Networks Using a Dual-Hose Model", 33rd IEEE. International Performance Computing and Communications Conference, Dec. 2014. **Runner up for the best paper Award**
102. Jiahui Jin, Samamon Khemmarat, Lixin Gao and Junzhou Luo, "A Distributed Approach for Top-k Star Queries on Massive Information Networks", the IEEE International Conference on Parallel and Distributed Systems. Dec. 2014, **nominated for the best paper award.**
101. Jiangtao Yin, and Lixin Gao, "Scalable Distributed Belief Propagation with Prioritized Block Updates", in Proceeding of ACM International Conference on Information and Knowledge Management (CIKM), 2014.

100. Jiangtao Yin, Lixin Gao, Mark Zhang, “Scalable Nonnegative Matrix Factorization with Block-wise Updates”, The European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases, Sept. 2014.
99. Tian Zhou, Lixin Gao and Daiheng Ni, “Road Traffic Prediction by Incorporating Online Information”, Workshop On Connecting Online & Offline Life (COOL) in conjunction with the International World Wide Web Conference, April 2014.
98. Samamon Khemmarat, Sabyasachi Saha, Han Hee Song, Mario Baldi and Lixin Gao, “On Understanding User Interests through Heterogeneous Data Sources” The 15th Passive and Active Measurement Conference (PAM) 2014.
97. Samamon Khemmarat and Lixin Gao, “Fast Top-K Path-based Relevance Query on Massive Graphs”, IEEE International Conference on Data Engineering (ICDE), March 2014. Chicago. Acceptance rate: 20%.
96. Chunlei Wang, Yanfeng Zhang, Changkuan Zhao, Ge Yu, and Lixin Gao, “Asyn-SimRank: An Asynchronous Large-Scale SimRank Algorithm”, 1st CCF Big Data Conference, December 2013.
95. Guoyi Zhao, Li Guo, Lixin Gao and Li-Jun Ma, “Inferring Regulatory Networks through Orthologous Gene Mapping”, International Symposium on Network Analysis and Mining for Health Informatics, Biomedicine and Bioinformatics, December 2013.
94. Deepak Unnikrishnan, Sandesh Virupaksha, Lekshmi Krishnan, Lixin Gao and Russell Tessier, “Accelerating Iterative Algorithms with Asynchronous Accumulative Updates on FPGAs”, The 2013 International Conference on Field-Programmable Technology, Kyoto, Japan. Dec. 2013.
93. Jiangtao Yin, Yong Liao, Mario Baldi, Lixin Gao and Antonio Nucci, “A Scalable Distributed Framework for Efficient Analytics on Ordered Datasets”, IEEE/ACM International Conference in Utility and Cloud Computing, December 2013.
92. Sen Su, Xiang Cheng, Lixin Gao, and Jiangtao Yin, “Co-ClusterD: A Distributed Framework for Data Co-Clustering with Sequential Updates”, 2013 IEEE International Conference on Data Mining (ICDM’13), December 2013. Acceptance rate: 20%.
91. Jiangtao Yin, Yong Liao, Mario Baldi, Lixin Gao, and Antonio Nucci, “Efficient Analytics on Ordered Datasets using MapReduce”, ACM Symposium on High Performance Parallel and Distributed Computing, June 2013
90. Liu Liu, Jiangtao Yin, Lixin Gao, “Efficient Social Network Data Query Processing on MapReduce”, HotPlanet workshop co-located with ACM SIGCOMM, 2013.
89. Yang Song, Arun Venkataramani, Lixin Gao, “Identifying and Addressing Protocol Manipulation Attacks in Secure BGP”, IEEE Conference on Distributed Computing Systems, 2013. Acceptance rate: 13%
88. Guo, L., G. Zhao, X. Zhao, W. Jonkers, J. Xu, C. Kistler, L. Gao, and L.J. Ma. “Comparative Transcriptomics and Transcriptional Regulatory Network

Reconstruction of Fusarium”, in Fusarium Workshop. 2013. Asilomar, CA: Genetics Society of America.

