

Baochun Li

Present Appointment

Professor
Edward S. Rogers Sr. Department of Electrical
and Computer Engineering
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Research Interests Cloud computing, federated learning, distributed machine learning, security and privacy

Education

University of Illinois at Urbana-Champaign, Urbana, Illinois, USA
Department of Computer Science

◇ **Ph.D.**, Computer Science, May 2000

▷ *Dissertation:* “Agilos: A Middleware Control Architecture for Application-Aware Quality of Service Adaptations”

▷ *Advisor:* Klara Nahrstedt, Department of Computer Science

▷ *Thesis Committee:* Vaduvur Bharghavan (ECE), Geneva Belford (Computer Science), Roy H. Campbell (Computer Science)

◇ **M.Sc.**, Computer Science, May 1997

▷ *Dissertation:* “Adaptive Behavior of Quality of Service in Distributed Multimedia Systems”

▷ *Advisor:* Klara Nahrstedt, Department of Computer Science

Tsinghua University, Beijing, People's Republic of China
Department of Computer Science and Technology

◇ **B.Engr.**, Computer Science and Technology, July 1995

Honours and Awards

◇ *IEEE INFOCOM Achievement Award*, the highest honour that can be bestowed on a researcher in the IEEE INFOCOM community, May 2024.

◇ *Fellow, Engineering Institute of Canada*, December 2023.

◇ *Fellow, Canadian Academy of Engineering*, June 2023.

◇ *IEEE Fellow*, class of 2015, for contributions to application-layer network protocols and network coding.

◇ Inaugural recipient, *Distinguished Educator Award* (in the “under 40” category), Department of Computer Science, University of Illinois at Urbana-Champaign, November 4, 2011.

◇ *NSERC Discovery Accelerator Supplements Award*, NSERC, 2011.

◇ *Departmental Teaching Award*, for excellence in undergraduate teaching in Fall 2010, Department of Electrical and Computer Engineering, University of Toronto. The award was

determined with the student vote conducted by the ECE Student Clubs at the end of the term.

- ◇ *McLean Award*, University of Toronto, December 2009.
- ◇ *Bell Canada Endowed Chair in Computer Engineering*, University of Toronto, July 2005 — present (renewed in 2010, 2015 and 2020).
- ◇ *Nortel Networks Junior Chair in Network Architecture and Services*, University of Toronto, October 2003 – June 2005.
- ◇ *The University of Toronto TechKnowFile Award*, for “outstanding achievement for an application or service,” in recognition of the on-line graduate admissions system used in the Faculty of Applied Science and Engineering, May 2007.
- ◇ *Inaugural winner, ECE Departmental Service Award*, for exemplary service in the development of mission-critical software for graduate admission and undergraduate course selection, University of Toronto, May 2006.
- ◇ *Outstanding Teaching Assistant Award*, Department of Computer Science, University of Illinois at Urbana-Champaign, November 1999.

Best Paper Awards

- ◇ *Best Paper Award*, IEEE INFOCOM 2023, IEEE Communications Society
 - ▷ For the paper co-authored with Fei Wang and Ethan Hugh, titled “More than Enough is Too Much: Adaptive Defenses against Gradient Leakage in Production Federated Learning,” May 2023.
- ◇ *Best Paper Award*, IEEE International Conference on Metaverse Computing, Networking and Applications (IEEE MetaCom 2023)
 - ▷ For the paper co-authored with Ningxin Su and Bo Li, titled “Multi-Server Stable Rendezvous for the Metaverse,” June 2023.
- ◇ *Best Paper Finalist*, 2022 IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2022)
 - ▷ For the paper co-authored with Wanyu Lin, Hao Lan, and Hao Wang, titled “OrphicX: A Causality-Inspired Latent Variable Model for Interpreting Graph Neural Networks,” June 2022.
- ◇ *Best Paper Candidate*, IEEE International Conference on Cloud Engineering (IC2E 2016)
 - ▷ For the paper co-authored with Li Chen and Bo Li, titled “Barrier-Aware Max-Min Fair Bandwidth Sharing and Path Selection in Datacenter Networks,” April 2016.
- ◇ *Finalist for Best Paper Award*, 10th USENIX International Conference on Autonomic Computing (ICAC 2013)
 - ▷ For the paper co-authored with Wei Wang and Ben Liang, titled “To Reserve or Not to Reserve: Optimal Online Multi-Instance Acquisition in IaaS Clouds,” June 2013.
- ◇ *Best Paper Award*, IEEE Globecom 2011, Wireless Networking Symposium, IEEE Communications Society
 - ▷ For the paper co-authored with Jie Dai, Bo Li, Fangming Liu, and Jiangchuan Liu, titled “Collaborative Caching for Video Streaming among Selfish Wireless Service Providers,”

December 2011.

- ◇ *2009 Multimedia Communications Best Paper Award*, the Multimedia Communications Technical Committee, IEEE Communications Society, 2009
 - ▷ For the paper co-authored with Mea Wang, titled “ R^2 : Random Push with Random Network Coding in Live Peer-to-Peer Streaming,” published in the IEEE Journal on Selected Areas in Communications, Special Issue on Advances in Peer-to-Peer Streaming Systems, vol. 25, no. 9, pp. 1655-1666, December 2007.
- ◇ *Best Student Paper Award*, the Thirteenth International Workshop on Quality of Service (IWQoS 2005)
 - ▷ For the paper co-authored with Ying Zhu, titled “Overlay Networks with Linear Capacity Constraints,” published in the Proceedings of the Thirteenth International Workshop on Quality of Service (IWQoS 2005), also Lecture Notes in Computer Science, Springer, vol. 3552, pp. 21-36, H. de Meer, N. Bhatti (Eds.), Passau, Germany, June 21 – 23, 2005.
- ◇ *Leonard G. Abraham Prize Paper Award in the Field of Communications Systems*, The IEEE Communications Society, June 2000
 - ▷ For the paper co-authored with Klara Nahrstedt, titled “A Control-Based Middleware Framework for Quality-of-Service Adaptations,” published in the IEEE Journal on Selected Areas in Communications, vol. 17, no. 9, pp. 1632-1650, September 1999.

Professional Experience

University of Toronto, Edward S. Rogers Sr. Department of Electrical and Computer Engineering, Toronto, Ontario, Canada

Full Professor (with tenure) **July 2008 — present**

Associate Professor (with tenure) **July 2005 — June 2008**

Date of promotion and tenure: July 1, 2005

Assistant Professor (tenure-track) **July 2000 — June 2005**

Hong Kong Polytechnic University, Hong Kong, P. R. China

Visiting Professor **August 2013 — August 2014**

Microsoft Research, Redmond, Washington, USA

Consulting Researcher **August 2007, June 2009, June 2010, June 2011, May 2013**

Visiting Researcher **September 2006 — October 2006**

Hong Kong Polytechnic University, Hong Kong, P. R. China

Visiting Associate Professor **May 2006**

University of Illinois at Urbana-Champaign, Urbana, Illinois, USA

<i>Ph.D. Candidate</i>	May 1997 — May 2000
<i>Teaching Assistant, CS 314: Multimedia Systems Design</i>	May 1999 — August 1999
<i>Teaching Assistant</i>	September 1996 — May 1997
◇ <i>CS 397kn: Multimedia Systems Design</i>	
◇ <i>CS 323: Operating Systems Design</i>	
<i>Research Assistant</i>	August 1995 – May 1996
◇ supervised by Professor Daniel Reed	

Scholarly Research Achievements at a Glance	Best Paper Awards	6
	Best Paper Awards Finalists	3
	Refereed Publications in Journals	132
	Refereed Publications in Magazines	6
	Refereed Publications in Book Chapters	5
	Refereed Publications in Conference Proceedings	314
	Invited Publications	18
	H-Index computed by Google Scholar Citations	88 (as of May 2024)
	i10-Index computed by Google Scholar Citations	338 (as of May 2024)
	Total of publications in academic career (January 1998 — present)	475

Publications

◇ Refereed Journal Articles (in reverse chronological order)

[J132] Fei Wang, Baochun Li. “Data Reconstruction and Protection in Federated Learning for Fine-Tuning Large Language Models,” in *IEEE Transactions on Big Data*, Special Section on Pre-Trained Large Language Models, 2024.

[J131] Chenghao Hu, Baochun Li. “MaskCrypt: Federated Learning with Selective Homomorphic Encryption,” in *IEEE Transactions on Dependable and Secure Computing*, 2024.

[J130] Xinglong Diao, Huaxi Gu, Wenting Wei, Guoyong Jiang, Baochun Li. “Deep Reinforcement Learning Based Dynamic Flowlet Switching for DCN,” in *IEEE Transactions on Cloud Computing*, 2024.

[J129] Fei Wang, Ethan Hugh, Baochun Li. “More than Enough is Too Much: Adaptive Defenses against Gradient Leakage in Production Federated Learning,” in *IEEE/ACM Transactions on Networking*, 2024.

[J128] Yufei Kang, Baochun Li. “Polaris: Accelerating Asynchronous Federated Learning with Client Selection,” in *IEEE Transactions on Cloud Computing*, 2024.

[J127] Fei Wang, Baochun Li. “Harnessing the Power of Local Supervision in Federated Learning,” in *IEEE Transactions on Big Data*, Special Issue on Federated Learning for Big

Data Applications, 2024.

[J126] Ningxin Su, Baochun Li. “MLOps in the Metaverse: Human-Centric Continuous Integration,” in *IEEE Journal on Selected Areas in Communications*, Special issue on Human-Centric Communication and Networking for Metaverse over 5G and Beyond Networks, vol. 42, no. 3, pp. 737-751, March 2024.

[J125] Wanyu Lin, Baochun Li. “Status-Aware Signed Heterogeneous Network Embedding,” in *IEEE Transactions on Neural Networks and Learning Systems*, Special Issue on Deep Neural Networks for Graphs: Theory, Models, Algorithms and Applications, vol. 35, no. 4, pp. 4580-4592, April 2024.

[J124] Yuechen Tao, Bo Li, Baochun Li. “On Atomicity and Confidentiality Across Blockchains Under Failures,” in *IEEE Transactions on Knowledge and Data Engineering*, vol. 36, no. 2, pp. 766-780, February 2024.

[J123] Tianhang Zheng, Baochun Li. “CMI: Client-Targeted Membership Inference in Federated Learning,” in *IEEE Transactions on Dependable and Secure Computing*, 2023.

[J122] Junpei Ni, Jiang Xiao, Shijie Zhang, Bo Li, Baochun Li, Hai Jin. “FLUID: Towards Efficient Continuous Transaction Processing in DAG-based Blockchains,” in *IEEE Transactions on Knowledge and Data Engineering*, vol. 35, no. 12, pp. 12679-12692, December 2023.

[J121] Chen Chen, Hong Xu, Wei Wang, Baochun Li, Bo Li, Li Chen, and Gong Zhang. “Synchronize Only the Immature Parameters: Communication-Efficient Federated Learning By Freezing Parameters Adaptively,” in *IEEE Transactions on Parallel and Distributed Systems*, 2023.

[J120] Liyao Xiang, Weiting Li, Jungang Yang, Xinbing Wang, Baochun Li. “Differentially-Private Deep Learning with Directional Noise,” in *IEEE Transactions on Mobile Computing*, vol. 22, no. 5, pp. 2599-2612, May 2023.

[J119] Chen Chen, Hong Xu, Wei Wang, Baochun Li, Bo Li, Li Chen, Gong Zhang. “GIFT: Towards Accurate and Efficient Federated Learning with Gradient-Instructed Frequency Tuning,” in *IEEE Journal on Selected Areas in Communications*, Special Issue on Communication-Efficient Distributed Learning over Networks, vol. 41, no. 4, pp. 902-914, April 2023.

[J118] Yuechen Tao, Bo Li, Baochun Li, Lei Chen. “Characterizing Performance Limits in Payment Channel Networks,” in *IEEE Transactions on Knowledge and Data Engineering*, vol. 35, no. 3, pp. 2353-2365, March 2023.

[J117] Jungang Yang, Liyao Xiang, Jiahao Yu, Xinbing Wang, Bin Guo, Zhetao Li, and Baochun Li. “Matrix Gaussian Mechanisms for Differentially-Private Learning,” in *IEEE Transactions on Mobile Computing*, vol. 22, no. 2, pp. 1036-1048, February 2023.

[J116] Chen Chen, Qizhen Weng, Wei Wang, Baochun Li, Bo Li. “Accelerating Distributed Learning in Non-Dedicated Environments,” in *IEEE Transactions on Cloud Computing*, vol. 11, no. 1, pp. 515-531, January-March 2023.

- [J115] Xiaoyan Yin, Xiaoqian Mi, Sijia Yu, Yanjiao Chen, Baochun Li. “Harmony or Involution: Game Inspiring Age-of-Information Optimization for Data Gathering in IoT,” in *ACM Transactions on Sensor Networks*, vol. 19, no. 2, article no. 46, pp. 1-23, May 2023.
- [J114] Xue Sun, Wenwen Deng, Xudong Wei, Dingyi Fang, Baochun Li, Xiaojiang Chen. “Akte-Liquid: Acoustic-Based Liquid Identification with Smartphones,” in *ACM Transactions on Sensor Networks*, vol. 9, no. 1, article no. 18, pp. 1-24, February 2023.
- [J113] Lu Yang, Ping Li, Miaomiao Dong, Bo Bai, Zaporozhets Dmitry, Xiang Chen, Wei Han, Baochun Li. “ C^2 : A Capacity-Centric Architecture Towards Future Wireless Networking,” in *IEEE Transactions on Wireless Communications*, vol. 21, no. 10, pp. 8134-8147, October 2022.
- [J112] Salma Emara, Fei Wang, Baochun Li, Timothy Zeyl. “Pareto: Fair Congestion Control with Online Reinforcement Learning,” in *IEEE Transactions on Network Science and Engineering*, vol. 9, no. 5, pp. 3731-3748, September-October 2022.
- [J111] Wanyu Lin, Baochun Li, Cong Wang. “Towards Private Learning on Decentralized Graphs with Local Differential Privacy,” in *IEEE Transactions on Information Forensics and Security*, vol. 17, pp. 2936-2946, August 2022.
- [J110] Li Chen, Shuhao Liu, and Baochun Li. “Optimizing Network Transfers for Data Analytic Jobs across Geo-Distributed Datacenters,” in *IEEE Transactions on Parallel and Distributed Systems*, vol. 33, no. 2, pp. 403-414, February 2022.
- [J109] Hai Jin, Xiaohai Dai, Jiang Xiao, Baochun Li, Huichuwu Li, Yan Zhang. “Cross-Cluster Federated Learning and Blockchain for Internet of Medical Things,” in *IEEE Internet of Things Journal*, Special Issue on Towards Intelligent Internet of Medical Things and Its COVID-19 Applications and Beyond, vol. 8, no. 21, pp. 15776-15784, November 2021.
- [J108] Yanjiao Chen, Long Lin, Baochun Li, Qian Wang, Qian Zhang. “Silhouette: Efficient Cloud Configuration Exploration for Large-Scale Analytics,” in *IEEE Transactions on Parallel and Distributed Systems*, vol. 32, no. 8, pp. 2049-2061, August 2021.
- [J107] Zhiming Hu, Baochun Li, Qin Zheng, Rick Siow Mong Goh. “Low Latency Big Data Processing without Prior Information,” in *IEEE Transactions on Cloud Computing*, vol. 9, no. 4, pp. 1521-1534, October-December 2021.
- [J106] Guiyan Liu, Songtao Guo, Baochun Li, Chao Chen. “Joint Traffic-aware Consolidated Middleboxes Selection and Routing in Distributed SDNs,” in *IEEE Transactions on Network and Service Management*, vol. 18, no. 2, pp. 1415-1429, June 2021.
- [J105] Jungang Yang, Liyao Xiang, Ruidong Chen, Weiting Li, Baochun Li. “Differential Privacy for Tensor-Valued Queries,” in *IEEE Transactions on Information Forensics and Security*, vol. 17, pp. 152-164, June 2021.
- [J104] Jun Li, Baochun Li. “Demand-aware Erasure Coding for Distributed Storage Systems,” in *IEEE Transactions on Cloud Computing*, vol. 9, no. 2, pp. 532-545, April-June 2021.

- [J103] Xiaoyan Yin, Xiao Hu, Yanjiao Chen, Xu Yuan, Baochun Li. “Signed-PageRank: An Efficient Influence Maximization Framework for Signed Social Networks,” in *IEEE Transactions on Knowledge and Data Engineering*, vol. 33, no. 5, pp. 2208-2222, May 2021.
- [J102] Li Chen, Yuan Feng, Baochun Li, Bo Li. “A Case for Pricing Bandwidth: Sharing Datacenter Networks with Cost Dominant Fairness,” in *IEEE Transactions on Parallel and Distributed Systems*, vol. 32, no. 5, pp. 1256-1269, May 2021.
- [J101] Wanyu Lin, Helei Cui, Baochun Li, Cong Wang. “Privacy-Preserving Similarity Search with Efficient Updates in Distributed Key-Value Stores,” in *IEEE Transactions on Parallel and Distributed Systems*, vol. 32, no. 5, pp. 1072-1084, May 2021.
- [J100] Salma Emara, Silas L. Fong, Baochun Li, Ashish Khisti, Wai-Tian Tan, Xiaoqing Zhu, John Apostolopoulos. “Low-Latency Network-Adaptive Error Control for Interactive Streaming,” in *IEEE Transactions on Multimedia*, vol. 24, pp. 1691-1706, March 2021.
- [J99] Xiaoyan Yin, Yanjiao Chen, Cheng Xu, Sijia Yu, Baochun Li. “Matchmaker: Stable Task Assignment with Bounded Constraints for Crowdsourcing Platforms,” in *IEEE Internet of Things Journal*, vol. 8, no. 3, pp. 1599-1610, February 2021.
- [J98] Chen Ying, Baochun Li, Xiaodi Ke, Lei Guo, “Raven: Scheduling Virtual Machine Migration during Datacenter Upgrades with Reinforcement Learning,” in *Mobile Networks and Applications, Springer*, Special Issue on Advances in Mobile, Edge and Cloud Computing, August 2020.
- [J97] Silas L. Fong, Ashish Khisti, Baochun Li, Wai-Tian Tan, Xiaoqing Zhu, and John Apostolopoulos. “Optimal Multiplexed Erasure Codes for Streaming Messages with Different Decoding Delays,” in *IEEE Transactions on Information Theory*, vol. 66, no. 7, pp. 4007-4018, July 2020.
- [J96] Yanjiao Chen, Long Lin, Baochun Li. “Razor: Scaling Backend Capacity for Mobile Applications,” in *IEEE Transactions on Mobile Computing*, vol. 19, no. 7, pp. 1702-1714, July 2020.
- [J95] Hao Wang, Di Niu, Baochun Li. “Turbo: Dynamic and Decentralized Global Analytics via Machine Learning,” in *IEEE Transactions on Parallel and Distributed Systems*, vol. 31, no. 6, pp. 1372-1386, June 2020.
- [J94] Silas L. Fong, Ashish Khisti, Baochun Li, Wai-Tian Tan, Xiaoqing Zhu, and John Apostolopoulos. “Optimal Streaming Erasure Codes over the Three-Node Relay Network,” in *IEEE Transactions on Information Theory*, vol. 66, no. 5, pp. 2696-2712, May 2020.
- [J93] Xu Yuan, Xingliang Yuan, Yihe Zhang, Baochun Li, Cong Wang. “Enabling Encrypted Boolean Queries in Geographically Distributed Databases,” in *IEEE Transactions on Parallel and Distributed Systems*, vol. 31, no. 3, pp. 634-646, March 2020.
- [J92] Xueling Lin, Jingjie Jiang, Calvin Hong Yi Li, Bo Li, Baochun Li. “Circa: Collaborative Code Offloading among Multiple Mobile Devices,” in *Wireless Networks*, Springer, vol. 26,

no. 2, pp. 823-841, February 2020.