87. Yang Song, Lixin Gao, and Arun Venkataramani, “On the CDN Pricing Game”, The 2nd IEEE International Workshop on Smart Data Pricing, 2013

86. Jiangtao Yin, Yanfeng Zhang, Lixin Gao, “Accelerating Expectation-Maximization Algorithms with Frequent Updates”, IEEE International Conference and Cluster Computing, Sept. 2012.

85. Yanfeng Zhang, Qixin Gao, Lixin Gao, and Cuirong Wang, “Accelerate Large-Scale Iterative Computation through Asynchronous Accumulative Updates”, in Proceeding of the 3rd Workshop on Scientific Cloud Computing (ScienceCloud 2012) in conjunction with HPDC 2012, 2012.

84. Weibo Chu, Xiaohong Guan, Lixin Gao, Zhongmin Cai, “Model-based Real-time Volume Control for Interactive Network Traffic Replay”, 13th IEEE/IFIP Network Operations and Management Symposium (NOMS 2012) April, 2012.

83. Deepak Unnikrishnan, Justin Lu, Lixin Gao, Russell Tessier, “ReClick - A Modular Dataplane Design Framework for FPGA-based Network Virtualization”, ACM/IEEE Symposium on Architectures for Networking and Communications Systems, 2011. Oct 3-4.

82. Yanfeng Zhang, Qixin Gao, Lixin Gao, and Cuirong Wang, “PrIter: A Distributed Framework for Prioritized Iterative Computations”, The ACM Symposium on Cloud Computing (ACM SOCC 2011) , 2011, acceptance rate: 16%. **Paper of Distinction.**

81. Yang Song, Lixin Gao, and Kenji Fujikawa, “Resilient Routing under Hierarchical Automatic Addressing”, IEEE GLOBECOM 2011.

80. Renjie Zhou, Samamon Khemmarat, Lixin Gao and Huiqiang Wang, “Boosting Video Popularity Through Recommendation System”, First ACM SIGMOD workshop on DBSocial Database and Social Networks, June 2011.

79. Q. Gao and Lixin Gao, “Optimal Algorithms for Computing Policy-Conforming Paths in the Internet”, 2nd International Conference on High Performance Networking, Computing and Communication System, May 2011.

78. Samamon Khemmarat, Renjie Zhou, Lixin Gao, and Michael Zink, “Watching User Generated Videos with Prefetching”, The ACM Multimedia Systems Conference, Feb 2011,

77. Y. Zhang, Q. Gao, L. Gao, and C. Wang, “iMapReduce: A Distributed Computing Framework for Iterative Computation”, DataCloud 2011.

76. Dilip Kumar Krishnappa, Samamon Khemmarat, Lixin Gao, and Michael Zink, “On the Feasibility of Prefetching and Caching for Online TV Services: A Measurement Study on Hulu”, The Passive and Active Measurement Conference, April, 2011.

75. Renjie Zhou, Samamon Khemmarat, and Lixin Gao, “The Impact of YouTube Recommendation System on Video Views”, in Proceedings of ACM SIGCOMM Internet Measurement Conference (IMC), 2010.

74. Dong Yin, Deepak Unnikrishnan, Yong Liao, Lixin Gao and Russell Tessier, “Customizing Virtual Networks with Partial FPGA Reconfiguration”,

in Proceedings of VISA 2010: The Second ACM SIGCOMM Workshop on Virtualized Infrastructure Systems and Architectures, September 3, New Delhi, India. (Selected as the best workshop paper to be published in ACM SIGCOMM Computer Communications Review)

73. Ram Keralapura, Antonio Nucci, Zhi-Li Zhang, Lixin Gao, “Profiling Users in a 3G Network Using Hourglass Co-Clustering”, in Proceedings of ACM Mobicom 2010. Acceptance Rate: 14.2%

72. Yong Liao, Dong Yin, and Lixin Gao, “DPillar: Scalable Dual-Port Server Interconnection for Data Center Networks”, in Proceedings of ICCCN’10: the 19th International Conference on Computer Communications and Networks, 2010

71. Yang Song, Katherine Guo, Lixin Gao, “Redundancy-Aware Routing with Limited Resources”, in Proceedings of ICCCN’10: the 19th International Conference on Computer Communications and Networks, 2010

70. Yong Liao, Dong Yin, Lixin Gao, “EUROPA: Efficient User Mode Packet Forwarding in Network Virtualization”, in Proceedings of USENIX INM/WREN’10., April, 2010.