[J91] Hao Wang, Baochun Li. “Mitigating Bottlenecks in Wide Area Data Analytics via Machine Learning,” in *IEEE Transactions on Network Science and Engineering*, vol. 7, no. 1, pp. 155-166, January-March 2020.

[J90] Li Chen, Yuan Feng, Baochun Li, Bo Li. “Promenade: Proportionally Fair Multipath Rate Control in Datacenter Networks with Random Network Coding,” in *IEEE Transactions on Parallel and Distributed Systems*, vol. 30, no. 11, pp. 2536-2546, November 2019.

[J89] Yanjiao Chen, Xu Wang, Baochun Li, Qian Zhang. “An Incentive Mechanism for Crowdsourcing Systems with Network Effects,” in *ACM Transactions on Internet Technology*, vol. 19, no. 4, pp. 49:1-49:21, September 2019.

[J88] Jun Li, Baochun Li, Bo Li. “Mist: Efficient Dissemination of Erasure-coded Data in Data Centers,” in *IEEE Transactions on Emerging Topics in Computing*, Special Issue on Emerging Trends and Design Paradigms for Memory Systems and Storage, vol. 7, no. 3, pp. 468-480, July-September 2019.

[J87] Li Chen, Shuhao Liu, Baochun Li, Bo Li. “Scheduling Jobs across Geo-Distributed Datacenters with Max-Min Fairness,” in *IEEE Transactions on Network Science and Engineering*, vol. 6, no. 3, pp. 488-500, July-September 2019.

[J86] Silas L. Fong, Ashish Khisti, Baochun Li, Wai-Tian Tan, Xiaoqing Zhu, and John Apostolopoulos. “Optimal Streaming Codes for Channels with Burst and Arbitrary Erasures,” in *IEEE Transactions on Information Theory*, vol. 65, no. 7, pp. 4274-4291, July 2019.

[J85] Wenxin Li, Di Niu, Yinan Liu, Shuhao Liu, Baochun Li. “Wide-Area Spark Streaming: Automated Routing and Batch Sizing,” in *IEEE Transactions on Parallel and Distributed Systems*, vol. 30, no. 6, pp. 1434-1448, June 2019.

[J84] Yu Guo, Xingliang Yuan, Xinyu Wang, Cong Wang, Baochun Li, Xiaohua Jia, “Enabling Encrypted Rich Queries in Distributed Key-Value Stores,” in *IEEE Transactions on Parallel and Distributed Systems*, vol. 30, no. 6, pp. 1283-1297, June 2019.

[J83] Jingjie Jiang, Shiyao Ma, Bo Li, Baochun Li. “Adia: Achieving High Link Utilization with Coflow-Aware Scheduling in Data Center Networks,” in *IEEE Transactions on Cloud Computing*, vol. 7, no. 2, pp. 431-441, April-June 2019.

[J82] Xu Yuan, Xingliang Yuan, Baochun Li, Cong Wang. “Toward Secure and Scalable Computation in Internet of Things Data Applications,” in *IEEE Internet of Things Journal*, vol. 6, no. 2, pp. 3753-3763, April 2019.

[J81] Yanjiao Chen, Yuxuang Xiong, Qian Wang, Xiaoyan Yin, Baochun Li. “Ensuring Minimum Spectrum Requirement in Matching-based Spectrum Allocation,” in *IEEE Transactions on Mobile Computing*, vol. 17, no. 9, pp. 2028-2040, September 2018.

[J80] Li Chen, Yuan Feng, Baochun Li, Bo Li. “Efficient Performance-Centric Bandwidth

Allocation with Fairness Tradeoff,” in *IEEE Transactions on Parallel and Distributed Systems*, vol. 29, no. 8, pp. 1693-1706, August 2018.

[J79] Zhiming Hu, Baochun Li, Jun Luo. “Time- and Cost-Efficient Task Scheduling Across Geo-Distributed Data Centers,” in *IEEE Transactions on Parallel and Distributed Systems*, vol. 29, no. 3, pp. 705-718, March 2018.

[J78] Di Niu, Hong Xu, Baochun Li. “Resource Auto-Scaling and Sparse Content Replication for Video Storage Systems,” in *ACM Transactions on Modeling and Performance Evaluation of Computing Systems*, vol. 2, no. 4, pp. 19:1-19:30, December 2017.

[J77] Shuhao Liu, Baochun Li. “Stemflow: Software-Defined Inter-Datacenter Overlay as a Service,” in *IEEE Journal on Selected Areas in Communications*, Special issue on Emerging Technologies in Software-driven Communication, vol. 35, no. 11, pp. 2563-2573, October 2017.

[J76] Chen Feng, Hong Xu, Baochun Li. “An Alternating Direction Method Approach to Cloud Traffic Management,” in *IEEE Transactions on Parallel and Distributed Systems*, vol. 28, no. 8, pp. 2145-2158, August 2017.

[J75] Jun Li, Baochun Li. “Beehive: Erasure Codes for Fixing Multiple Failures in Distributed Storage Systems,” in *IEEE Transactions on Parallel and Distributed Systems*, vol. 28, no. 5, pp. 1257-1270, May 2017.

[J74] Liyao Xiang, Tzu-Yin Tai, Baochun Li, Bo Li. “Tack: Learning Towards Contextual and Ephemeral Indoor Localization with Crowdsourcing,” in *IEEE Journal on Selected Areas in Communications*, Special Issue on Human-In-The-Loop Mobile Networks, vol. 35, no. 4, pp. 863-879, April 2017.

[J73] Di Niu, Baochun Li. “An Asynchronous Fixed-Point Algorithm for Resource Sharing with Coupled Objectives,” in *IEEE/ACM Transactions on Networking*, vol. 24, no. 5, pp. 2593-2606, October 2016.

[J72] Yinan Liu, Di Niu, Baochun Li. “Delay-Optimized Video Traffic Routing in Software-Defined Inter-Datacenter Networks,” in *IEEE Transactions on Multimedia*, Special Issue on Cloud-Based Video Processing and Content Sharing, vol. 18, no. 5, pp. 865-878, May 2016.

[J71] Siqi Ji, Baochun Li. “Wide Area Analytics for Geographically Distributed Datacenters,” in *Journal of Tsinghua Science and Technology*, vol. 21, no. 2, pp. 125-135, April 2016.

[J70] Zhi Wang, Baochun Li, Lifeng Sun, Wenwu Zhu, Shiqiang Yang. “Dispersing Instant Social Video Service Across Multiple Clouds,” in *IEEE Transactions on Parallel and Distributed Systems*, vol. 27, no. 3, pp. 735-747, March 2016.

[J69] Jingjie Jiang, Shengkai Zhang, Bo Li, Baochun Li. “Maximized Cellular Traffic Offloading via Device-to-Device Content Sharing,” in *IEEE Journal on Selected Areas in Communications*, vol. 34, no. 1, pp. 82-91, January 2016.

- [J68] Wei Wang, Ben Liang, Baochun Li. “Optimal Online Multi-Instance Acquisition in IaaS Clouds,” in *IEEE Transactions on Parallel and Distributed Systems*, vol. 26, no. 12, pp. 3407-3419, December 2015.
- [J67] Wei Wang, Ben Liang, Baochun Li. “Multi-Resource Fair Allocation in Heterogeneous Cloud Computing Systems,” in *IEEE Transactions on Parallel and Distributed Systems*, vol. 26, no. 20, pp. 2822-2835, October 2015.
- [J66] Hong Xu, Baochun Li. “Spot Transit: Cheaper Internet Transit for Elastic Traffic,” in *IEEE Transactions on Services Computing*, vol. 8, no. 5, pp. 768-781, September 2015.
- [J65] Hong Xu, Chen Feng, Baochun Li. “Temperature Aware Workload Management in Geo-distributed Datacenters,” in *IEEE Transactions on Parallel and Distributed Systems*, vol. 26, no. 6, pp. 1743-1753, June 2015.
- [J64] Wei Wang, Di Niu, Ben Liang, Baochun Li. “Dynamic Cloud Resource Reservation via IaaS Cloud Brokerage,” in *IEEE Transactions on Parallel and Distributed Systems*, vol. 26, no. 6, pp. 1580-1593, June 2015.
- [J63] Zongpeng Li, Baochun Li, Yuefei Zhu. “Designing Truthful Spectrum Auctions for Multi-hop Secondary Networks,” in *IEEE Transactions on Mobile Computing*, vol. 14, no. 2, pp. 316-327, February 2015.
- [J62] Boyang Wang, Baochun Li, Hui Li. “Panda: Public Auditing for Shared Data with Efficient User Revocation in the Cloud,” in *IEEE Transactions on Services Computing*, vol. 8, no. 1, pp. 92-106, January – February 2015.
- [J61] Fei Xu, Fangming Liu, Linghui Liu, Hai Jin, Bo Li, Baochun Li. “iAware: Making Live Migration of Virtual Machines Interference-Aware in the Cloud,” in *IEEE Transactions on Computers*, vol. 63, no. 12, pp. 3012-3025, December 2014.
- [J60] Yuefei Zhu, Baochun Li, Haoming Fu, Zongpeng Li. “Core-Selecting Secondary Spectrum Auctions,” in *IEEE Journal on Selected Areas in Communications*, Cognitive Radio Series, vol. 32, no. 11, pp. 2268-2279, November 2014.
- [J59] Fangming Liu, Zhi Zhou, Hai Jin, Bo Li, Baochun Li, Hongbo Jiang. “On Arbitrating the Power-Performance Tradeoff in SaaS Clouds,” in *IEEE Transactions on Parallel and Distributed Systems*, vol. 25, no. 10, pp. 2648-2658, October 2014.
- [J58] Hong Xu, Baochun Li. “An Optimization Framework for XOR-Assisted Cooperative Relaying in Cellular Networks,” in *IEEE Transactions on Mobile Computing*, vol. 13, no. 5, pp. 979-991, May 2014.
- [J57] Boyang Wang, Baochun Li, Hui Li. “Oruta: Privacy-Preserving Public Auditing for Shared Data in the Cloud,” in *IEEE Transactions on Cloud Computing*, vol. 2, no. 1, pp. 43-56, January – March 2014.
- [J56] Wei Wang, Ben Liang, Baochun Li. “Designing Truthful Spectrum Double Auctions

with Local Markets,” in *IEEE Transactions on Mobile Computing*, vol. 13, no. 1, pp. 75-88, January 2014.

[J55] Yuan Feng, Baochun Li, Bo Li. “Price Competition in an Oligopoly Cloud Market with Multiple IaaS Cloud Providers,” in *IEEE Transactions on Computers*, Special Issue on Cloud of Clouds, vol. 63, no. 1, pp. 59-73, January 2014.

[J54] Hong Xu, Baochun Li. “Dynamic Cloud Pricing for Revenue Maximization,” in *IEEE Transactions on Cloud Computing*, vol. 1, no. 2, pp. 158-171, July – December 2013.

[J53] Baochun Li, Zhi Wang, Jiangchuan Liu, Wenwu Zhu. “Two Decades of Internet Video Streaming: A Retrospective View,” in *ACM Transactions on Multimedia Computing, Communications and Applications*, Special Issue on the 20th Anniversary of ACM SIGMM Multimedia, vol. 9, no. 1s, pp. 33:1-33:20, October 2013.

[J52] Xiangwen Chen, Minghua Chen, Baochun Li, Yao Zhao, Yunnan Wu, Jin Li. “Celerity: A Low-Delay Multi-Party Conferencing Solution,” in *IEEE Journal on Selected Areas in Communications*, Special Issue on Emerging Technologies in Communications, vol. 31, no. 9, pp. 155-164, September 2013.

[J51] Fangming Liu, Shijun Shen, Bo Li, Baochun Li, Hai Jin. “Cinematic-Quality VoD in a P2P Storage Cloud: Design, Implementation and Measurements,” in *IEEE Journal on Selected Areas in Communications*, Special Issue on Emerging Technologies in Communications, vol. 31, no. 9, pp. 214-226, September 2013.

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[M5] Fei Wang, Baochun Li, and Bo Li. “Federated Unlearning and Its Privacy Threats,” in *IEEE Network*, 2023.

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◇ **Refereed Papers in Conference Proceedings** (in reverse chronological order)

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[C313] Chenghao Hu, Baochun Li. “When the Edge Meets Transformers: Distributed Inference with Transformer Models,” in the Proceedings of *the 44th IEEE International Conference on Distributed Computing Systems (ICDCS 2024)*, Jersey City, New Jersey, USA, July 23 – 26, 2024 (acceptance ratio: 21%).

[C312] Sijia Chen, Ningxin Su, Baochun Li. “Calibre: Towards Fair and Accurate Personalized Federated Learning with Self-Supervised Learning,” in the Proceedings of *the 44th IEEE International Conference on Distributed Computing Systems (ICDCS 2024)*, Jersey City, New Jersey, USA, July 23 – 26, 2024 (acceptance ratio: 21%).

[C311] Chen Ying, Baochun Li, Bo Li. “Blade: Pushing the Performance Envelope of Asynchronous Federated Learning,” in the Proceedings of *the IEEE/ACM International Symposium on Quality of Service (IWQoS 2024)*, Guangzhou, China, June 19 – 21, 2024 (acceptance ratio: 34%).

[C310] Sijia Chen, Ningxin Su, Baochun Li. “Relic: Federated Conditional Textual Inversion with Prototype Alignment,” in the Proceedings of *the IEEE/ACM International Symposium on Quality of Service (IWQoS 2024)*, Guangzhou, China, June 19 – 21, 2024 (acceptance ratio: 34%).

[C309] Hengyuan Xu, Liyao Xiang, Hangyu Ye, Dixi Yao, Pengzhi Chu, Baochun Li. “Permutation Equivariance of Transformers and Its Applications,” in the Proceedings of *the 2024 IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2024)*, Seattle, Washington, June 17 – 21, 2024 (acceptance ratio: 23%).

[C308] Salma Emara, Daniel Liu, Fei Wang, Baochun Li, “Cascade: Enhancing Reinforcement Learning with Curriculum Federated Learning and Interference Avoidance — A Case Study in Adaptive Bitrate Selection,” in the Proceedings of *IEEE INFOCOM 2024 Workshop on Distributed Machine Learning and Fog Networks (FOGML)*, Vancouver, Canada, May 20 – 23, 2024.

[C307] Ningxin Su, Chenghao Hu, Baochun Li, Bo Li. “Titanic: Towards Production Federated Learning with Large Language Models,” in the Proceedings of *IEEE INFOCOM 2024*, Vancouver, Canada, May 20 – 23, 2024 (acceptance ratio: 19%).

[C306] Feng Cheng, Jiang Xiao, Cunyang Liu, Shijie Zhang, Yifan Zhou, Bo Li, Baochun Li, Hai Jin. “SharDAG: Scaling DAG-Based Blockchains via Adaptive Sharding,” in the Proceedings of *the IEEE International Conference on Data Engineering (ICDE 2024)*, Utrecht, Netherlands, May 13 – 16, 2024.

[C305] Sijia Chen, Baochun Li, Di Niu. “Boosting of Thoughts: Trial-and-Error Problem Solving with Large Language Models,” in the Proceedings of the *12th International Conference on Learning Representations (ICLR 2024)*, Vienna, Austria, May 7 – 11, 2024 (acceptance ratio: 31%).

[C304] Qikai Lu, Di Niu, Mohammadamin Khoshkho, Baochun Li. “HyperFLORA: Federated Learning with Instantaneous Personalization,” in the Proceedings of *SIAM International Conference on Data Mining (SDM 2024)*, Houston, Texas, April 18 – 20, 2024 (acceptance ratio: 29%).

[C303] Tianhang Zheng, Baochun Li. “Differentially Private Dataset Condensation,” in the Proceedings of the *Workshop on Artificial Intelligence System with Confidential Computing (AISCC 2024)*, co-located with the Network and Distributed System Security Symposium (NDSS 2024), San Diego, California, February 26 – March 1, 2024.

[C302] Dixi Yao, Baochun Li. “PerFedRLNAS: One-for-all Personalized Federated Neural Architecture Search,” in Proceedings of the *38th Annual AAAI Conference on Artificial Intelligence (AAAI 2024)*, Vancouver, Canada, February 20 – 27, 2024. (acceptance ratio: 23%).

[C301] Chen Ying, Baochun Li, Bo Li. “FedSaw: Communication-Efficient Cross-Silo Federated Learning with Adaptive Compression,” in the Proceedings of the *20th IEEE International Conference on Mobile Ad Hoc and Smart Systems (MASS 2023)*, Toronto, Ontario, September 25 – 27, 2023.