69. D. Unnikrishnan, R. Vadlamani, Y. Liao, A. Dwaraki, J. Crenne, L. Gao, R. Tessier, “Scalable network virtualization using FPGAs”, ACM Sigda Intl. Symposium on Field Programmable Gate Arrays, Monterey, CA, Feb 2010.

68. E. Kwong, L. Gao, R. Guerin, Z-L. Zhang, “On the Feasibility and Efficacy of Protection Routing in IP Networks” in Proceedings of IEEE INFOCOM 2010. **Best paper award.**

67. Yanfeng Zhang, Lixin Gao, and Cuirong Wang, “MultiNet: Multiple Virtual Networks for a Reliable Live Streaming Service”, IEEE Globecom 2009 Next-Generation Networking and Internet Symposium, Dec. 2009

66. Yong Liao, Dong Yin, and Lixin Gao, “PdP: Parallelizing Data Plane in Virtual Network Substrate”, in Proceedings of VISA 2009: The First ACM SIGCOMM Workshop on Virtualized Infrastructure Systems and Architectures, August 17, Barcelona, Spain.

65. Feng Wang and Lixin Gao, “Path Diversity Aware Interdomain Routing”, in Proceedings of IEEE INFOCOM 2009. Acceptance rate: 19.65%

64. Yanfeng Zhang, Lixin Gao, Cuirong Wang. MultiNet: Multiple Virtual Networks for a Reliable Live Streaming Service [C]. Proceedings of IEEE Global Telecommunications Conference (GLOBECOM 09), Hawaii, USA, 2009.

63. Yong Liao, Dong Yin, and Lixin Gao, “A Fully-Programmable and High-Speed Virtual Network Platform”, in poster session of NSDI’09 - 6th USENIX Symposium on Networked Systems Design and Implementation, April 22-24, 2009, Boston, Massachusetts.

62. J. Fan, D. Wu, A. Nucci, R. Keralapura, and L. Gao, “Identifying hidden voice and video streams,” Proceedings of SPIE Defense & Security Symposium 2009, Orlando, FL, USA, April 13–17, 2009.

61. Yong Liao, Lixin Gao, Roch Guerin, and Zhi-Li Zhang “Reliable Interdomain Routing Through Multiple Complementary Routing Processes,”

in proceeding of ReArch'08 - Re-Architecting the Internet, Madrid, Spain, December 2008.

60. Yong Liao, Zhensheng Zhang, Bo Ryu, and Lixin Gao, "Cooperative Robust Forwarding Scheme in DTNs using Erasure Coding," in Proceeding of MILCOM 2007, October 29-31, Orlando, Florida.

59. Yong Liao, Kun Tan, Zhensheng Zhang, and Lixin Gao, "Estimation based Erasure-coding Routing in Delay Tolerant Networks," in Proceeding of IWCMC 2006 (International Wireless Communications and Mobile Computing Conference) Delay Tolerant Mobile Networks Symposium, Vancouver, Canada, 3-6 July, 2006.

58. Feng Wang, Lixin Gao, Oliver Spatscheck, Jia Wang, "STRID: Scalable Trigger-based Route Incidence Diagnosis", ICCCN 2008.

57. Vinod Namboodiri, and Lixin Gao, "Energy-Efficient VoIP over WLAN", The ACM International Symposium on Mobile Ad Hoc Networking and Computing, 2008.

56. Changjin Suh, Lixin Gao, Jisoo Shin, "Multi-level BGP Backup Routing", International Conference on Information Networking, 2008

55. Feng Wang and Lixin Gao, "A Full Route Aware Routing Protocol – Fast Recovery from Transient Routing Failures", INFOCOM mini-conference, 2008.