[C300] Tianhang Zheng, Baochun Li. “RDM-DC: Poisoning Resilient Dataset Condensation with Robust Distribution Matching,” in the Proceedings of the *39th Conference on Uncertainty in Artificial Intelligence (UAI 2023)*, Pittsburgh, PA, July 31 – August 4, 2023 (acceptance ratio: 31%).

[C299] Baochun Li, Ningxin Su, Chen Ying, Fei Wang. “Plato: An Open-Source Research Framework for Production Federated Learning,” in the Proceedings of *ACM Turing Award Celebration Conference (TURC)*, Wuhan, China, July 29 – 30, 2023.

[C298] Ningxin Su, Baochun Li, Bo Li. “Multi-Server Stable Rendezvous for the Metaverse,” in the Proceedings of the *IEEE International Conference on Metaverse Computing, Networking and Applications (IEEE MetaCom 2023)*, Kyoto, Japan, June 26 – 28, 2023 (acceptance ratio: 35%, **Best Paper Award**).

[C297] Tianhang Zheng, Hao Lan, Baochun Li. “Be Careful with PyPI Packages: You May Unconsciously Spread Backdoor Model Weights,” in the Proceedings of the *6th Conference on Machine Learning and Systems (MLSys 2023)*, Miami, FL, June 4 – 8, 2023 (acceptance ratio: 22%).

[C296] Fei Wang, Salma Emara, Isidor Kaplan, Baochun Li, Timothy Zeyl. “Multi-Agent Deep Reinforcement Learning for Cooperative Edge Caching via Hybrid Communication,” in the Proceedings of *IEEE International Conference on Communications (ICC 2023)*, Selected Areas in Communications — Machine Learning for Communications and Networking Track, Rome, Italy, May 28 – June 1, 2023.

[C295] Ningxin Su, Baochun Li. “Asynchronous Federated Unlearning,” in the Proceedings of *IEEE INFOCOM 2023*, New York Area, U.S.A., May 17 – 20, 2023 (acceptance ratio: 19%).

[C294] Fei Wang, Ethan Hugh, Baochun Li. “More than Enough is Too Much: Adaptive Defenses against Gradient Leakage in Production Federated Learning,” in the Proceedings of *IEEE INFOCOM 2023*, New York Area, U.S.A., May 17 – 20, 2023 (acceptance ratio: 19%, **Best Paper Award**).

[C293] Chen Zhang, Boyang Zhou, Zhiqiang He, Zeyuan Liu, Yanjiao Chen, Wenyuan Xu, Baochun Li. “OBLIVION: Poisoning Federated Learning by Inducing Catastrophic Forgetting,” in the Proceedings of *IEEE INFOCOM 2023*, New York Area, U.S.A., May 17 – 20, 2023 (acceptance ratio: 19%).

[C292] Zhifeng Jiang, Wei Wang, Baochun Li, Bo Li. “Pisces: Efficient Federated Learning via Guided Asynchronous Training,” in the Proceedings of *the 13th ACM Symposium on Cloud Computing (SoCC 2022)*, San Francisco, California, November 7 – 11, 2022 (acceptance ratio: 25%).

[C291] Yufei Kang, Baochun Li, Timothy Zeyl. “FedRL: Improving the Performance of Federated Learning with Non-IID Data,” in the Proceedings of *IEEE Globecom 2022*, Symposium on Selected Areas in Communications, Cloud Computing, Networking and Storage, Rio de Janeiro, Brazil, December 4 – 8, 2022.

[C290] Qing-Qing Yang, Xi Peng, Li Chen, Libin Liu, Jingze Zhang, Hong Xu, Baochun Li, Gong Zhang. “DeepQueueNet: Towards Scalable and Generalized Network Performance Estimation with Packet-level Visibility,” in the Proceedings of *ACM SIGCOMM 2022*, Amsterdam, the Netherlands, August 22 – 24, 2022 (acceptance ratio: 19%).

[C289] Ningxin Su, Baochun Li. “How Asynchronous can Federated Learning Be?” in the Proceedings of *the 29th IEEE/ACM International Symposium on Quality of Service (IWQoS 2022)*, Online, June 10 – 12, 2022 (acceptance ratio: 24%).

[C288] Salma Emara, Fei Wang, Isidor Kaplan, and Baochun Li. “Ivory: Learning Network Adaptive Streaming Codes,” in the Proceedings of *the 29th IEEE/ACM International Symposium on Quality of Service (IWQoS 2022)*, Online, June 10 – 12, 2022 (acceptance ratio: 24%).

[C287] Wanyu Lin, Hao Lan, Hao Wang, Baochun Li. “OrphicX: A Causality-Inspired Latent Variable Model for Interpreting Graph Neural Networks,” in the Proceedings of *the 2022 IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2022)*, Oral Presentation, New Orleans, Louisiana, June 19 – 24, 2022 (acceptance ratio: 25%, **Best Paper Finalist**, $33 / 8161 = 0.4\%$).

[C286] Sijia Chen, Baochun Li. “Multi-Modal Dynamic Graph Transformer for Visual Grounding,” in the Proceedings of *the 2022 IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2022)*, New Orleans, Louisiana, June 19 – 24, 2022 (acceptance ratio: 25%).

[C285] Tianhang Zheng, Baochun Li. “InfoCensor: An Information-Theoretic Framework against Sensitive Attribute Inference and Demographic Disparity,” in the Proceedings of *the*

17th ACM ASIA Conference on Computer and Communications Security (AsiaCCS 2022), Nagasaki, Japan, May 30 – June 3, 2022.

[C284] Chen Ying, Baochun Li, Bo Li. “Tempo: Improving Training Performance in Cross-Silo Federated Learning,” in the Proceedings of *IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP 2022)*, Singapore, May 22 – 27, 2022 (acceptance ratio: 48%).

[C283] Tianhang Zheng, Baochun Li. “Poisoning Attacks on Deep Learning based Wireless Traffic Prediction,” in the Proceedings of *IEEE INFOCOM 2022*, Virtual Conference, May 2 – 5, 2022 (acceptance ratio: 20%).

[C282] Sijia Chen, Baochun Li. “Towards Optimal Multi-modal Federated Learning on Non-IID Data with Hierarchical Gradient Blending,” in the Proceedings of *IEEE INFOCOM 2022*, Virtual Conference, May 2 – 5, 2022 (acceptance ratio: 20%).

[C281] Chenghao Hu, Baochun Li. “Distributed Inference with Deep Learning Models across Heterogeneous Edge Devices,” in the Proceedings of *IEEE INFOCOM 2022*, Virtual Conference, May 2 – 5, 2022 (acceptance ratio: 20%).

[C280] Rui Han, Jiang Xiao, Xiaohai Dai, Shijie Zhang, Yi Sun, Baochun Li, Hai Jin. “Vassago: Efficient and Authenticated Provenance Query on Multiple Blockchains,” in the Proceedings of the *40th International Symposium on Reliable Distributed Systems (SRDS 2021)*, Online, September 20 – 23, 2021 (acceptance ratio: 25%).

[C279] Hao Lan, Li Chen, Baochun Li. “Accelerated Device Placement Optimization with Contrastive Learning,” in the Proceedings of the *50th International Conference on Parallel Processing (ICPP 2021)*, Argonne National Laboratory, Illinois, August 9 – 12, 2021 (acceptance ratio: 26%).

[C278] Wanyu Lin, Hao Lan, Baochun Li. “Generative Causal Explanations for Graph Neural Networks,” in the Proceedings of the *38th International Conference on Machine Learning (ICML 2021)*, Online, July 18 – 24, 2021 (acceptance ratio: 21%).

[C277] Chen Chen, Hong Xu, Wei Wang, Baochun Li, Bo Li, Li Chen, Gong Zhang. “Communication-Efficient Federated Learning with Adaptive Parameter Freezing,” in the Proceedings of the *41st IEEE International Conference on Distributed Computing Systems (ICDCS 2021)*, Online, July 7 – 10, 2021 (acceptance ratio: 20%).

[C276] Zhenchang Xia, Yanjiao Chen, Libing Wu, Yu-Cheng Chou, Zhicong Zheng, Haoyang Li, Baochun Li. “A Multi-Objective Reinforcement Learning Perspective on Internet Congestion Control,” in the Proceedings of the *29th IEEE/ACM International Symposium on Quality of Service (IWQoS 2021)*, Online, June 25 – 28, 2021 (acceptance ratio: 25%).

[C275] Hao Lan, Li Chen, Baochun Li. “EAGLE: Expedited Device Placement with Automatic Grouping for Large Models,” in the Proceedings of the *35th IEEE International Parallel and Distributed Processing Symposium (IPDPS 2021)*, Portland, Oregon, May 17 – 21, 2021.

- [C274] Tianhang Zheng, Baochun Li. “First-Order Efficient General-Purpose Clean-Label Data Poisoning,” in the Proceedings of *IEEE INFOCOM 2021*, Virtual Conference, May 10 – 13, 2021 (acceptance ratio: 20%).
- [C273] Wanyu Lin, Baochun Li. “Medley: Predicting Social Trust in Time-Varying Online Social Networks,” in the Proceedings of *IEEE INFOCOM 2021*, Virtual Conference, May 10 – 13, 2021 (acceptance ratio: 20%).
- [C272] Chen Chen, Qizhen Weng, Wei Wang, Baochun Li, Bo Li. “Semi-Dynamic Load Balancing: Efficient Distributed Learning in Non-Dedicated Environments,” in the Proceedings of the *ACM Symposium on Cloud Computing 2020 (SoCC 2020)*, pp. 431-446, Renton, WA, October 19 – 21, 2020 (acceptance ratio: 24%).
- [C271] Zhongjie Ba*, Tianhang Zheng*, Zhan Qin, Hanlin Yu, Liu Liu, Baochun Li, Xue Liu, Kui Ren. “AccelEve: Accelerometer-based Smartphone Eavesdropping,” In the Proceedings of the 26th ACM International Conference on Mobile Computing and Networking (ACM Mobicom 2020) (Demos), pp. 73:1-73:2, Virtual Conference, September 21 – 25, 2020 (*equal contribution).
- [C270] Liyao Xiang, Lingdong Wang, Shufan Wang, Baochun Li. “Achieving Consensus in Privacy-Preserving Decentralized Learning,” in the Proceedings of the *40th IEEE International Conference on Distributed Computing Systems (ICDCS 2020)*, pp. 899-909, Singapore, July 8 – 10, 2020 (acceptance ratio: 18%).
- [C269] Lingdong Wang, Liyao Xiang, Jiayu Xu, Jiaju Chen, Xing Zhao, Dixi Yao, Xinbing Wang, Baochun Li. “Context-Aware Deep Model Compression for Edge Cloud Computing,” in the Proceedings of the *40th IEEE International Conference on Distributed Computing Systems (ICDCS 2020)*, pp. 787-797, Singapore, July 8 – 10, 2020 (acceptance ratio: 18%).
- [C268] Hao Wang, Zakhary Kaplan, Di Niu, Baochun Li. “Optimizing Federated Learning on Non-IID Data with Reinforcement Learning,” in the Proceedings of *IEEE INFOCOM*, pp. 1698-1707, Virtual Conference, July 6 – 9, 2020 (acceptance ratio: 20%).
- [C267] Wanyu Lin, Zhaolin Gao, Baochun Li. “Guardian: Evaluating Trust in Online Social Networks with Graph Convolutional Networks,” in the Proceedings of *IEEE INFOCOM*, pp. 914-923, Virtual Conference, July 6 – 9, 2020 (acceptance ratio: 20%).
- [C266] Salma Emara, Baochun Li, Yanjiao Chen. “Eagle: Refining Congestion Control by Learning from the Experts,” in the Proceedings of *IEEE INFOCOM*, pp. 676-685, Virtual Conference, July 6 – 9, 2020 (acceptance ratio: 20%).
- [C265] Wanyu Lin, Zhaolin Gao, Baochun Li. “Shoestring: Graph-Based Semi-Supervised Classification with Severely Limited Labeled Data,” in the Proceedings of the 2020 IEEE Conference on Computer Vision and Pattern Recognition (CVPR 2020), pp. 4174-4182, Seattle, Washington, June 16 – 18, 2020 (acceptance ratio: 22%).
- [C264] Wanyu Lin, Shengxiang Ji, Baochun Li. “Adversarial Attacks on Link Prediction Algorithms based on Graph Neural Networks,” in the Proceedings of *the 15th ACM ASIA Confer-*

ence on Computer and Communications Security (*ACM ASIACCS 2020*), pp. 370-380, Taipei, Taiwan, June 1 – 5, 2020 (acceptance ratio: 22%).

[C263] Yuechen Tao, Bo Li, Jingjie Jiang, Hok Chu Ng, Cong Wang, Baochun Li. “On Sharding Open Blockchains with Smart Contracts,” in the Proceedings of *IEEE International Conference on Data Engineering (ICDE 2020)*, pp. 1357-1368, Dallas, Texas, April 20 – 24, 2020.

[C262] Zhongjie Ma*, Tianhang Zheng*, Xinyu Zhang, Zhan Qin, Baochun Li, Xue Liu, Kui Ren. “Learning-based Practical Smartphone Eavesdropping with Built-in Accelerometer,” in the Proceedings of *the 26th Annual Network and Distributed System Security Symposium (NDSS 2020)*, San Diego, California, February 23 – 26, 2020 (*equal contribution) (acceptance ratio: 17%).

[C261] Chen Ying, Baochun Li, Xiaodi Ke, Lei Guo, “Scheduling Virtual Machine Migration during Datacenter Upgrades with Reinforcement Learning,” in the Proceedings of the *15th EAI International Conference on Heterogeneous Networking for Quality, Reliability, Security and Robustness (QShine 2019)*, pp. 102-117, Shenzhen, China, November 22 – 23, 2019.

[C260] Silas L. Fong, Salma Emara, Baochun Li, Ashish Khisti, Wai-Tian Tan, Xiaoqing Zhu and John Apostolopoulos. “Low-Latency Channel-Adaptive Error Control for Interactive Streaming,” in the Proceedings of *ACM Multimedia 2019*, pp. 438-446, Nice, France, October 21 – 25, 2019 (acceptance ratio: 26%).

[C259] Zhenjie Yang, Yong Cui, Baochun Li, Yadong Liu, Yi Xu. “Software-Defined Wide Area Network (SD-WAN): Architecture, Advances and Opportunities,” in the Proceedings of *the 28th International Conference on Computer Communication and Networks (ICCCN 2019)*, Valencia, Spain, July 29 – August 1, 2019.

[C258] Silas L. Fong, Ashish Khisti, Baochun Li, Wai-Tian Tan, Xiaoqing Zhu, John Apostolopoulos. “Optimal Multiplexed Erasure Codes for Streaming Messages with Different Decoding Delays,” in the Proceedings of the *2019 IEEE International Symposium on Information Theory (ISIT 2019)*, Paris, France, July 7 – 12, 2019.

[C257] Silas L. Fong, Ashish Khisti, Baochun Li, Wai-Tian Tan, Xiaoqing Zhu, John Apostolopoulos. “Optimal Streaming Erasure Codes over the Three-Node Relay Network,” in the Proceedings of the *2019 IEEE International Symposium on Information Theory (ISIT 2019)*, Paris, France, July 7 – 12, 2019.

[C256] Zhiming Hu, James Tu, Baochun Li. “Spear: Optimized Dependency-Aware Task Scheduling with Deep Reinforcement Learning,” in the Proceedings of the *39th International Conference on Distributed Computing Systems (ICDCS 2019)*, pp. 2037-2046, Dallas, Texas, July 7 – 10, 2019 (acceptance ratio: 25%).

[C255] Yifan Gong, Baochun Li, Ben Liang, Zheng Zhan. “Chic: Experience-driven Scheduling in Machine Learning Clusters,” in the Proceedings of the *2019 IEEE/ACM International Symposium on Quality of Service (IWQoS 2019)*, Phoenix, Arizona, June 24 – 25, 2019 (acceptance ratio: 27%).

[C254] Liyao Xiang, Jingbo Yang, Baochun Li. “Differentially-Private Deep Learning from an Optimization Perspective,” in the Proceedings of *IEEE INFOCOM 2019*, pp. 559-567, Paris, France, April 29 – May 2, 2019 (acceptance ratio: 19%).

[C253] Hao Wang, Di Niu, Baochun Li. “Distributed Machine Learning with a Serverless Architecture,” in the Proceedings of *IEEE INFOCOM 2019*, pp. 1288-1296, Paris, France, April 29 – May 2, 2019 (acceptance ratio: 19%).

[C252] Yuanxiang Gao, Li Chen, Baochun Li. “Post: Device Placement with Cross-Entropy Minimization and Proximal Policy Optimization,” in the Proceedings of the *32rd Conference on Neural Information Processing Systems (NeurIPS 2018)*, pp. 9971-9980, Montreal, Canada, December 3 – 8, 2018 (acceptance ratio: 20%).

[C251] Hao Wang, Di Niu, Baochun Li. “Dynamic and Decentralized Global Analytics via Machine Learning,” in the Proceedings of the *ACM Symposium on Cloud Computing 2018 (SoCC 2018)*, pp. 14-25, Carlsbad, California, October 11 – 13, 2018 (acceptance ratio: 24%).

[C250] Yuanxiang Gao, Li Chen, Baochun Li. “Spotlight: Optimizing Device Placement for Training Deep Neural Networks,” in the Proceedings of the *35th International Conference on Machine Learning (ICML 2018)*, pp. 1676-1684, Stockholm, Sweden, July 10 – 15, 2018 (acceptance ratio: 25%).

[C249] Shuhao Liu, Li Chen, Baochun Li. “Siphon: Expediting Inter-Datacenter Coflows in Wide-Area Data Analytics,” in the Proceedings of the *2018 USENIX Annual Technical Conference (USENIX ATC 2018)*, Boston, Massachusetts, July 11 – 13, 2018 (acceptance ratio: 20%).

[C248] Silas L. Fong, Ashish Khisti, Baochun Li, Wai-Tian Tan, Xiaoqing Zhu, John Apostolopoulos. “Optimal Streaming Codes for Channels with Burst and Arbitrary Erasures,” in the Proceedings of the *2018 IEEE International Symposium on Information Theory (ISIT 2018)*, Vail, Colorado, June 17 – 22, 2018.

[C247] Zhiming Hu, Baochun Li, Chen Chen and Xiaodi Ke. “FlowTime: Dynamic Scheduling of Deadline-Aware Workflows and Ad-hoc Jobs,” in the Proceedings of the *38th International Conference on Distributed Computing Systems (ICDCS 2018)*, pp. 929-938, Vienna, Austria, July 2 – 5, 2018 (acceptance ratio: 20%).

[C246] Jun Li, Baochun Li. “Parallelism-Aware Locally Repairable Code for Distributed Storage Systems,” in the Proceedings of the *38th International Conference on Distributed Computing Systems (ICDCS 2018)*, pp. 87-98, Vienna, Austria, July 2 – 5, 2018 (acceptance ratio: 20%).

[C245] Siqi Ji, Shuhao Liu, Baochun Li. “Deadline-Aware Scheduling and Routing for Inter-Datacenter Multicast Transfers,” in the Proceedings of *IEEE International Conference on Cloud Engineering (IC2E 2018)* (full paper), pp. 124-133, Orlando, Florida, April 17 – 20, 2018 (acceptance ratio: 19%).

[C244] Siqi Ji, Ming Da Li, Niannian Ji, Baochun Li. “An Online Virtual Machine Placement

Algorithm in an Over-Committed Cloud,” in the Proceedings of *IEEE International Conference on Cloud Engineering (IC2E 2018)* (short paper), pp. 106-112, Orlando, Florida, April 17 – 20, 2018 (acceptance ratio: 22%).

[C243] Yanjiao Chen, Long Lin, Guiyan Cao, Zhenzhong Chen, Baochun Li. “Stable Combinatorial Spectrum Matching,” in the Proceedings of *IEEE INFOCOM 2018*, pp. 1664-1672, Honolulu, HI, April 15 – 19, 2018 (acceptance ratio: 19%).

[C242] Shuhao Liu, Li Chen, Baochun Li, Aiden Carnegie. “A Hierarchical Synchronous Parallel Model for Wide-Area Graph Analytics,” in the Proceedings of *IEEE INFOCOM 2018*, pp. 531-539, Honolulu, HI, April 15 – 19, 2018 (acceptance ratio: 19%).

[C241] Xu Yuan, Xingliang Yuan, Baochun Li, Cong Wang. “Secure Multi-Client Data Access with Boolean Queries in Distributed Key-Value Stores,” in the Proceedings of the *IEEE Conference on Communications and Network Security (IEEE CNS 2017)*, Las Vegas, NV, October 9 – 11, 2017 (acceptance ratio: 30%).

[C240] Liyao Xiang, Baochun Li, Bo Li. “Privacy-Preserving Inference in Crowdsourcing Systems,” in the Proceedings of the *IEEE Conference on Communications and Network Security (IEEE CNS 2017)*, Las Vegas, NV, October 9 – 11, 2017 (acceptance ratio: 30%).

[C239] Shuhao Liu, Li Chen, Baochun Li. “Siphon: a High-Performance Substrate for Inter-Datcenter Transfers in Wide-Area Data Analytics,” in the Proceedings of the ACM Symposium on Cloud Computing (SoCC) 2017 (Poster Session), pp. 646-646, Santa Clara, California, September 24 – 27, 2017.

[C238] Wenxin Li, Di Niu, Yinan Liu, Shuhao Liu and Baochun Li. “Joint Routing and Batch Sizing in Wide-Area Stream Processing Systems,” in the Proceedings of the *14th International Conference on Autonomic Computing (ICAC 2017)* (short paper), Columbus, Ohio, July 17 – 21, 2017.

[C237] Hao Wang, Baochun Li. “Lube: Mitigating Bottlenecks in Wide Area Data Analytics,” in the Proceedings of the *9th USENIX Workshop on Hot Topics in Cloud Computing (Hot-Cloud 2017)*, Santa Clara, California, July 10 – 11, 2017 (acceptance ratio: 32%).

[C236] Yanjiao Chen, Yuxuang Xiong, Qian Wang, Xiaoyan Yin, Baochun Li. “Stable Matching for Spectrum Market with Guaranteed Minimum Requirement,” in the Proceedings of the *18th International Symposium on Mobile Ad Hoc Networking and Computing (ACM MobiHoc 2017)*, Chennai, India, July 10 – 14, 2017 (acceptance ratio: 17%).

[C235] Xiaoyan Yin, Yanjiao Chen, Baochun Li. “Task Assignment with Guaranteed Quality for Crowdsourcing Platforms,” in the Proceedings of the *2017 IEEE/ACM International Symposium on Quality of Service (IWQoS 2017)*, Vilanova i la Geltrú, Spain, June 14 – 16, 2017 (acceptance ratio: 20%).

[C234] Yanjiao Chen, Zixuan Yu, Baochun Li. “Clockwork: Scheduling Cloud Requests in Mobile Applications,” in the Proceedings of the *14th IEEE International Conference on Sensing, Communication and Networking (SECON 2017)*, San Diego, California, June 12 – 14,

2017 (acceptance ratio: 26%).

[C233] Jun Li, Baochun Li. “On Data Parallelism of Erasure Coding in Distributed Storage Systems,” in the Proceedings of the *37th International Conference on Distributed Computing Systems (ICDCS 2017)*, pp. 45-56, Atlanta, Georgia, June 5 – 8, 2017 (acceptance ratio: 17%).

[C232] Zhiming Hu, Baochun Li, Zheng Qin, Rick Siow Mong Goh. “Job Scheduling without Prior Information in Big Data Processing Systems,” in the Proceedings of the *37th International Conference on Distributed Computing Systems (ICDCS 2017)*, pp. 572-582, Atlanta, Georgia, June 5 – 8, 2017 (acceptance ratio: 17%).

[C231] Shuhao Liu, Hao Wang, Baochun Li. “Optimizing Shuffle in Wide-Area Data Analytics,” in the Proceedings of the *37th International Conference on Distributed Computing Systems (ICDCS 2017)*, pp. 560-571, Atlanta, Georgia, June 5 – 8, 2017 (acceptance ratio: 17%).

[C230] Wanyu Lin, Xu Yuan, Baochun Li, Cong Wang. “Multi-Client Searchable Encryption over Distributed Key-Value Stores,” in the Proceedings of the *3rd IEEE International Conference on Smart Computing (SMARTCOMP 2017)*, Hong Kong, China, May 29 – 31, 2017.

[C229] Shuhao Liu, Baochun Li. “Stemflow: Inter-Datacenter Overlay as a Service,” in the Proceedings of *IEEE INFOCOM 2017 (Demo Session)*, pp. 976-977, Atlanta, Georgia, May 1 – 4, 2017.

[C228] Jingjie Jiang, Shiyao Ma, Bo Li, Baochun Li, Jiangchuan Liu. “Maximizing Link Utilization with Coflow-Aware Scheduling in Datacenter Networks,” in the Proceedings of *IEEE International Conference on Communications (ICC 2017)*, Selected Areas in Communications Symposium on Cloud Communications and Networking, Paris, France, May 21 – 25, 2017.

[C227] Xingliang Yuan, Yu Guo, Xinyu Wang, Cong Wang, Baochun Li, Xiaohua Jia. “EncKV: An Encrypted Key-value Store with Rich Queries,” in the Proceedings of *ACM Asia Conference on Computer and Communications Security (ASIACCS) 2017*, pp. 423-435, Abu Dhabi, UAE, April 2 – 6, 2017 (acceptance ratio: 20%).

[C226] Wei Wang, Shiyao Ma, Bo Li, Baochun Li. “Coflex: Navigating the Fairness-Efficiency Tradeoff for Coflow Scheduling,” in the Proceedings of *IEEE INFOCOM 2017*, Atlanta, Georgia, May 1 – 4, 2017 (acceptance ratio: 20%).

[C225] Li Chen, Shuhao Liu, Baochun Li, Bo Li. “Scheduling Jobs across Geo-Distributed Datacenters with Max-Min Fairness,” in the Proceedings of *IEEE INFOCOM 2017*, Atlanta, Georgia, May 1 – 4, 2017 (acceptance ratio: 20%).

[C224] Rui Zhu, Di Niu, Baochun Li, Zongpeng Li. “Optimal Multicast in Virtualized Datacenter Networks with Software Switches,” in the Proceedings of *IEEE INFOCOM 2017*, Atlanta, Georgia, May 1 – 4, 2017 (acceptance ratio: 20%).

[C223] Haofan Cai, Linshan Jiang, Yanjiao Chen, Jin Zhang, Baochun Li. “Multi-Seller Combinatorial Spectrum Auction with Reserve Prices,” in the Proceedings of the *15th IEEE Con-*

ference on Communication Systems (ICCS 2016), Shenzhen, China, December 14 – 16, 2016.

[C222] Shiyao Ma, Jingjie Jiang, Bo Li, Baochun Li. “Maximizing Container-based Network Isolation in Parallel Computing Clusters,” in the Proceedings of the *24th IEEE International Conference on Network Protocols (ICNP 2016)*, November 8 – 11, 2016 (acceptance ratio: 20%).

[C221] Shiyao Ma, Jingjie Jiang, Bo Li, Baochun Li. “Custody: Towards Data-Aware Resource Sharing in Cloud-Based Big Data Processing,” in the Proceedings of *IEEE Cluster 2016*, Taipei, Taiwan, September 12 – 16, 2016 (acceptance ratio: 24%).

[C220] Wei Wang, Baochun Li, Ben Liang, Jun Li. “Multi-Resource Fair Sharing for Datacenter Jobs with Placement Constraints,” in the Proceedings of the *International Conference for High Performance Computing, Networking, Storage and Analysis (SC 2016)*, Salt Lake City, Utah, November 13 – 18, 2016 (acceptance ratio: 18%).

[C219] Jun Li, Baochun Li. “Zebra: Demand-aware Erasure Coding for Distributed Storage Systems,” in the Proceedings of the *24th IEEE/ACM International Symposium on Quality of Service (IWQoS 2016)*, Beijing, China, June 20 – 21, 2016 (acceptance ratio: 21%).

[C218] Wei Wang, Baochun Li, Ben Liang, Jun Li. “Towards Multi-Resource Fair Allocation with Placement Constraints,” in the Proceedings of *ACM SIGMETRICS 2016*, Poster Session, Antibes Juan-les-Pins, France, June 14 – 18, 2016 (acceptance ratio: 24%).

[C217] Yanjiao Chen, Linshan Jiang, Haofan Cai, Jin Zhang, Baochun Li. “Spectrum Matching,” in the Proceedings of the *36th International Conference on Distributed Computing Systems (ICDCS 2016)*, Nara, Japan, June 27 – 30, 2016 (acceptance ratio: 17%).

[C216] Linshan Jiang, Haofan Cai, Yanjiao Chen, Jin Zhang, Baochun Li. “Many-to-Many Matching for Combinatorial Spectrum Trading,” in the Proceedings of *IEEE International Conference on Communications (ICC 2016)*, Symposium on Cognitive Radio and Networks, Kuala Lumpur, Malaysia, May 23 – 27, 2016 (acceptance ratio: 39%).

[C215] Shiyao Ma, Jingjie Jiang, Bo Li, Baochun Li. “Chronos: Meeting Coflow Deadlines in Data Center Networks,” in the Proceedings of *IEEE International Conference on Communications (ICC 2016)*, Symposium on Selected Areas in Communications, Cloud Communications and Networking, Kuala Lumpur, Malaysia, May 23 – 27, 2016 (acceptance ratio: 39%).

[C214] Chen Chen, Bo Li, Dong Lin, Baochun Li. “Software-Defined Inter-Domain Routing Revisited,” in the Proceedings of *IEEE International Conference on Communications (ICC 2016)*, Symposium on Next-Generation Networking and Internet, Kuala Lumpur, Malaysia, May 23 – 27, 2016 (acceptance ratio: 39%).

[C213] Li Chen, Baochun Li, Bo Li. “Barrier-Aware Max-Min Fair Bandwidth Sharing and Path Selection in Datacenter Networks,” in the Proceedings of the *4th IEEE International Conference on Cloud Engineering (IC2E 2016)*, Berlin, Germany, April 4 – 8, 2016 (acceptance ratio: 23%, **Best Paper Candidate**).

[C212] Li Chen, Baochun Li, Bo Li. “Surviving Failures with Performance-Centric Bandwidth Allocation in Private Datacenters,” in the Proceedings of the *4th IEEE International Conference on Cloud Engineering (IC2E 2016)*, Berlin, Germany, April 4 – 8, 2016 (acceptance ratio: 23%).

[C211] Jingjie Jiang, Shiyao Ma, Bo Li, Baochun Li. “Symbiosis: Network-Aware Task Scheduling in Data-Parallel Frameworks,” in the Proceedings of *IEEE INFOCOM 2016*, San Francisco, California, April 10 – 15, 2016 (acceptance ratio: 18%).

[C210] Yanjiao Chen, Bao chun Li, Qian Zhang. “Incentivizing Crowdsourcing Systems with Network Effects,” in the Proceedings of *IEEE INFOCOM 2016*, San Francisco, California, April 10 – 15, 2016 (acceptance ratio: 18%).

[C209] Li Chen, Wei Cui, Baochun Li, Bo Li. “Optimizing Coflow Completion Times with Utility Max-Min Fairness,” in the Proceedings of *IEEE INFOCOM 2016*, San Francisco, California, April 10 – 15, 2016 (acceptance ratio: 18%).

[C208] Zhiming Hu, Baochun Li, Jun Luo. “Flutter: Scheduling Tasks Closer to Data Across Geo-Distributed Datacenters,” in the Proceedings of *IEEE INFOCOM 2016*, San Francisco, California, April 10 – 15, 2016 (acceptance ratio: 18%).

[C207] Yifei Zhu, Jingjie Jiang, Bo Li, Baochun Li. “Rado: A Randomized Auction Approach for Data Offloading via D2D Communication,” in the Proceedings of the *12th IEEE International Conference on Mobile Ad Hoc and Sensor Systems (MASS 2015)*, Dallas, Texas, October 19 – 22, 2015 (acceptance ratio: 26%).

[C206] Jingjie Jiang, Yifei Zhu, Bo Li, Baochun Li. “Rally: Device-to-Device Content Sharing in LTE networks as a Game,” in the Proceedings of the *12th IEEE International Conference on Mobile Ad Hoc and Sensor Systems (MASS 2015)*, Dallas, Texas, October 19 – 22, 2015 (acceptance ratio: 26%).

[C205] Jun Li, Baochun Li. “Beehive: Erasure Codes for Fixing Multiple Failures in Distributed Storage Systems,” in the Proceedings of the *7th USENIX Workshop on Hot Topics in Storage and File Systems (HotStorage 2015)*, Santa Clara, California, July 6 – 7, 2015 (acceptance ratio: 30%).

[C204] Yilun Wu, Jinshu Su, Baochun Li. “Keyword Search over Shared Cloud Data without Secure Channel or Authority,” in the Proceedings of the *IEEE International Conference on Cloud Computing (IEEE CLOUD 2015)*, Applications Track, New York, New York, June 27 – July 2, 2015 (acceptance ratio: 14%).

[C203] Liyao Xiang, Baochun Li, Bo Li. “Coalition Formation towards Energy-Efficient Collaborative Mobile Computing,” in the Proceedings of the *24th International Conference on Computer Communications and Networks (ICCCN 2015)*, Las Vegas, Nevada, August 3 – 6, 2015.

[C202] Xueling Lin, Jingjie Jiang, Bo Li, Baochun Li. “Circa: Offloading Collaboratively in the Same Vicinity with iBeacons,” in the Proceedings of *IEEE ICC 2015*, Mobile and Wireless

Networking Symposium, London, UK, June 8 – 12, 2015 (acceptance ratio: 38%).

[C201] Shengkai Zhang, Bo Li, Baochun Li. “Presto: Towards Fair and Efficient HTTP Adaptive Streaming from Multiple Servers,” in the Proceedings of *IEEE International Conference on Communications (ICC 2015)*, Communications Software, Services and Multimedia Applications Symposium, London, UK, June 8 – 12, 2015 (acceptance ratio: 38%).

[C200] Wei Wang, Chen Feng, Baochun Li, Ben Liang. “On the Fairness-Efficiency Tradeoff for Packet Processing with Multiple Resources,” in the Proceedings of *10th ACM SIGCOMM International Conference on emerging Networking EXperiments and Technologies (CoNEXT)*, Sydney, Australia, December 2 – 5, 2014 (acceptance ratio: 14%).

[C199] Rui Zhu, Di Niu, Baochun Li. “Min-Cost Live Webcast under Joint Pricing of Data, Congestion and Virtualized Servers,” in the Proceedings of *the International Conference on Network Games, Control and Optimization (NETGCOOP 2014)*, Trento, Italy, October 29 – 31, 2014.

[C198] Hong Xu, Baochun Li. “Reducing Electricity Demand Charge for Data Centers with Partial Execution,” in the Proceedings of *5th ACM International Conference on Future Energy Systems (ACM e-Energy)*, Cambridge, UK, June 11 – 13, 2014 (acceptance ratio: 20%).

[C197] Hong Xu, Baochun Li. “TinyFlow: Breaking Elephants Down Into Mice in Data Center Networks,” in the Proceedings of *IEEE International Workshop on Local and Metropolitan Area Networks (LANMAN 2014)*, Reno, Nevada, May 21 – 23, 2014.

[C196] Di Niu, Baochun Li. “Congestion-Aware Internet Pricing for Media Streaming,” in Proceedings of the *3rd Workshop on Smart Data Pricing (SDP 2014)*, affiliated with *IEEE INFOCOM 2014*, Toronto, Canada, May 2, 2014.

[C195] Zhi Zhou, Fangming Liu, Bo Li, Baochun Li, Hai Jin, Ruolan Zou, and Zhiyong Liu, “Fuel Cell Generation in Geo-Distributed Cloud Services: A Quantitative Study,” in the Proceedings of the *34th International Conference on Distributed Computing Systems (ICDCS 2014)*, Madrid, Spain, June 30 – July 3, 2014 (acceptance ratio: 13%).