54. Jian Qiu, Supranamaya Ranjan, Lixin Gao, Antonio Nucci, "Detecting Bogus BGP Route Information: Going Beyond Prefix Hijacking", International Conference on Security and Privacy in Communication Networks 2007.

53. Feng Wang, Nick Feamster, Lixin Gao, "Measuring the Contributions of Routing Dynamics to Prolonged End-to-End Internet Path Failures", in Proceedings of IEEE GLOBECOM 2007.

52. Qiang Wu, Yong Liao, Tilman Wolf, Lixin Gao, "Benchmarking BGP Routers", 2007 IEEE International Symposium on Workload Characterization.

51. Vinod Namboodiri, Lixin Gao, "Energy-Aware Tag Anti-Collision Protocols for RFID Systems", IEEE International Conference on Pervasive Computing and Communications, 2007. Acceptance rate : 10%.

50. Yong Liao, Kun Tan, Zhangsheng Zhang, and Lixin Gao, "Modeling Redundance-based Routing in Delay Tolerant Networks", IEEE Consumer Communications and Networking Conference, January, 2007.

49. Jian Qiu and Lixin Gao, "Robust Egress Interdomain Traffic Engineering", Proceedings of ICNP, November, 2006. Acceptance rate : 14%.

48. Jian Qiu and Lixin Gao, "AS Path Inference by Exploiting Known AS Paths", Proceedings of GLOBECOM, November, 2006.

47. Jian Qiu, Feng Wang and Lixin Gao, "BGP Rerouting Solutions for Transient Routing Failures and Loops", Proceedings of MILCOM, October, 2006.

46. Feng Wang, Z. Morley Mao, Jia Wang, Lixin Gao, and Randy Bush, "Measurement Study on the Impact of Routing Events on End-to-End Internet

- Path Performance”, Proceedings of ACM SIGCOMM, September, 2006, Acceptance Rate: 12%
45. Y. Liao, K. Tan, Z. Zhang, and L. Gao, “Estimation based Erasure-coding Routing in Delay Tolerant Networks”, IWCMC 2006 Delay Tolerant Mobile Networks, July 2006.
 44. Yong Liao and Lixin Gao, “Practical Schemes for Smooth MAC Layer Handoff in IEEE 802.11 Wireless Networks”, in Proceedings of IEEE Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM 2006), Buffalo, NY, 26-29 June, 2006.
 43. Teng Fei, Shu Tao, Lixin Gao, Roch Guerin and Zhi-li Zhang, “Light-Weight Overlay Path Selection in a Peer-to-Peer Environment”, Proceedings of IEEE Global Internet 2006, Barcelona, Spain, April, 2006.
 42. Teng Fei, Shu Tao, Lixin Gao and Roch Guerin. “How to Select a Good Alternate Path in Large Peer-to-Peer Systems?”, Proceedings of IEEE INFOCOM 2006, Barcelona, Spain, April, 2006.
 41. Feng Wang, Lixin Gao, Jia Wang and Jian Qiu, “On Understanding of Transient Interdomain Routing Failures”, Proceedings of IEEE ICNP, Boston, Massachusetts, USA, November 2005. 10
 40. Jianhong Xia, Lixin Gao and Teng Fei, “Flooding Attacks by Exploiting Persistent Forwarding Loops”, Proceedings of Internet Measurement Conference (IMC05), October 2005.
 39. F. Wang, L. Gao, “Impact of Routing Lags on Routing Failures”, Networking, May 2005.
 38. Shu Tao, Kuai Xu, Antonio Estepa, Teng Fei, Lixin Gao, Roch Guerin, Jim Kurose, Don Towsley, and Zhi-Li Zhang. “Improving VoIP Quality through Path Switching”, IEEE INFOCOM 2005
 37. V. Namboodiri and L. Gao, and Ramakrishna Janaswamy, “Power Efficient Topology Control for Wireless Networks with Switched Beam Directional Antennas”, 2nd IEEE International Conference on Mobile Ad-Hoc and Sensor Systems, Nov. 2005.
 36. S. Cai, L. Gao, W. Gong, and W. Xu, “On Generating Internet Hierarchical Topology”, CDC, Dec 2004.
 35. F. Wang, and L. Gao, “Characterizing Routing Policy in the Internet”, SIGCOMM 2004 Poster.
 34. J. Xia, and L. Gao, “On the Evaluation of AS Relationship Inferences”, IEEE Global Internet and Next Generation Network, Nov. 2004.
 33. M. Agarwal, J. Cho, L. Gao, and J. Wu “Energy Efficient Broadcasting in Wireless Ad Hoc Networks with Hitchhiking”, INFOCOM 2004.
 32. J. Wu, S. Vangala, L. Gao, and K. Kwiat, “An Effective Architecture and Algorithm for Detecting Worms with Various Scan Techniques”, Network and Distributed System Security Symposium 2004
 31. Shu Tao, Kuai Xu, Ying Xu, Teng Fei, Lixin Gao, Roch Guerin, Jim Kurose, Don Towsley, and Zhi-Li Zhang. “Exploring the Performance Benefits of End-to-End Path Switching”. Proceedings of IEEE ICNP 2004.

30. Changjin Suh and Lixin Gao, "Stable Routing in Internet with Fully Meshed Sibling Relationship," ISPC comm, Sept. 2004.
29. Vinod Nambroodiri, M. Agarwal, and Lixin Gao, "A Study on the Feasibility of Mobile Gateways for Vehicular Ad-hoc Networks", ACM Workshop on Vehicular Ad Hoc Networks Sept. 2004.
28. XinYan Zhang, Gang Song, Qian Zhang, Wenwu Zhu, Lixin Gao, Zhensheng Zhang, "Measurement-based construction of locality-aware overlay networks", ICC 2004 - IEEE International Conference on Communications, vol. 27, no. 1, June 2004 pp. 1401-1405
27. Q. Zhang, Z. Xiang, W. Zhu, and L. Gao, "A Comprehensive Study of Cache Replacement and Server Selection for Multimedia Proxy across Wireless Internet, IEEE ISCAS'03.
26. Feng Wang, Lixin Gao, "Inferring and Characterizing Internet Routing Policies" IMC 2003.
25. Z. Chen, L. Gao, and K. Kwiat, "Modeling the Spread of Active Worms", INFOCOM 2003.
24. F. Wang and L. Gao, "Traffic Flow Patterns", *Proc. SPIE ITCOM Workshop on Scalability and Traffic Control in IP Networks* 2002, pp 78-91.
23. Y. Guo, L. Gao, D. Towsley, S. Sen, "Workload adaptive for seamless video streaming", Packet Video 2002. CD format, 11 pages.
22. T. Bu, L. Gao, and Don Towsley, "On Characterizing Routing Table Growth", to Global Internet 2002.
21. L. Gao, and F. Wang, "The Extent of AS Path Inflation by Routing Policy", Global Internet 2002.
20. L. Gao, T. Griffin, J. Rexford, "Inherently Safe Backup Routing with BGP", *Proc. of INFOCOM*, 2001. pp. 547-556. Acceptance Rate: 23.1%
19. T. Bu, L. Gao, D. Towsley, "On routing table growth", poster, SIGCOMM 2001.
18. Michael K. Bradshaw, Bing Wang, Subhabrata Sen, Lixin Gao, Jim Kurose, Prashant Shenoy, and Don Towsley "Periodic Broadcast and Patching Services - Implementation, Measurement, and Analysis in an Internet Streaming Video Testbed", *Proc. ACM Multimedia*, 2001. pp. 280-290. Acceptance Rate: 16% Also a shorter version appeared at *Proc. ACM SIGMETRICS*, June 2001. Acceptance Rate: 20%
17. Subhabrata Sen, Lixin Gao, and Don Towsley, "Frame-Based Periodic Broadcast and Fundamental Resource Tradeoffs", *Proc. IEEE International Performance, Computing, and Communications Conference*, pp. 77-83, April 2001,
16. Zihui Ge, Daniel Figueiredo, Sharad Jaiswal, and Lixin Gao, "On Hierarchical Structure of Logical Autonomous System Graph in the Internet", *Proc. SPIE ITCOM Workshop on Scalability and Traffic Control in IP Networks*, 2001. pp. 208 - 222.