[C194] Li Chen, Yuan Feng, Baochun Li, Bo Li. “Towards Performance-Centric Fairness in Datacenter Networks,” in the Proceedings of *IEEE INFOCOM 2014*, Toronto, Canada, April 27 – May 2, 2014 (acceptance ratio: 19%).

[C193] Liyao Xiang, Shiwen Ye, Yuan Feng, Baochun Li, Bo Li. “Ready, Set, Go: Coalesced Offloading from Mobile Devices to the Cloud,” in the Proceedings of *IEEE INFOCOM 2014*, Toronto, Canada, April 27 – May 2, 2014 (acceptance ratio: 19%).

[C192] Jun Li, Baochun Li. “Cooperative Repair with Minimum-Storage Regenerating Codes for Distributed Storage,” in the Proceedings of *IEEE INFOCOM 2014*, Toronto, Canada, April 27 – May 2, 2014 (acceptance ratio: 19%).

[C191] Hong Xu, Baochun Li. “RepFlow: Minimizing Flow Completion Times with Replicated Flows in Data Centers,” in the Proceedings of *IEEE INFOCOM 2014*, Toronto, Canada,

April 27 – May 2, 2014 (acceptance ratio: 19%).

[C190] Wei Wang, Baochun Li, Ben Liang. “Dominant Resource Fairness in Cloud Computing Systems with Heterogeneous Servers,” in the Proceedings of *IEEE INFOCOM 2014*, Toronto, Canada, April 27 – May 2, 2014 (acceptance ratio: 19%).

[C189] Wei Wang, Ben Liang, Baochun Li. “Low Complexity Multi-Resource Fair Queueing with Bounded Delay,” in the Proceedings of *IEEE INFOCOM 2014*, Toronto, Canada, April 27 – May 2, 2014 (acceptance ratio: 19%).

[C188] Wei Wang, Baochun Li, Ben Liang. “Multi-Resource Round Robin: A Low Complexity Packet Scheduler with Dominant Resource Fairness,” in the Proceedings of *the 21st IEEE International Conference on Network Protocols (ICNP 2013)*, Goettingen, Germany, October 7 – 11, 2013 (acceptance ratio: 18%).

[C187] Zimu Liu, Yuan Feng, Baochun Li. “Bellini: Ferrying Application Traffic Flows through Geo-distributed Datacenters in the Cloud,” in the Proceedings of *IEEE Globecom 2013*, Communications Software, Services and Multimedia Application Symposium, Atlanta, Georgia, December 9 – 13, 2013 (acceptance ratio: 37%).

[C186] Boyang Wang, Baochun Li, Hui Li, Fenghua Li. “Certificateless Public Auditing for Data Integrity in the Cloud,” in the Proceedings of *the First IEEE Conference on Communications and Network Security (CNS 2013)*, Washington DC, October 14 – 16, 2013 (acceptance ratio: 28%).

[C185] Hong Xu, Chen Feng, Baochun Li. “Temperature Aware Workload Management in Geo-Distributed Datacenters,” in the Proceedings of *the 10th USENIX International Conference on Autonomic Computing (ICAC 2013)*, pp. 303-313, San Jose, California, June 26 – 28, 2013 (acceptance ratio: 25%).

[C184] Wei Wang, Baochun Li, Ben Liang. “To Reserve or Not to Reserve: Optimal Online Multi-Instance Acquisition in IaaS Clouds,” in the Proceedings of *the 10th USENIX International Conference on Autonomic Computing (ICAC 2013)*, pp. 13-22, San Jose, California, June 26 – 28, 2013 (acceptance ratio: 22%, **Best Paper Award Finalist**, top 3 out of 73 submissions).

[C183] Wei Wang, Ben Liang, Baochun Li. “Multi-Resource Generalized Processor Sharing for Packet Processing,” in the Proceedings of *the 21st ACM/IEEE International Symposium on Quality of Service (IWQoS 2013)*, Montreal, Canada, June 3 – 4, 2013 (acceptance ratio: 28%).

[C182] Wei Wang, Ben Liang, Baochun Li. “Revenue Maximization with Dynamic Auctions in IaaS Cloud Markets,” in the Proceedings of *the 21st ACM/IEEE International Symposium on Quality of Service (IWQoS 2013)* (short paper), Montreal, Canada, June 3 – 4, 2013.

[C181] Wei Wang, Ben Liang, Baochun Li. “On Fairness-Efficiency Tradeoffs for Multi-Resource Packet Processing,” in the Proceedings of *the 3rd International Workshop on Data Center Performance (DCPerf 2013)*, in conjunction with the 33rd International Conference on Dis-

tributed Computing Systems (ICDCS 2013), Philadelphia, Pennsylvania, July 8, 2013.

[C180] Wei Wang, Di Niu, Baochun Li, Ben Liang. “Dynamic Cloud Resource Reservation via Cloud Brokerage,” in the Proceedings of *the 33rd International Conference on Distributed Computing Systems (ICDCS 2013)*, Philadelphia, Pennsylvania, July 8 – 11, 2013 (acceptance ratio: 13%).

[C179] Hong Xu, Chen Feng, Baochun Li. “Temperature Aware Workload Management in Geo-Distributed Datacenters,” in the Proceedings of *ACM SIGMETRICS 2013* (two-page poster paper), Pittsburgh, Pennsylvania, June 17 – 21, 2013 (acceptance ratio: 30%).

[C178] Hong Xu, Baochun Li. “Joint Request Mapping and Response Routing for Geo-distributed Cloud Services,” in the Proceedings of *IEEE INFOCOM 2013*, Turin, Italy, April 14 – 19, 2013 (acceptance ratio: 17%).

[C177] Jun Li, Xin Wang, Baochun Li. “Cooperative Pipelined Regeneration in Distributed Storage Systems,” in the Proceedings of *IEEE INFOCOM 2013*, Turin, Italy, April 14 – 19, 2013 (acceptance ratio: 17%).

[C176] Yuefei Zhu, Baochun Li, Zongpeng Li. “Core-Selecting Combinatorial Auction Design for Secondary Spectrum Markets,” in the Proceedings of *IEEE INFOCOM 2013*, Turin, Italy, April 14 – 19, 2013 (acceptance ratio: 17%).

[C175] Boyang Wang, Baochun Li, Hui Li. “Public Auditing for Shared Data with Efficient User Revocation in the Cloud,” in the Proceedings of *IEEE INFOCOM 2013*, Turin, Italy, April 14 – 19, 2013 (acceptance ratio: 17%).

[C174] Di Niu, Baochun Li. “Pricing and Fast Distributed Resource Allocation in Large-Scale Coupled Systems,” in the Proceedings of *IEEE INFOCOM 2013*, Turin, Italy, April 14 – 19, 2013 (acceptance ratio: 17%).

[C173] Zhi Zhou, Fangming Liu, Hai Jin, Bo Li, Baochun Li, Hongbo Jiang. “On Arbitrating the Power-Performance Tradeoff in SaaS Clouds,” in the Proceedings of *IEEE INFOCOM 2013*, Turin, Italy, April 14 – 19, 2013 (acceptance ratio: 17%).

[C172] Zhi Wang, Baochun Li, Lifeng Sun, Shiqiang Yang. “Cloud-based Social Application Deployment using Local Processing and Global Distribution,” in the Proceedings of the *8th ACM International Conference on emerging Networking EXperiments and Technologies (CoNEXT 2012)*, Nice, France, December 10 – 13, 2012 (acceptance ratio: 17%).

[C171] Yuan Feng, Baochun Li, Bo Li. “Airlift: Video Conferencing as a Cloud Service using Inter-Datcenter Networks,” in the Proceedings of the *20th IEEE International Conference on Network Protocols (ICNP 2012)*, Austin, Texas, October 30 – November 2, 2012 (acceptance ratio: 23%).

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[C60] Ying Zhu, Baochun Li. “Overlay Multicast with Inferred Link Capacity Correlations,” in the Proceedings of the *26th International Conference on Distributed Computing Systems (ICDCS 2006)*, pp. 54, Lisbon, Portugal, July 4 – 7, 2006 (acceptance ratio: 13%).

[C59] Kevin Yuen, Baochun Li, Ben Liang. “Distributed Data Gathering in Multi-Sink Sensor Networks with Correlated Sources,” in the Proceedings of *IFIP Networking 2006*, pp. 868-879, Coimbra, Portugal, May 15 – 19, 2006 (acceptance ratio: 20%).

[C58] Kevin Yuen, Baochun Li, Ben Liang. “Distributed Minimum Energy Data Gathering and Aggregation in Sensor Networks,” in the Proceedings of the *2006 IEEE International Conference on Communications (ICC 2006)*, Istanbul, Turkey, June 11 – 15, 2006 (acceptance

ratio: 39%).

[C57] Ying Zhu, Baochun Li. “Correlation-aware Multimedia Content Distribution in Overlay Networks,” in the Proceedings of the *Thirteenth Annual SPIE/ACM Multimedia Computing and Networking (MMCN 2006)*, pp. 127-138, San Jose, California, January 18 – 19, 2006.

[C56] Chuan Wu, Baochun Li. “Optimal Peer Selection for Minimum-Delay Peer-to-Peer Streaming with Rateless Codes,” in the Proceedings of *ACM Workshop on Advances in Peer-to-Peer Multimedia Streaming (P2PMMS 2005)*, in conjunction with *ACM Multimedia 2005*, pp. 69-78, Singapore, November 6 – 12, 2005.

[C55] Chuan Wu, Baochun Li. “rStream: Resilient Peer-to-Peer Streaming with Rateless Codes,” in the Proceedings of *ACM Multimedia 2005*, pp. 307-310, Singapore, November 6 – 12, 2005 (acceptance ratio: 19%).

[C54] Zongpeng Li, Baochun Li. “On Increasing End-to-End Throughput in Wireless Ad Hoc Networks,” in the Proceedings of the *Second International Conference on Quality of Service in Heterogeneous Wired/Wireless Networks (QShine 2005)*, Orlando, Florida, August 22 – 24, 2005.

[C53] Jun Yuan, Zongpeng Li, Wei Yu, Baochun Li. “A Cross-Layer Optimization Framework for Multicast in Multi-hop Wireless Networks,” in the Proceedings of the *First International Conference on Wireless Internet (WICON 2005)*, pp. 47-54, Budapest, Hungary, July 10 – 14, 2005 (acceptance ratio: 39%).

[C52] Ying Zhu, Baochun Li. “Overlay Networks with Linear Capacity Constraints,” in the Proceedings of the *Thirteenth International Workshop on Quality of Service (IWQoS 2005)*, also *Lecture Notes in Computer Science*, Springer, vol. 3552, pp. 21-36, H. de Meer, N. Bhatti (Eds.), Passau, Germany, June 21 – 23, 2005 (acceptance ratio: 26%), **Best Student Paper Award**).

[C51] Mea Wang, Zongpeng Li, Baochun Li. “A High-Throughput Overlay Multicast Infrastructure with Network Coding,” in the Proceedings of the *Thirteenth International Workshop on Quality of Service (IWQoS 2005)*, also *Lecture Notes in Computer Science*, Springer, vol. 3552, pp. 37-53, H. de Meer, N. Bhatti (Eds.), Passau, Germany, June 21 – 23, 2005 (acceptance ratio: 26%).

[C50] Baochun Li. “End-to-End Fair Bandwidth Allocation in Multi-hop Wireless Ad Hoc Networks,” in the Proceedings of the *25th International Conference on Distributed Computing Systems (ICDCS 2005)*, pp. 471-480, Columbia, Ohio, June 6 – 9, 2005 (acceptance ratio: 14%).

[C49] Gregory Hartl, Baochun Li. “*infer*: A Bayesian Inference Approach towards Energy Efficient Data Collection in Sensor Networks,” in the Proceedings of the *25th International Conference on Distributed Computing Systems (ICDCS 2005)*, pp. 371-380, Columbia, Ohio, June 6 – 9, 2005 (acceptance ratio: 14%).

[C48] Zhihua Hu, Baochun Li. “ZAL: Zero-Maintenance Address Allocation in Mobile Wire-

less Ad Hoc Networks,” in the Proceedings of *the 25th International Conference on Distributed Computing Systems (ICDCS 2005)*, pp. 103-112, Columbia, Ohio, June 6 – 9, 2005 (acceptance ratio: 14%).

[C47] Zongpeng Li, Baochun Li, Dan Jiang, Lap-Chi Lau. “On Achieving Optimal Throughput with Network Coding,” in the Proceedings of *IEEE INFOCOM 2005*, vol. 3, pp. 2184-2194, Miami, Florida, March 13 – 17, 2005 (acceptance ratio: 17%).

[C46] Zongpeng Li, Baochun Li. “Efficient and Distributed Computation of Maximum Multicast Rates,” in the Proceedings of *IEEE INFOCOM 2005*, Miami, Florida, vol. 3, pp. 1618-1628, March 13 – 17, 2005 (acceptance ratio: 17%).

[C45] Selwyn Yuen, Baochun Li. “Strategyproof Mechanisms for Dynamic Multicast Tree Formation in Overlay Networks,” in the Proceedings of *IEEE INFOCOM 2005*, vol. 3, pp. 2135-2146, Miami, Florida, March 13 – 17, 2005 (acceptance ratio: 17%).

[C44] Weihong Wang, Baochun Li. “Market-driven Bandwidth Allocation in Selfish Overlay Networks,” in the Proceedings of *IEEE INFOCOM 2005*, vol. 3, pp. 2578-2589, Miami, Florida, March 13 – 17, 2005 (acceptance ratio: 17%).

[C43] Baochun Li, Jiang Guo, Mea Wang. “iOverlay: A Lightweight Middleware Infrastructure for Overlay Application Implementations,” in the Proceedings of *the Fifth ACM/IFIP/USENIX International Middleware Conference (Middleware 2004)*, also Lecture Notes in Computer Science, ACM Springer-Verlag, vol. 3231, pp. 135-154, Toronto, Canada, October 18 – 22, 2004 (acceptance ratio: 14%).

[C42] Selwyn Yuen, Baochun Li. “Strategyproof Mechanisms towards Evolutionary Topology Formation in Autonomous Networks,” in the Proceedings of *the International Workshop on Theoretical Aspects of Wireless Ad hoc, Sensor and Peer-to-Peer Networks*, Chicago, Illinois, June 11 – 12, 2004.

[C41] Alex Varshavsky, Baochun Li, Eyal De Lara. “Cross-Layer Flow Control in Lightly-Loaded Multi-Hop Ad Hoc Networks,” in the Proceedings of *the International Workshop for Network Design and Architecture (IWNA 2004)*, in conjunction with *the 2004 International Conference on Parallel Processing (ICPP 2004)*, pp. 315-321, Montreal, Quebec, Canada, August 15 – 18, 2004.

[C40] Jiang Guo, Baochun Li. “Mitigating Information Asymmetries to achieve Efficient Peer-to-Peer Queries,” in the Proceedings of *the 2004 International Conference on Parallel Processing (ICPP 2004)*, pp. 91-99, Montreal, Quebec, Canada, August 15 – 18, 2004 (acceptance ratio: 34%).

[C39] Yi Cui, Baochun Li, Klara Nahrstedt. “On Achieving Optimized Capacity Utilization in Application Overlay Networks with Multiple Competing Sessions,” in the Proceedings of *the Sixteenth ACM Symposium on Parallelism in Algorithms and Architectures (SPAA 2004)*, pp. 160-169, Barcelona, Spain, June 27 – 30, 2004.

[C38] Alvin Mok, Bina Mistry, Eric Chung, Baochun Li. “FAIR: Fee Arbitrated Incentive Ar-

chitecture in Wireless Ad Hoc Networks,” in the Proceedings of *the 10th IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS 2004)*, pp. 2-9, Toronto, Canada, May 25 – 28, 2004 (acceptance ratio: 32%).

[C37] Zhihua Hu, Baochun Li. “On the Fundamental Capacity and Lifetime Limits of Energy-Constrained Wireless Sensor Networks,” in the Proceedings of *the 10th IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS 2004)*, pp. 38-47, Toronto, Canada, May 25 – 28, 2004 (acceptance ratio: 32%).

[C36] Jiang Guo, Baochun Li. “Distributed Algorithms in Service Overlay Networks: A Game Theoretic Perspective,” in the Proceedings of *IEEE International Conference on Communications (ICC 2004)*, vol. 3, pp. 1421-1425, Paris, France, June 20 – 24, 2004 (acceptance ratio: 29%).

[C35] Gregory Hartl, Baochun Li. “Loss Inference in Wireless Sensor Networks based on Data Aggregation,” in the Proceedings of *the Third IEEE/ACM International Symposium on Information Processing in Sensor Networks (IPSN 2004)*, pp. 396-404, Berkeley, California, April 26 – 27, 2004.

[C34] Borzoo Shadpour, Shahrokh Valaee, Baochun Li. “A Self-Organized Approach for Stimulating Cooperation in Mobile Ad hoc Networks,” in the Proceedings of *the 22nd Biennial Symposium on Communications, Queen’s University, Kingston, Ontario, Canada*, May 31 – June 3, 2004.

[C33] Mea Wang, Baochun Li, Zongpeng Li. “sFlow: Towards Resource-Efficient and Agile Service Federation in Service Overlay Networks,” in the Proceedings of *the 24th IEEE International Conference on Distributed Computing Systems (ICDCS 2004)*, pp. 628-635, Tokyo, Japan, March 23 – 26, 2004 (acceptance ratio: 17%).

[C32] Jiang Guo, Ying Zhu, Baochun Li. “CodedStream: Live Media Streaming with Network Coding in Application-Layer Overlay Networks,” in the Proceedings of *the SPIE Conference on Multimedia Computing and Networking (MMCN 2004)*, pp. 28-39, Santa Clara, California, January 21 – 22, 2004 (acceptance ratio: 25%).

[C31] Shahid Bashir, Baochun Li. “KELOP: Distributed Key-Value Lookup in Wireless Ad Hoc Networks,” in the Proceedings of *the 12th IEEE International Conference on Computer Communications and Networks (ICCCN 2003)*, pp. 471-476, Dallas, Texas, October 20 – 22, 2003.