15. H.S. Bassali, K.M. Kamath, R.B. Hosamani, and Lixin Gao, "Topology-Aware Algorithms for Proxy Placement in the Internet", *Proc. of SPIE ITCOM Workshop on Scalability and Traffic Control in IP Networks*, 2001. pp. 157 - 171
14. J. Miller and L. Gao, "Creating A Subpoena-Proof Diary: A Technological Solution to A Legal Problem", *Cyberspace Law Abstracts*, 2001.
13. L. Gao and J. Rexford, "Stable Internet Routing Without Global Coordination", *Proc. of SIGMETRICS*, 2000. pp. 307-317. Acceptance Rate: 17%
12. Z.-L. Zhang and Z. Duan and L. Gao and Y.T. Hou, "Decompling QoS Control from Core Routers: A Novel Bandwidth Broker Architecture for Scalable Support of Guaranteed Services", *Proc. of SIGCOMM*, 2000, pp 71-83, Acceptance Rate: 10.9%
11. L. Gao, "On Inferring Automonous System Relationships in the Internet", *Proc. of Global Internet*, 2000. pp, 387-396, Acceptance Rate: 24.8%,
10. L. Gao and Z.-L. Zhang and D. Towsley, "Catching and Selective Catching: Efficient Latency Reduction Techniques for Delivering Continuous Multimedia Streams", *Proc. of ACM Multimedia '99*, pp. 203-206. Acceptance Rate: 18.2%
9. S.Sen, L. Gao, J. Rexford, D. Towsley, "Optimal Patching Schemes for Efficient Multimedia Streaming". *Proc. of NOSSDAV'99*. pp. 265-277.
8. L. Gao, D. Towsley, "Supplying Instantaneous Video-on-Demand Services Using Controlled Multicast", *Proceedings of IEEE Multimedia Computing Systems'99*. pp. 117-121.
7. L. Gao and J. Kurose and D. Towsley, "Efficient Schemes for Broadcasting Popular Videos", *Proc. of the 8th NOSSDAV*, pp. 317-329. July, 1998.
6. L. Gao and B. Li and F. Chen, "Optimal Placement of Repair Servers for Reliable Multicast", *AMS Dimacs Series*, 1999, pp. 61-80.
5. D.E. Gregory and L. Gao and A.L. Rosenberg and P.R. Cohen, "Efficient scheduling of branching computations on rings of processors: an empirical study", *Proc. of 8th IEEE Symp. on Parallel and Distributed Processing*, Oct. 1996, pp. 470 -473.
4. L. Gao and A.L. Rosenberg and R.K. Sitaraman, "Trading on tasks reallocation with thread management in partitionable multiprocessors", *Proc. of 8th ACM Symp. on Parallel Algorithms and Architectures*, June, 1996, pp. 309-317.
3. L. Gao, A.L. Rosenberg and R.K. Sitaraman, "Optimal Scheduling of Fine-Grain Tree-Sweep Computations in Communication-Bounded Systems", *7th IEEE Symp. on Parallel and Distributed Processing*, Oct. 1995, pp. 620-629.
2. L. Gao and A.L. Rosenberg, "On Balancing Computational Load on Rings of Processors", *6th IEEE Symp. on Parallel and Distributed Processing*, Oct. 1994, pp. 478-483.
1. L. Gao and E.B. Fernandez, "Accelerating Conversations for Fault-Tolerant Concurrent Software", *Proc. IEEE Southeastcon'94*, April, 1994, pp. 334-338.

INVITED TALKS

Lixin Gao, keynote address, "Distributed Frameworks for Iterative Computations", IEEE Conference on Internet and Computer Network Protocol (ICNP) Workshop on Machine Learning and Artificial Intelligence in Computer Networks, Oct 2017

Lixin Gao, keynote address, "Accelerating Iterative Computations on Commodity Servers and FPGA", The 2nd International Conference on Big Data Computing and Communications, July 2016.

Lixin Gao, "Distributed Frameworks for Iterative Computations on Commodity Servers and FPGA", Yale University, Oct 2015.

Lixin Gao, "Distributed Frameworks for Massive Datasets", Southeast University, China, Dec 2014.

Lixin Gao, "Distributed Frameworks for Iterative Computations", Chinese Academy of Sciences, June 2014.

Lixin Gao, "Distributed Frameworks for Iterative Computations", University of Wisconsin, Madison, April 2013.

Lixin Gao, "Network Virtualization with Commodity Hardware and FPGAs", IBM Watson Research, May 2010.

Lixin Gao, "Safe Interdomain Routing under Diverse Commercial Agreements", Temple University, April 2010.

Lixin Gao, "A Measurement Study of Interdomain Routing", Institute for Pure & Applied Mathematics, Workshop on Multiscale Representation, Analysis and Modeling of Internet Data and Measurements, Sept. 2008.

Lixin Gao, "Robustness of Internet Routing", invited talk, Princeton University, October, 2007.

Lixin Gao, "Interdomain Routing Stability and Robustness", invited talk, Univ. of Minnesota, November 2007.

Lixin Gao, "Interdomain Routing Stability and Robustness", invited talk, Microsoft Research, December 2007.

Lixin Gao, "Interdomain Routing Stability and Robustness", invited talk, Institute of Computing Technology, Chinese Academy of Sciences, June 2008.

Lixin Gao, "Self-Managed Future Wireless Networks?", Panelist of Panel "New Architectures and Disruptive Technologies for the Future Wireless Networks", ACM Mobihoc, May 2008, .

Lixin Gao, "Internet Routing Robustness and Security", invited talk, Sept. 2007, Beijing University of Posts and Telecommunications.

Lixin Gao, "Internet Routing Stability and Robustness", invited talk, May 2007, Microsoft Research Asia

Lixin Gao, "Internet Routing Robustness and Security", invited talk, Dec 2006, Intel Research.

Lixin Gao, "Impact of Interdomain Routing on End-to-end Path Failures" invited talk, Dec 2007, Microsoft Research Silicon Valley.

Lixin Gao, “Impact of Interdomain Routing on End-to-end Path Failures”, invited talk, April 2005, Tsinghua University, China

Lixin Gao, “On Characterizing Transient Routing Failures”, invited talk, Nov 2004, AT&T Research Labs, NJ.

Lixin Gao, “On Inferring Autonomous System Relationships”, invited talk, Dec 2000, Lucent Research Labs, NJ.

Lixin Gao, “Stable Interdomain Routing without Coordination”, invited talk, Dec 1999, AT&T Research Labs, NJ.

Lixin Gao, “Efficient Schemes for Broadcasting Popular Videos”, invited talk, Nov 1998, Northeastern University.

PROFESSIONAL ACTIVITIES

Chair, Best paper selection committee of ICNP 2017

Editor, CCF Transactions on Networking 2016-

Program Committee, ACM SIGMETRICS 2017

Area Chair, IEEE ICNP 2017

Program Committee, ACM Cloud Computing 2017

Program Committee, World Wide Web Conference, 2017

Program Committee, ACM SIGCOMM 2015

InternetTC Best Paper Selection Committee 2014-

Area Chair, IEEE INFOCOM 2015

Chair of the SIGCOMM Achievement Award Committee, 2013

Co-Chair of Computer Communication Workshop, 2011

Co-Chair of Future Net, 2012

Associate Editor, CCF Transactions on Networking, 2016-

Associate Editor, IEEE/ACM Transactions on Networking, 2002–2007

Guest Editor, Computer Network Magazine, Special Issue on Interdomain Routing

NSF Panelist 1999, 2000, 2002, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2014.