[C30] Jilei Liu, Baochun Li. “Distributed Topology Control in Wireless Sensor Networks with Asymmetric Links,” in the Proceedings of *IEEE Globecom 2003*, Wireless Communications Symposium, vol. 3, pp. 1257-1262, San Francisco, California, December 1 – 5, 2003 (acceptance ratio: 36%).

[C29] Weihong Wang, Ying Zhu, Baochun Li. “Self-Managed Heterogeneous Certification in Mobile Ad Hoc Networks,” in the Proceedings of *IEEE Vehicular Technology Conference (VTC 2003)*, vol. 3, pp. 2137-2141, Orlando, Florida, October 6 – 9, 2003.

- [C28] Weihong Wang, Baochun Li. “To Play or to Control: A Game-based Control-theoretic Approach to Peer-to-Peer Incentive Engineering,” in the Proceedings of *the Eleventh IEEE International Workshop on Quality of Service (IWQoS 2003)*, also in *Lecture Notes in Computer Science*, ACM Springer-Verlag, vol. 2707, pp. 174-192, Monterey, CA, June 2 – 4, 2003.
- [C27] Yuan Xue, Baochun Li, Klara Nahrstedt. “Price-based Resource Allocation in Wireless Ad Hoc Networks,” in the Proceedings of *the Eleventh IEEE International Workshop on Quality of Service (IWQoS 2003)*, also in *Lecture Notes in Computer Science*, ACM Springer-Verlag, vol. 2707, pp. 79-96, Monterey, CA, June 2 – 4, 2003.
- [C26] Zongpeng Li, Baochun Li, Dongyan Xu, Xin Zhou. “iFlow: Middleware-assisted Rendezvous-based Information Access for Mobile Ad Hoc Applications,” in the Proceedings of *the First ACM/USENIX International Conference on Mobile Systems, Applications, and Services (MobiSys 2003)*, pp. 71 – 84, San Francisco, CA, May 5 – 8, 2003 (acceptance ratio: 15%).
- [C25] Edmond Poon, Baochun Li. “SmartNode: Achieving 802.11 MAC Interoperability in Power-efficient Sensor Networks with Dynamic Range Adjustments,” in the Proceedings of *IEEE International Conference on Distributed Computing Systems (ICDCS 2003)*, pp. 650-657, Providence, Rhode Island, May 19 – 22, 2003 (acceptance ratio: 18%).
- [C24] Jilei Liu, Baochun Li. “MobileGrid: Capacity-aware Topology Control in Mobile Ad Hoc Networks,” in the Proceedings of *the 11st IEEE International Conference on Computer Communications and Networks (ICCCN 2002)*, pp. 570-574, Miami, Florida, October 14 – 16, 2002.
- [C23] Siddhartha Goel, Manish Singh, Dongyan Xu, Baochun Li. “Efficient Peer-to-Peer Data Dissemination in Mobile Ad Hoc Networks,” in the Proceedings of *the International Workshop on Ad Hoc Networks (IWAHN 2002)*, in conjunction with *the 2002 International Conference on Parallel Processing (ICPP 2002)*, Vancouver, British Columbia, August 18 – 21, 2002.
- [C22] Shahrokh Valaee, Baochun Li. “Distributed Call Admission Control in Wireless Ad Hoc Networks,” in the Proceedings of *IEEE Vehicular Technology Conference (VTC 2002)*, vol. 2, pp. 1244-1248, Vancouver, British Columbia, September 24 – 28, 2002 (acceptance ratio: 39%).
- [C21] Karen Wang, Baochun Li. “Efficient and Guaranteed Service Coverage in Partitionable Mobile Ad-hoc Networks,” in the Proceedings of *IEEE INFOCOM 2002*, vol. 2, pp. 1089-1098, New York City, New York, June 23 – 27, 2002 (acceptance ratio: 20%).
- [C20] Karen Wang, Baochun Li. “Group Mobility and Partition Prediction in Wireless Ad-hoc Networks,” in the Proceedings of *IEEE International Conference on Communications (ICC 2002)*, vol. 2, pp. 1017-1021, New York City, New York, April 28 – May 2, 2002 (acceptance ratio: 42%).
- [C19] Yuan Xue, Baochun Li. “A Location-aided Power-aware Routing Protocol in Mobile Ad Hoc Networks,” in the Proceedings of *IEEE Globecom 2001*, vol. 5, pp. 2837-2841, San Antonio, Texas, November 25 – 29, 2001 (acceptance ratio: 25%).

- [C18] Roy Leung, Jilei Liu, Edmond Poon, Charles Chan, Baochun Li. "MP-DSR: A QoS-aware Multi-path Dynamic Source Routing Protocol for Wireless Ad-hoc Networks," in the Proceedings of *the 26th IEEE Annual Conference on Local Computer Networks (LCN 2001)*, pp. 132-141, Tampa, Florida, November 15 – 16, 2001.
- [C17] Yuan Xue, Baochun Li, Klara Nahrstedt. "A Scalable Location Management Scheme in Mobile Ad-hoc Networks," in the Proceedings of *the 26th IEEE Annual Conference on Local Computer Networks (LCN 2001)*, pp. 102-111, Tampa, Florida, November 15 – 16, 2001.
- [C16] Xinran Wu, Clement Yuen, Yan Gao, Hong Wu, Baochun Li. "Fair Scheduling with Bottleneck Consideration in Wireless Ad-hoc Networks," in the Proceedings of *10th IEEE International Conference on Computer Communications and Networks (ICCCN 2001)*, pp. 568-572, Phoenix, Arizona, October 15 – 17, 2001.
- [C15] Baochun Li, Dongyan Xu, Klara Nahrstedt. "Towards Integrated Runtime Solutions in QoS-aware Middleware," in the Proceedings of *ACM Multimedia Middleware Workshop (M3W 2001)*, pp. 11-14, Ottawa, Canada, October 5, 2001.
- [C14] Hassan Shojania, Baochun Li. "Experiences with MPEG-4 Multimedia Streaming," in the Proceedings of *the Ninth ACM Multimedia Conference (ACM Multimedia 2001)*, pp. 492-494, Ottawa, Canada, September 30 – October 5, 2001.
- [C13] Baochun Li. "A Hierarchical Graph Model for Probing Multimedia Applications," in the Proceedings of *the IEEE International Conference on Multimedia and Expo (ICME 2001)*, Tokyo, Japan, August 22 – 25, 2001.
- [C12] Baochun Li. "QoS-aware Adaptive Services in Mobile Ad-hoc Networks," in the Proceedings of *the Ninth IEEE International Workshop on Quality of Service (IWQoS 2001)*, also Lecture Notes in Computer Science, ACM Springer-Verlag, vol. 2092, pp. 251-268, Karlsruhe, Germany, June 6 – 8, 2001 (acceptance ratio: 21%).
- [C11] William Kalter, Baochun Li, Won Jeon, Klara Nahrstedt, and Jun-hyuk Seo. "A Gateway-Assisted Approach Toward QoS Adaptations," in the Proceedings of *the IEEE International Conference on Multimedia and Expo (ICME 2000)*, New York City, New York, July 30 – August 2, 2000.
- [C10] Baochun Li, Klara Nahrstedt. "QualProbes: Middleware QoS Profiling Services for Configuring Adaptive Applications," in the Proceedings of *IFIP International Conference on Distributed Systems Platforms and Open Distributed Processing (Middleware 2000)*, also Lecture Notes in Computer Science, ACM Springer-Verlag, vol. 1795, pp. 256-272, New York, April 3 – 7, 2000 (acceptance ratio: 30%).
- [C9] Baochun Li, Won Jeon, William Kalter, Klara Nahrstedt, and Jun-Hyuk Seo. "Adaptive Middleware Architecture for a Distributed Omni-Directional Visual Tracking System," in the Proceedings of *the SPIE Multimedia Computing and Networking 2000 (MMCN 2000)*, pages 101-112, San Jose, California, January 25 – 27, 2000.
- [C8] Dongyan Xu, Baochun Li, Klara Nahrstedt. "QoS-Directed Error Control of Video Mul-

ticast in Wireless Networks,” in the Proceedings of *the 8th IEEE International Conference on Computer Communications and Networks (IEEE ICCCN 1999)*, pp. 257-262, Boston-Natick, Massachusetts, October 11 – 13, 1999.

[C7] Baochun Li, Klara Nahrstedt. “Dynamic Reconfiguration for Complex Multimedia Applications,” in the Proceedings of *the IEEE International Conference on Multimedia Computing and Systems (IEEE Multimedia 1999)*, vol. 1, pp. 165-170, Florence, Italy, June 7 – 11, 1999.

[C6] Baochun Li, Dongyan Xu, Klara Nahrstedt. “Optimal State Prediction for Feedback-Based QoS Adaptations,” in the Proceedings of *the Seventh IEEE International Workshop on Quality of Service (IWQoS 1999)*, pp. 37-46, London, UK, May 31 – June 4, 1999 (acceptance ratio: 17%).

[C5] Baochun Li, Dongyan Xu, Klara Nahrstedt, and Jane W.S. Liu. “End-to-End QoS Support for Adaptive Applications Over the Internet,” in *SPIE Proceedings on Internet Routing and Quality of Service*, vol. 3529, pp. 166-176, Boston, Massachusetts, November 1 – 6, 1998.

[C4] Dongyan Xu, Baochun Li, Jane W.S. Liu, Klara Nahrstedt. “Providing Seamless QoS for Multimedia Multicast in Real-Time Packet Cellular Networks,” in *SPIE Proceedings on Multimedia Systems and Applications*, vol. 3528, pp. 352-361, Boston, Massachusetts, November 1 – 6, 1998.

[C3] Dongyan Xu, Baochun Li. “Synchronized End-to-End Multicast in Real-Time Packet Cellular Networks,” in the Proceedings of *the IEEE Military Communications Conference (MILCOM 1998)*, pp. 431-435, Bedford, Massachusetts, October 18 – 21, 1998.

[C2] Baochun Li, Klara Nahrstedt. “A Control Theoretical Model for Quality of Service Adaptations,” in the Proceedings of *the Sixth IEEE International Workshop on Quality of Service (IWQoS 1998)*, pp. 145-153, Napa, California, May 18 – 20, 1998 (acceptance ratio: 16%).

[C1] Baochun Li, Klara Nahrstedt. “An Open Task Control Model for Quality of Service Adaptation,” in the Proceedings of *the 14th International Conference of Advanced Science and Technology (ICAST 1998)*, pp. 29-41, Naperville, Illinois, April 3 – 5, 1998.

◇ **Invited Papers** (in reverse chronological order)

[IP18] Jingjie Jiang, Shiyao Ma, Bo Li, Baochun Li. “Tailor: Trimming Coflow Completion Times in Datacenter Networks,” in the Proceedings of the 25th International Conference on Computer Communications and Networks (ICCCN 2016), Waikoloa, Hawaii, August 1-4, 2016.

[IP17] Shuhao Liu and Baochun Li. “On Scaling Software-Defined Networking in Wide-Area Networks,” *Journal of Computer Science and Technology*, vol. 20, no. 3, pp. 221-232, June 2015.

[IP16] Li Chen, Baochun Li, and Bo Li. “Allocating Bandwidth in Datacenter Networks: A Survey,” *Journal of Computer Science and Technology*, vol. 29, no. 5, pp. 910-917, September

2014.

[IP15] Li Chen, Baochun Li, and Bo Li. "On Meeting Deadlines in Datacenter Networks," in *Tsinghua Science and Technology*, vol. 18, no. 3, pp. 273-285, June 2013.

[IP14] Jun Li, Baochun Li. "Erasure Coding for Cloud Storage Systems: A Survey," in *Tsinghua Science and Technology*, vol. 18, no. 3, pp. 259-272, June 2013.

[IP13] Hong Xu, Baochun Li. "A Study of Pricing for Cloud Resources," in ACM SIGMETRICS Performance Evaluation Review, Special Issue on Cloud Computing, vol. 40, no. 4, pp. 3-12, March 2013.

[IP12] Baochun Li, Yuan Feng, Bo Li. "Rise and Fall of the Peer-to-Peer Empire," in *Tsinghua Science and Technology*, vol. 17, no. 1, pp. 1-16, February 2012.

[IP11] Baochun Li, Yunnan Wu. "Scanning the Issue: Network Coding," in *Proceedings of the IEEE*, vol. 99, no. 3, pp. 363-365, March 2011.

[IP10] Yunnan Wu, Baochun Li. "Point of View: Network Coding," in *Proceedings of the IEEE*, Vol. 8, No. 5, pp. 643-644, May 2010.

[IP9] Chen Feng, Baochun Li. "Network Coding for Peer-Assisted Multimedia Streaming," in *IEEE Multimedia Communications Technical Committee E-Letter*, IEEE Communications Society, Vol. 5, No. 2, pp. 9-12, March 2010.

[IP8] Di Niu, Baochun Li. "Asymptotic Rate Limits for Randomized Broadcasting with Network Coding," in the Proceedings of the *47th Annual Allerton Conference on Communication, Control, and Computing (Allerton 2009)*, invited session on Network Algorithms and Analysis I, Allerton, Illinois, September 30 – October 2, 2009.

[IP7] Ajay Gopinathan, Zongpeng Li, Baochun Li. "On Achieving Group Strategyproof Information Dissemination in Wireless Networks," in the Proceedings of the *International Conference on Game Theory for Networks (GameNets 2009)*, invited session on *Game Theory for P2P Networks*, Istanbul, Turkey, May 13 – 15, 2009.

[IP6] Mea Wang, Baochun Li. "RapidFlow: An Experimental Testbed for Information Flows with Network Coding," in the Proceedings of *IEEE International Zurich Seminar on Communications (IZS 2006)*, invited session on *Applications of Network Coding*, pp. 78-81, Zurich, Switzerland, February 22 – 24, 2006.

[IP5] Zongpeng Li, Baochun Li. "Network Coding: The Case of Multiple Unicast Sessions," in the Proceedings of the *42nd Annual Allerton Conference on Communication, Control, and Computing*, invited session on *Network Coding*, pp. 11-19, Monticello, Illinois, September 29 – October 1, 2004.

[IP4] Zongpeng Li, Baochun Li. "Network Coding in Undirected Networks," in the Proceedings of the *38th Annual Conference on Information Science and Systems (CISS 2004)*, invited session on *Network Coding*, pp. 257-262, Princeton, New Jersey, March 17 – 19, 2004.

[IP3] Baochun Li, Klara Nahrstedt. “Impact of Control Theory on QoS Adaptation in Distributed Middleware Systems,” in the Proceedings of *the 2001 American Control Conference*, Arlington, Virginia, June 25 – 27, 2001.

[IP2] Baochun Li, Klara Nahrstedt. “A Dynamic Middleware Control Architecture for Distributed Multimedia Applications,” in the Proceedings of *the Workshop on Automated Control of Distributed Instrumentation (ACDI 1999)*, Urbana, Illinois, April 22 – 23, 1999.

[IP1] Baochun Li, Klara Nahrstedt. “Adaptive QoS Middleware Framework for Complex Flexible Applications,” in the Proceedings of *the NASA NREN QoS Workshop*, NASA Ames Research Center, California, August 18 – 19, 1998.

Dissertations

[D2] Baochun Li. “Agilos: A Middleware Control Architecture for Application-Aware Quality of Service Adaptations,” *Ph.D. Dissertation*, Department of Computer Science, University of Illinois at Urbana-Champaign, May 2000.

[D1] Baochun Li. “Adaptive Behavior of Quality of Service in Distributed Multimedia Systems,” *M.Sc. Dissertation*, Department of Computer Science, University of Illinois at Urbana-Champaign, May 1997.

Selected Scholarly Addresses

[SA110] “Does Federated Learning Preserve Data Privacy?” Keynote Address, the 2024 IEEE International Conference on e-health Networking, Applications and Services (HealthCom 2024), Chongqing, China, December 14, 2023.

[SA109] “Towards Fast, Scalable and Generalized Network Performance Estimation,” Keynote Address, 19th International Conference on Network and Service Management (CNSM 2023), Niagara Falls, Ontario, October 31, 2023.

[SA108] “The Rise (and Ultimate Fall) of Federated Learning,” Keynote Address, the 23rd International Conference on Algorithms and Architectures for Parallel Processing (ICA3PP 2023), Tianjin, China, October 20, 2023.

[SA107] “Is Federated Learning Ready for Real-World Deployment?,” Invited Talk, Distinguished Lecture Series, Department of Computing, Hong Kong Polytechnic University, July 7, 2023.

[SA106] “Towards Production Federated Learning Systems,” Invited Talk, Distinguished Lecture Series, Department of Computer Science, Hong Kong Baptist University, June 12, 2023.

[SA105] “Optimizing Application Performance in Regionless Computing Environments,” Invited Talk, Huawei Tongtu Forum on Regionless Computing (online), December 5, 2022.

[SA104] “DeepQueueNet: Towards Scalable and Generalized Network Performance Estimation with Packet-level Visibility,” Invited Talk, Future Network Frontiers – Datacenter Networking Workshop, Toronto, Ontario, Canada, November 30, 2022.

[SA103] “Federated Learning in an Edge-Cloud Coordinated World: Facts or Fiction?” North-

eastern University, P. R. China, October 25, 2022.

[SA102] “Federated Learning in an Edge-Cloud Coordinated World: Facts or Fiction?” Invited Talk, Distributed Hyper-Terminal and Device-Edge-Cloud Collaboration, Huawei STW 2022, September 26, 2022.

[SA101] “Federated Learning in an Edge-Cloud Coordinated World: Facts or Fiction?” Invited Tutorial/Lecture Speaker, 7th Zhejiang University International Workshop on Intelligent Signal Processing, October 10, 2022.

[SA100] “Writing Perfect Grant Proposals,” Invited Speaker, Distinguished Lecture Series, Department of Computing, Hong Kong Polytechnic University, July 3, 2022.

[SA99] “Federated Learning: The Good, the Bad, and the Ugly,” Invited Keynote Talk, the 4th International Workshop on Intelligent Cloud Computing and Networking (ICCN 2022), affiliated with IEEE INFOCOM 2022, online, May 2, 2022.

[SA98] “Back to the Basics: Proven Recipes in Distributed Systems Design,” Invited Keynote Talk, the 12th International Symposium on Parallel Architectures, Algorithms and Programming (PAAP 2021), Xi’an, China, December 11, 2021.

[SA97] “Federated Learning: Challenges, Opportunities, and Real-World Frameworks,” Invited Speaker, Distinguished Lecture Series, Department of Computer Science and Engineering, Hong Kong University of Science and Technology, September 19, 2021.

[SA96] “Federated Learning: Challenges, Opportunities, and Real-World Frameworks,” Invited Tutorial/Lecture Speaker, Zhejiang University International Workshop on Intelligent Signal Processing, September 21, 2021.

[SA95] “Writing Perfect Papers,” Invited Speaker, Xidian University, Xi’an, China, July 23, 2021.

[SA94] “Writing Perfect Grant Proposals,” Invited Speaker, Distinguished Lecture Series, Department of Computing, Hong Kong Polytechnic University, July 15, 2021.

[SA93] “Back to the Basics: Proven Recipes in Distributed Systems Design,” Invited Speaker, Distinguished Lecture Series, Department of Computing, Hong Kong Polytechnic University, July 1, 2021.

[SA92] “Four Guiding Principles towards Designing Good Real-World Systems,” Invited Research Seminar in the Distinguished Seminar Series on Data Science and Artificial Intelligence, Department of Computing, Hong Kong Polytechnic University, March 31, 2021.

[SA91] “Plato: Federated Learning Research Made Easy,” Invited Research Seminar, Department of Computing, Hong Kong Polytechnic University, March 31, 2021.

[SA90] “Federated Learning in the Era of Artificial Intelligence of Things: Challenges and Opportunities,” Invited Keynote Address, the 20th IEEE International Conference on Com-

munication Technology (IEEE ICCT 2020), Nanning, China, October 28-31, 2020.

[SA89] “Some Random Thoughts about System Design,” Invited Online Research Seminar, Workshop on Networking, Intelligent Internet of Things Research Center, Shanghai Jiaotong University, October 18, 2020.

[SA88] “Some Random Thoughts about System Design,” Invited Tech Tycoon Talk, Huawei Hong Kong Research Center, Hong Kong Science and Technology Park, September 10, 2020.

[SA87] “Applying Deep Reinforcement Learning Techniques in Federated Learning,” Invited Plenary Address, the First ACM Workshop on Simplifying Edge and Mobile Intelligence (SEMI), co-located with the 18th ACM International Conference on Mobile Systems, Applications, and Services (MobiSys 2020), Online, June 19, 2020.

[SA86] “Federated Learning: Challenges and Opportunities,” Invited Plenary Address, International Conference on Computing, Networking and Communications (ICNC 2020), Big Island, Hawaii, February 19, 2020.

[SA85] “Federated Learning: Architectures, Key Algorithms, and Future Outlook,” Invited Keynote Address, 15th EAI International Conference on Heterogeneous Networking for Quality, Reliability, Security and Robustness (QShine 2019), Shenzhen, P. R. China, November 22-23, 2019.

[SA84] “Optimizing Resource Provisioning with Deep Reinforcement Learning,” Invited Keynote Address, IEEE 19th International Conference on Communication Technology (IEEE ICCT 2019), Xi’an, P. R. China, October 16-19, 2019.

[SA83] “Optimizing Device Placement in Machine Learning Workloads using Deep Reinforcement Learning,” Invited Research Seminar, Distinguished Lecture Series, Department of Electrical and Computer Engineering, George Washington University, April 15, 2019.

[SA82] “Optimizing Device Placement in Machine Learning Workloads using Deep Reinforcement Learning,” Invited Research Seminar, Department of Computer Science, City University of Hong Kong, December 17, 2018.

[SA81] “Tack: Learning Towards Contextual and Ephemeral Indoor Localization with Crowdsourcing,” Invited Talk, Workshop on Mobile Computing and Security, Kunming, China, August 2, 2018.

[SA80] “Learning Towards Better Privacy,” Invited Talk, ACM Turing Conference China (TURC 2018), Shanghai, China, May 20, 2018.

[SA79] “Optimizing Job Performance within and across Datacenters,” Invited Research Seminar, Distinguished Speaker Seminar Series, Department of Electrical and Computer Engineering, McMaster University, May 2, 2018.

[SA78] “Learning Towards Better Privacy,” Invited Keynote Address, BigSecurity 2018 Workshop, affiliated with IEEE INFOCOM 2018, April 14, 2018.

[SA77] “AI as a Service – What Should Cloud Computing Researchers Consider?” Invited Panel Talk, IEEE CloudCom 2017, Hong Kong, December 14, 2017.

[SA76] “Accelerated Data Processing across Datacenters: An Optimization Perspective,” Invited Research Talk, Huawei Advisory Technology Board Workshop, October 2017.

[SA75] “Optimizing Job Performance within and across Datacenters,” Invited Research Seminar, Hong Kong Polytechnic University, September 2017.

[SA74] “Optimizing Job Performance within and across Datacenters,” Invited Research Seminar, Huazhong University of Science and Technology, August 2017.

[SA73] “Spectrum Matching,” Invited Research Seminar, Workshop on Mobile Computing and Security, Xiamen University, July 2017.

[SA72] “Optimizing Job Performance within and across Datacenters,” Invited Research Seminar, Tianjin University, June 2017.

[SA71] “Optimizing Job Performance within and across Datacenters,” Invited Research Seminar, Beijing University of Post and Telecommunications, April 2017.

[SA70] “Optimizing Job Performance within and across Datacenters,” Invited Research Seminar, University of Florida, November 2016.

[SA69] “Optimizing Job Performance within and across Datacenters,” Invited Research Seminar, City University of Hong Kong, August 2016.

[SA68] “Fair Scheduling in Cloud Datacenters with Multiple Resource Types,” Keynote Speech, the 25th International Conference on Computer Communication and Networks (ICCCN 2016), Waikoloa, Hawaii, August 1-4, 2016.

[SA67] “Scheduling with Multiple Resource Types in Cloud Datacenters,” Invited Talk in the Distinguished Lecture Series, Technische Universität Darmstadt, May 2015.

[SA66] “Fair Scheduling with Multiple Resources,” Invited Research Seminar, Concordia University, Montreal, QC, November 2014.

[SA65] “Cloud Computing: Design and Challenges,” Invited Panel Talk, IEEE Computer Communications Workshop (CCW 2014), Philadelphia, PA, November 2014.

[SA64] “Fair Scheduling with Multiple Resources,” Invited Research Seminar, Southwest University, Chongqing, P.R. China, June 2014.

[SA63] “Fair Scheduling with Multiple Resources,” Invited Research Seminar, City University of Hong Kong, Hong Kong, June 2014.

[SA62] “Beyond Offloading,” IEEE INFOCOM 2014 All Conference Panel, Toronto, Canada, April 2014.

[SA61] “Mobile Cloud Computing: The Beginning of the End?,” Keynote Address, Workshop on Mobile Cloud Computing, affiliated with IEEE INFOCOM 2014, Toronto, Canada, April 2014.

[SA60] “Fair Scheduling with Multiple Resources,” Invited Research Seminar, Xidian University, Xi’an, China, April 2014.

[SA59] “Mobile Cloud Computing: Looking Through a Crystal Ball,” Keynote Address, ACM China Education Summit, Chengdu, China, April 2014.

[SA58] “Mobile Cloud Computing: The Beginning of the End?,” Keynote Address, the 9th IEEE International Conference on Mobile Ad-Hoc and Sensor Networks (MSN 2013), Dalian, China, December 2013.

[SA57] “Optimizing Datacenter Operations with Practical Complexity,” Invited Research Seminar, University of Science and Technology of China, Hefei, China, December 2013.

[SA56] “Writing Perfect Papers,” Invited Talk, University of Science and Technology of China, Hefei, China, December 2013.

[SA55] “The Art of Presentations,” Invited Seminar, Department of Computing Annual Research Day, Hong Kong Polytechnic University, November 2013.

[SA54] “Optimizing Datacenter Operations with Practical Complexity,” Invited Research Seminar, National University of Defence Technology, Changsha, China, November 2013.

[SA53] “Optimizing Datacenter Operations with Practical Complexity,” Invited Research Seminar, Shanghai Jiaotong University, Shanghai, China, November 2013.

[SA52] “Pervasive Computing: a Cloudy Perspective,” Panel on Pervasive Computing, the 27th Annual IEEE Computer Communications Workshop (CCW 2013), November 2013.

[SA51] “Mobile Cloud Computing,” Invited Research Seminar, Dalian Institute of Technology, Dalian, China, September 2013.

[SA50] “Mobile Cloud Computing: The Beginning of the End?,” Keynote Address, the 8th International Conference on Wireless Algorithms, Systems, and Applications (WASA 2013), August 2013.

[SA49] “Optimizing Datacenter Operations with Practical Complexity,” Invited Research Seminar, Microsoft Research Redmond, Washington, USA, May 2013.

[SA48] “Optimizing Datacenter Operations with Practical Complexity,” Invited Research Seminar, Xidian University, Xi’an, China, April 2013.

[SA47] “Airlift: Video Conferencing as a Cloud Service using Inter-Datacenter Networks,” Invited Research Seminar, Xi’an Jiaotong University, Xi’an, China, April 2013.

- [SA46] “The Art of Presentations,” Invited Seminar, Tsinghua University, Beijing, China, March 2013.
- [SA45] “A Roadmap to Good Research,” Invited Seminar, Tsinghua University, Beijing, China, March 2013.
- [SA44] “The Effects of Cloud Computing on Future Internet Designs,” Invited Keynote Speech, Future Internet Forum, Nanjing, China, December 2012.
- [SA43] “To Predict and To Guarantee, But at What Price?,” Invited Research Seminar, Peking University Shenzhen Graduate School, Shenzhen, China, August 2012.
- [SA42] “To Predict and To Guarantee, But at What Price?,” Invited Research Seminar, Shanghai Jiaotong University, Shanghai, China, June 2012.
- [SA41] “To Predict and To Guarantee, But at What Price?” Invited Research Seminar, Xidian University, Xi’an, China, June 2012.
- [SA40] “Raising the Bar with Inter-Datacenter Networks: From Costs to Performance,” Invited Research Seminar, Xi’an Jiaotong University, Xi’an, China, June 2012.
- [SA39] “Multimedia Networking: What’s Over and What’s Coming,” Invited Panel Presentation, the 20th International Conference on Computer Communications and Networks (ICCCN 2011), Maui, Hawaii, August 2011.
- [SA38] “Seen as Stable Marriages,” Invited Research Seminar, Huazhong University of Science and Technology, Wuhan, China, June 2011.
- [SA37] “Top Tips for Writing Top-Notch Research Papers,” Invited Research Seminar, Department of Computer Science and Technology, Tsinghua University, Beijing, China, October 27, 2011.
- [SA36] “Multimedia Networking: What’s Over and What’s Coming?” Invited Panel Presentation, IEEE International Conference on Computer Communication Networks (ICCCN 2011), Maui, Hawaii, August 1, 2011.
- [SA35] “Seen as Stable Marriages,” Invited Research Seminar, Huazhong University of Science and Technology, Wuhan, China, June 29, 2011.
- [SA34] “How Practical is Network Coding?” Invited Research Seminar, School of Telecommunications, Xidian University, Xi’an, China, April 15, 2011.
- [SA33] “How Practical is Network Coding?” Invited Research Seminar, Department of Computer Science, Rochester Institute of Technology, January 21, 2011.
- [SA32] “Practical Network Coding: 2002 – ?” Invited Research Seminar, Department of Computer Science and Engineering, University at Buffalo, State University of New York, October 21, 2010.

- [SA31] “Practical Network Coding: 2002 – ?” Invited Research Seminar, Department of Computing, Hong Kong Polytechnic University, Hong Kong, September 1, 2010.
- [SA30] “Decentralized Network Coding in Unreliable Networks,” Invited Research Seminar, China Computing Forum, Beijing, China, August 29, 2009.
- [SA29] “Decentralized Network Coding in Unreliable Networks,” Invited Research Seminar, Xidian University, Xi’an, China, August 26, 2009.
- [SA28] “Serving P2P Streaming Systems with GPU-accelerated Network Coding,” Invited Research Seminar, Huazhong University of Science and Technology, Wuhan, China, May 11, 2009.
- [SA27] “Live Peer-to-Peer Streaming Systems with Network Coding,” Invited Research Seminar, McGill SOCS Colloquium, McGill University, Montreal, Quebec, September 19, 2008.
- [SA26] “Large-scale Peer-to-Peer Streaming Systems with Network Coding,” Invited Research Seminar, Microsoft Research, Redmond, Washington, July 31, 2008.
- [SA25] “Live Peer-to-Peer Streaming Systems with Network Coding,” Invited Research Seminar, Fudan University, Shanghai, China, July 7, 2008.
- [SA24] “Network Coding in Multi-Hop Wireless Networks,” Invited Research Seminar, Xidian University, Xi’an, China, May 16, 2008.
- [SA23] “Peer-to-Peer Streaming: Have We Reached A Plateau?” one-hour invited seminar presentation, Hong Kong Polytechnic University, January 2, 2008.
- [SA22] “Practical Peer-to-Peer Live Streaming with Network Coding,” Invited Research Seminar, Microsoft Research, Redmond, Washington, August 21, 2007.
- [SA21] “Network Coding: From Theory to Reality,” Invited Research Seminar, Department of Computer Science, Fudan University, Shanghai, China, January 31, 2007.
- [SA20] “Scaling Laws and Tradeoffs in Peer-to-Peer Live Multimedia Streaming,” Invited Research Seminar, Department of Computing, Hong Kong Polytechnic University, January 25, 2007.
- [SA19] “Network Coding: From Theory to Reality,” Invited Research Seminar, Department of Computer Science, Northwestern University, Evanston, Illinois, November 3, 2006.
- [SA18] “Scaling Laws and Tradeoffs in Peer-to-Peer Live Multimedia Streaming,” Invited Research Seminar, Microsoft Research, Redmond, Washington, October 11, 2006.
- [SA17] “How Helpful is Network Coding?” Invited Research Seminar, Microsoft Research, Redmond, Washington, September 22, 2006.
- [SA16] “How Can P2P Help?” Invited Research Seminar, Plenary Panel titled “*Role of P2P in*

Network Architecture and Security,” the 26th International Conference on Distributed Computing Systems (ICDCS 2006), Lisbon, Portugal, July 5, 2006.

[SA15] “How Helpful is Network Coding?” Invited Research Seminar, Department of Computing, Hong Kong Polytechnic University, May 10, 2006.

[SA14] “Implementing an Experimental Testbed for Network Coding,” Invited Research Talk in the session “Applications of Network Coding,” the 2006 International Zurich Seminar (IZS) on Communications, Swiss Federal Institute of Technology (ETH), Zurich, Switzerland, February 22 – 24, 2006.

[SA13] “Maximizing Throughput with Network Coding,” Invited Research Seminar, the Toronto Networking Seminar Series, University of Toronto, October 14, 2005.

[SA12] “Optimizing Throughput with Network Coding,” Invited Research Seminar, DIMACS Working Group on Network Coding, Rutgers University, New Brunswick, New Jersey, January 28, 2005.

[SA11] “Maximizing Throughput with Network Coding,” Invited Research Seminar, *Department of Computer Science, Yale University*, New Haven, Connecticut, November 10, 2004.

[SA10] “Network Coding in Undirected Networks,” Invited Research Talk, *the 38th Annual Conference on Information Science and Systems (CISS 2004)*, invited session on *Network Coding*, Princeton University, New Jersey, March 17, 2004.

[SA9] “CodedStream: Live Media Streaming with Network Coding in Application-Layer Overlay Networks,” half-hour presentation, *the SPIE Conference on Multimedia Computing and Networking (MMCN 2004)*, Santa Clara, California, January 22, 2004.

[SA8] “On Improving Data Dissemination Throughput in Application-Layer Overlay Networks,” Invited Research Talk, *OpenSig 2003, Columbia University*, New York, New York, October 9, 2003.

[SA7] “iFlow: Improving the Way We Access Information in Wireless Networks,” Invited Research Talk, *Bell University Laboratories Wireless Research Conference*, Bell Mobility, Toronto, Ontario, October 30, 2002.

[SA6] “Applications in Hybrid/Heterogeneous Networks: Reality or Fiction?” Invited Research Seminar, *Bell University Laboratories Discoveries Session*, University of Toronto, Ontario, November 5, 2002.

[SA5] “End-to-End Throughput in Wireless Ad Hoc Networks: Simulation-based Studies,” Invited Research Talk, *Communications Group Graduate Seminar*, Department of Electrical and Computer Engineering, February 12, 2002.

[SA4] “Impact of Control Theory on QoS Adaptation in Distributed Middleware Systems,” Invited Research Talk, *the 2001 American Control Conference*, invited session on *Control Theory in Computer Systems*, Arlington, Virginia, June 26, 2001.

[SA3] “Existing Solutions and Future Challenges in Wireless Ad Hoc Networks,” Invited Research Seminar, *Bell University Laboratories Discoveries Session*, University of Toronto, Ontario, March 20, 2001.

[SA2] “A Dynamic Middleware Control Architecture for Distributed Multimedia Applications,” Invited Research Talk, *the Workshop on Automated Control of Distributed Instrumentation (ACDI 1999)*, Urbana, Illinois, April 22, 1999.

[SA1] “Adaptive QoS Middleware Framework for Complex Flexible Applications,” Invited Research Talk, *the NASA NREN QoS Workshop*, NASA Ames Research Center, California, August 18, 1998.