Organizer of workshop on Scalable Qos Solutions 2002.

Organizer of DIMACS workshop on Multimedia Streaming on the Internet, 2000.

Program committee member of The International Workshop on Next Generation Network Architecture (NGNA 2009)

Panelist of Conference on Future Computing 2010 on the panel ”Future Networking and Future Network Computing”

Program Committee, SIGCOMM 2013

Program Committee, BigData 2013

Program Committee, Smart Data Pricing Workshop, 2013
Program committee, IEEE ICDCS, 2013
TPC Area Chair of ICNP 2009, 2010, 2011
TPC Area Chair of INFOCOM 2010, 2012, 2013, 2014
Program committee member of CoNext 2009
Program Co-vice Chair of ICDCS 2008, Network Protocol track
Panelist of ACM Mobihoc 2008 on the panel "New Architectures and Disruptive Technologies for the Future Wireless Networks"
TPC Area Chair of INFOCOM 2009
Program committee member of CoNext 2008
Program committee member of ICNP 2008
Program committee member of Internet Measurement Conference 2008
Program Committee Member of ICC 2008
Program Committee Member of IEEE INFOCOM 2008
Program Committee Member of ICNP 2007
Program Committee Member of CoNext 2007
Program Committee Member of ACM SIGCOMM 2006
Program Committee Member of INFOCOM 2006
Program Committee Member of Network Protocols Track for ICDCS 2006
Program Committee Member of workshop on secure network protocols 2005
Program Committee Member of workshop on network/computer security 2005
Program Committee Member of GLOBECOM 2005 Autonomic Internet Symposium
Program Committee Member of SIGCOMM ASIA Workshop 2005.
Program Committee Member of ICNP 2004.
Program Committee Member of SIGCOMM 2004.
Program Committee Member of SIGMETRICS 2003.
Program Committee Member of INFOCOM 2004.
Program Committee Member of Internet Measurement Workshop 2003.
Program Committee Member of workshop on Wireless Networks and Mobile Computing 2003.
Program Committee Member of Group Communication Workshop 2002.
Program Committee Member of SPIE ITCOM Scalability and Traffic Control in IP Networks 2002.
Program Committee Member of Globe Internet 2000.
Program Committee Member of Mobile Data Access 1999.
Session Chair of Workshops on Mining Network Data 2005

Session Chair of SPIE ITCOM Scalability and Traffic Control in IP Networks 2002.

Session Chair of Computer Communication Workshop 2001.

Session Chair of Global Internet 2000.

Reviewer of Hong Kong Research Council.

Students Advised

Hao Zhang, M.S., 2017

Kaihua Liu, M.S., 2017

Qianqian Gao, M.S. 2016

Jiangtao Yin, Ph.D. 2016

Samamon Khemmara, Ph.D. 2015

Yang Song, Ph.D. 2013

Liu Liu, M. S. 2013

Mao Zhao, M.S. 2012

Yong Liao, Ph.D. 2010

Vinod Namboodiri, Ph.D. 2008, Associate Professor of Wichita State University

Feng Wang, Ph.D., 2006, Professor, Liberty University

Jianghong Xia, Ph.D., 2006.

Teng Fei, Ph.D., 2006.

Xiaozhe Shao, Ph.D.

Guoyi Zhao, Ph.D.

Fubao Wu, Ph.D.

Manish Agarwal, M.S. 2004

Tae Woo Kwon, M.S. 2002

Patents Issued and Filed

Method for Real-Time Diagnosing Routing Problems, Jia Wang, Oliver Spatscheck, Lixin Gao, and Feng Wang, Patent US7898955.

Working with Industry

Consulting for AT&T Research Labs, involved with analysis of IP network configuration.

Consulting for Microsoft Research, involved with proxy server design of wireless multimedia network.

Consulting for Air Force Rome Lab, involved with information assurance.

Undergraduate Student Research Advised

David Zeifman

Derek Thrasher
Dorian Elgers-Lo

OTHER

United States citizen.