Professional Society Memberships

- ◇ Fellow, the Institute of Electrical and Electronic Engineers (IEEE), for contributions to application-layer network protocols and network coding
- ◇ Member, the Association for Computing Machinery (ACM)
- ◇ Licensed Professional Engineer in the Province of Ontario

Professional Service Activities

- ◇ **Journal Editorships**
 - ▷ *Associate Editor*, IEEE Transactions on Network Science and Engineering, 2021 – present.
 - ▷ *Topical Editor*, IEEE Internet of Things Journal, 2014 – present.
 - ▷ *Associate Editor*, IEEE Transactions on Mobile Computing, 2013 – present.
 - ▷ *Guest Editor*, Special Issue on Network Coding, Proceedings of the IEEE, 2009 – 2010.
 - ▷ *Associate Editor*, Elsevier Computer Networks Journal, 2009 – 2011.
 - ▷ *Editorial Board Member*, ACM/Springer Multimedia Systems Journal, 2008 – present.
 - ▷ *Associate Editor*, IEEE Transactions on Multimedia, 2006 – 2008.
 - ▷ *Associate Editor*, IEEE Transactions on Vehicular Technology, 2005 – 2008.
 - ▷ *Guest Editor*, Special Issue on Quality of Service in Heterogeneous Wired/Wireless Networks, ACM/Kluwer Wireless Networks, 2007.
- ◇ **Membership in Panels and Committees**
 - ▷ *Chair*, Best Paper Award Committee, 30th IEEE/ACM International Symposium on Quality of Service (IWQoS 2023), Orlando, Florida, June 19 – 21, 2023.
 - ▷ *Senior Editor*, IEEE Journal on Selected Areas in Communications, 2022 – present
 - ▷ *Member*, IEEE Fellow Evaluation Committee, IEEE Computer Society, 2016, 2022 – present
 - ▷ *Member*, IEEE Koji Kobayashi Computers and Communications Award Committee, 2021 – present
 - ▷ *Vice Chair*, IEEE Fellow Evaluation Committee, IEEE Communications Society, 2018 – 2019
 - ▷ *Member*, IEEE Fellow Evaluation Committee, IEEE Communications Society, 2017
 - ▷ *Member*, IEEE INFOCOM Test of Time Award Committee, 2016 — present

- ▷ *Panelist*, Networking Technology and Systems (NeTS) Review Panels (both regular and CAREER awards), National Science Foundation, U.S., Spring 2007, Spring 2008, Fall 2008, Spring 2009, Spring 2010, Fall 2012, Spring 2013
- ▷ *Member*, Steering Committee, International Workshop on Quality of Service (IWQoS), May 2004 – September 2007.

◇ Conference Chairs

- ▷ *Technical Program Committee Co-Chair*, the 2nd International Conference on Meta-verse Computing, Networking, and Applications (MetaCom 2024), Hong Kong, August 12-15, 2024.
- ▷ *Area TPC Chair*, the 32nd IEEE International Conference on Network Protocols (ICNP 2024), Charleroi, Belgium, October 28 – 31, 2024.
- ▷ *Area TPC Chair*, IEEE INFOCOM 2024, Vancouver, British Columbia, Canada, May 2024.
- ▷ *Technical Program Committee Co-Chair*, the 43rd International Conference on Distributed Computing Systems (ICDCS 2023), Hong Kong, July 2023.
- ▷ *Area TPC Chair*, IEEE INFOCOM 2023, New York Area, U.S.A., May 17 – 20, 2023.
- ▷ *Area TPC Chair*, IEEE INFOCOM 2022, Online, May 2 – 5, 2022.
- ▷ *Technical Program Committee Co-Chair*, the 17th International Conference on Mobility, Sensing and Networking (MSN 2021), Exeter, UK, December 13 – 15, 2021.
- ▷ *Area TPC Chair*, the 29th IEEE International Conference on Network Protocols (ICNP 2021), Dallas, Texas, November 2 – 5, 2021.
- ▷ *Area TPC Chair and TPC Meeting (Online) Arrangements Chair*, IEEE INFOCOM 2021, Online, May 10 – 13, 2021.
- ▷ *General Co-Chair and Area TPC Chair*, IEEE INFOCOM 2020, Online, July 6 – 9, 2020.
- ▷ *Area TPC Chair*, the 28th IEEE International Conference on Network Protocols (ICNP 2020), Madrid, Spain, October 13 – 16, 2020.
- ▷ *Area TPC Chair*, IEEE INFOCOM 2019, Paris, France, April 29 – May 2, 2019.
- ▷ *Chief Architect (Software and Systems) and Area TPC Chair*, IEEE INFOCOM 2018, Honolulu, Hawaii, April 16 – 19, 2018.
- ▷ *General Chair*, the 25th IEEE International Conference on Network Protocols (ICNP 2017), Toronto, Canada, October 10 – 13, 2017.
- ▷ *Program Co-Chair*, 2017 IEEE International Conference on Cloud Computing Technology and Science (CloudCom 2017), December 11 – 14, 2017.
- ▷ *Track Chair*, the Communication Architecture, Algorithms, Modeling, and Evaluation track, the 26th International Conference on Computer Communication and Networks (ICCCN 2017), Vancouver, Canada, July 31 – August 3, 2017.
- ▷ *Chief Architect (Software and Systems) and Area TPC Chair*, IEEE INFOCOM 2017, Atlanta, Georgia, May 1 – 4, 2017.
- ▷ *Area TPC Chair*, the 24th IEEE International Conference on Network Protocols (ICNP 2016), Singapore, November 8 – 11, 2016.
- ▷ *Chief Architect (Software and Systems) and Area TPC Chair*, IEEE INFOCOM 2016, San Francisco, California, April 11 – 14, 2016.
- ▷ *TPC Group Leader*, the 13th IEEE International Conference on Sensing, Communication, and Networking (SECON 2016), London, UK, June 27 – 30, 2016.

- ▷ *Track Chair*, Systems, Protocols, and Applications Track, the 12th IEEE International Conference on Mobile Ad hoc and Sensor Systems (MASS 2015), Dallas, Texas, October 19 – 22, 2015.
- ▷ *Program Co-Chair*, IEEE INFOCOM 2015, Hong Kong, April 26 – May 1, 2015.
- ▷ *Area TPC Chair*, *Media Transport and Delivery Area*, ACM Multimedia 2014, Orlando, Florida, November 3 – 7, 2014.
- ▷ *Area TPC Chair*, the 22nd IEEE International Conference on Network Protocols (ICNP 2014), the Research Triangle, North Carolina, October 21 – 24, 2014.
- ▷ *Panel Co-Chair*, *Area TPC Chair*, and *Local Arrangement Co-Chair*, IEEE INFOCOM 2014, Toronto, Canada, April 28 – May 2, 2014.
- ▷ *Program Co-Chair*, the Second IEEE International Conference on Cloud Engineering (IC2E 2014), Boston, MA, March 10 – 14, 2014.
- ▷ *General Chair*, the 21st IEEE International Workshop on Quality of Service (IWQoS 2013), Montreal, Quebec, Canada, June 3 – 4, 2013.
- ▷ *Area TPC Chair*, ACM Multimedia 2012, Nara, Japan, October 29 – November 2, 2012.
- ▷ *Program Co-Chair*, 22nd SIGMM Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV 2012), Toronto, Ontario, Canada, June 7 – 8, 2012.
- ▷ *Program Co-Chair*, IEEE International Conference on Network Protocols (ICNP 2011), Vancouver, British Columbia, Canada, October 17 – 20, 2011.
- ▷ *TPC Group Leader*, Eighth IEEE Conference on Sensor, Mesh and Ad Hoc Communications and Networks (SECON 2011), Salt Lake City, Utah, June 27 – 30, 2011.
- ▷ *Program Vice Chair*, Network/Internet Protocols and Applications area, 31st IEEE International Conference on Distributed Computing Systems (IEEE ICDCS 2011), June 20 – 24, 2011.
- ▷ *Area TPC Chair*, IEEE INFOCOM 2011, Shanghai, China, April 10 – 15, 2011.
- ▷ *Program Co-Chair*, the Sixth International Symposium on Network Coding (NetCod 2010), Toronto, Ontario, Canada, June 9 – 11, 2010.
- ▷ *Publication Chair*, the 29th International Conference on Distributed Computing Systems (ICDCS 2009), Montreal, Quebec, Canada, June 22 – 26, 2009.
- ▷ *Short Paper Program Chair*, Systems Track, ACM Multimedia 2009, Beijing, China, October 19 – 24, 2009.
- ▷ *Program Co-Chair*, First International Workshop on Wireless Network Coding (WiNC 2008), in conjunction with the Fifth IEEE Conference on Sensor, Mesh and Ad Hoc Communications and Networks (SECON 2008), San Francisco, California, June 16 – 20, 2008.
- ▷ *Workshop Co-Chair*, ACM/IFIP/USENIX 8th International Middleware Conference (Middleware 2007), Newport Beach, Orange County, California, November 26 – 30, 2007.
- ▷ *ACM Student Research Competition (SRC) Co-Chair*, ACM MobiCom 2006, Los Angeles, California, September 24 – 29, 2006.

- ▷ *Program Co-Chair*, the Third International Conference on Quality of Service in Heterogeneous Wired/Wireless Networks (QShine 2006), University of Waterloo, Waterloo, Ontario, Canada, August 7 – 9, 2006.
 - ▷ *Demonstration Co-Chair*, ACM Multimedia 2006, Santa Barbara, California, October 22 – 28, 2006.
 - ▷ *Program Co-Chair*, the Twelfth IEEE International Workshop on Quality of Service (IWQoS 2004), successfully held in Montreal, Quebec, Canada, June 7 – 9, 2004. IWQoS 2004 has attracted 154 paper submissions, a record number in the history of IWQoS. With 30 papers accepted and an acceptance ratio of 19%, IWQoS 2004 has continued its tradition with a high-quality technical program, including two keynote addresses and a panel discussion.
 - ▷ *Local Arrangements Chair*, ACM/IEEE/IFIP Middleware 2004, successfully held in Toronto, Ontario, Canada, October 18 – 22, 2004.
- ◇ **Membership in Technical Program Committees** (in reverse chronological order)
- The 31st IEEE/ACM International Symposium on Quality of Service (IWQoS 2024), Guangzhou, China, June 19 - 21, 2024.
 - ▷ ACM Multimedia Systems (MMSys) 2024, Bari, Italy, April 15 – 18, 2024.
 - ▷ The 34th Workshop on Network and Operating System Support for Digital Audio and Video (NOSSDAV 2024), Bari, Italy, April 15 – 18, 2024.
 - ▷ ACM Multimedia Systems (MMSys) 2023, Vancouver, Canada, June 7 – 10, 2023.
 - ▷ The 30th IEEE/ACM International Symposium on Quality of Service (IWQoS 2023), Orlando, Florida, June 19 – 21, 2023.
 - ▷ ACM Multimedia 2022, Lisbon, Portugal, October 10 – 14, 2022.
 - ▷ The 42nd International Conference on Distributed Computing Systems (ICDCS 2022), Machine Learning on or for Distributed Systems track, July 10 – 13, 2022.
 - ▷ The 29th IEEE/ACM International Symposium on Quality of Service (IWQoS 2022), Online, June 10 – 12, 2022.
 - ▷ The 3rd International Workshop on AI in Networks and Distributed Systems (WAIN 2021), affiliated with Performance 2021, Politecnico Di Milano, Italy, November 8-12, 2021.
 - ▷ The 28th IEEE/ACM International Symposium on Quality of Service (IWQoS 2021), Online, June 25 – 28, 2021.
 - ▷ The 2nd Workshop on AI in Networks and Distributed Systems (WAIN) 2020, co-located with the 38th International Symposium on Computer Performance, Modeling, Measurements and Evaluation (Performance 2020), Milan, Italy, November 6, 2020.
 - ▷ ACM Multimedia 2020, Seattle, Washington, USA, October 12 – 16, 2020.
 - ▷ The 27th IEEE/ACM International Symposium on Quality of Service (IWQoS 2020), Online, June 15-17, 2020.
 - ▷ The 2019 ACM Multimedia Systems Conference (MMSys 2020), Online, June 8-11, 2020.

- ▷ The 33rd Annual Conference on Neural Information Processing Systems (NeurIPS 2019), Vancouver, BC, Canada, December 8-14, 2019.
- ▷ ACM Multimedia 2019, Multimedia Transport and Delivery, Nice, France, October 21-25, 2019.
- ▷ The 27th IEEE/ACM International Symposium on Quality of Service (IWQoS 2019), Phoenix, Arizona, June 24-25, 2019.
- ▷ The 2019 ACM Multimedia Systems Conference (MMSys 2019), Amherst, Massachusetts, June 18-21, 2019.
- ▷ The 27th IEEE/ACM International Symposium on Quality of Service (IWQoS 2019), Phoenix, Arizona, June 24-25, 2019.
- ▷ The 28th ACM SIGMM Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV 2018), Amsterdam, The Netherlands, June 12-15, 2018.
- ▷ The 10th USENIX Workshop on Hot Topics in Cloud Computing (HotCloud 2018), Boston, MA, July 9, 2018.
- ▷ The 2018 ACM Multimedia Systems Conference (MMSys 2018), Amsterdam, The Netherlands, June 12-15, 2018.
- ▷ The 26th IEEE/ACM International Symposium on Quality of Service (IWQoS 2018), Banff, Alberta, June 4-6, 2018.
- ▷ The 3rd ACM/IEEE International Conference on Internet of Things Design and Implementation (IoTDI 2018), Orlando, Florida, April 17-20, 2018.
- ▷ The 6th IEEE International Conference on Cloud Computing (IC2E 2018), Orlando, Florida, April 17-20, 2018.
- ▷ ACM Multimedia 2017, Multimedia Transport and Delivery, Mountain View, California, October 23-27, 2017.
- ▷ ACM SIGCOMM 2017 Workshop on Virtual Reality and Augmented Reality Network (VR/AR Network 2017), Los Angeles, California, August 21, 2017.
- ▷ The 27th ACM SIGMM Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV 2017), Taipei, Taiwan, June 20-23, 2017.
- ▷ The 25th IEEE/ACM International Symposium on Quality of Service (IWQoS 2017), Vilanova i la Geltrú, Spain, June 14-16, 2017.
- ▷ IFIP Networking 2017, Stockholm, Sweden, June 12-15, 2017.
- ▷ The 37th International Conference on Distributed Computing Systems (ICDCS 2017), Applications and Experiences Track, Atlanta, Georgia, June 5-8, 2017.
- ▷ The 37th International Conference on Distributed Computing Systems (ICDCS 2017), Distributed Algorithms and Theory Track, Atlanta, Georgia, June 5-8, 2017.
- ▷ The 15th International Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt 2017), Telecom ParisTech, Paris, France, May 15-19, 2017.
- ▷ ACM Multimedia Systems 2017 Conference (MMSys 2017), Taipei, Taiwan, June 20-23, 2017.

- ▷ IEEE INFOCOM 2017 Workshop on Smart Data Pricing (SDP 2017), Atlanta, Georgia, May 1, 2017.
- ▷ The 5th IEEE International Conference on Cloud Computing (IC2E 2017), Vancouver, Canada, April 4-7, 2017.
- ▷ IEEE Globecom 2016, Mobile and Wireless Networks Symposium, Washington DC, USA, December 4-8, 2016.
- ▷ ACM Multimedia 2016, Multimedia Transport and Delivery, Amsterdam, The Netherlands, October 15-19, 2016.
- ▷ The 24th IEEE/ACM International Symposium on Quality of Service (IWQoS 2016), Beijing, China, June 20-21, 2016.
- ▷ The 4th IEEE International Conference on Cloud Computing (IC2E 2016), Berlin, Germany, April 4-8, 2016.
- ▷ The 26th ACM SIGMM Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV 2016), Klagenfurt am Wörthersee, Austria, May 10-13, 2016.
- ▷ ACM Multimedia Systems 2016 Conference, Klagenfurt am Wörthersee, Austria, May 10-13, 2016.
- ▷ The 14th International Symposium on Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks (WiOpt 2016), Arizona State University, Tempe, Arizona, USA, May 9-13, 2016.
- ▷ IEEE International Conference on Communications (ICC 2016), Kuala Lumpur, Malaysia, May 23-27, 2016.
- ▷ The 23rd IEEE/ACM International Symposium on Quality of Service (IWQoS 2015), Portland, Oregon, June 15-16, 2015.
- ▷ The 12th IEEE Conference on Sensor, Mesh and Ad Hoc Communications and Networks (SECON 2015), Seattle, Washington, June 22-25, 2015.
- ▷ IEEE International Conference on Communications (ICC 2015), London, UK, June 8-12, 2015.
- ▷ The 25th ACM Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV 2015), Portland, Oregon, March 2015.
- ▷ Systems, Protocols, and Applications Track, the 11th IEEE International Conference on Mobile Ad hoc and Sensor Systems (MASS 2014), Philadelphia, Pennsylvania, October 2014.
- ▷ The 18th Annual ACM International Conference on Mobile Computing and Networking (Mobicom 2014), Maui, Hawaii, September 7-11, 2014.
- ▷ The 2014 IEEE International Symposium on Network Coding (NetCod 2014), Aalborg, Denmark, June 27-28, 2014.
- ▷ The 22nd IEEE/ACM International Symposium on Quality of Service (IWQoS 2014), Hong Kong, China, May 26-27, 2014.
- ▷ IEEE INFOCOM 2014 Workshop on Smart Data Pricing, Toronto, Canada, May 2, 2014.

- ▷ The 2014 ACM Multimedia Systems Conference (MMSys 2014), Singapore, March 19-21, 2014.
- ▷ The 24th ACM Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV 2014), Singapore, March 19-20, 2014.
- ▷ The 9th International Conference on emerging Networking EXperiments and Technologies (CoNEXT 2013), Santa Barbara, CA, December 9-12, 2013.
- ▷ IEEE Globecom 2013, Ad-hoc and Sensor Networking Symposium, Atlanta, Georgia, December 9-13, 2013.
- ▷ ACM Multimedia 2013, Multimedia Systems and Middleware track, Barcelona, Spain, October 21-25, 2013.
- ▷ The First IEEE Conference on Communications and Network Security (IEEE CNS 2013), Washington DC, October 14-16, 2013.
- ▷ The 21th International Conference on Network Protocols (ICNP 2013), Gottingen, Germany, October 7-10, 2013.
- ▷ The 31st International Symposium on Computer Performance, Modeling, Measurements and Evaluation 2013 (IFIP Performance 2013), Vienna, Austria, September 24-26, 2013.
- ▷ 2013 IEEE International Conference on Multimedia and Expo (ICME 2013), San Jose, California, July 15-19, 2013.
- ▷ The 33rd International Conference on Distributed Computing Systems (ICDCS 2013), Philadelphia, Pennsylvania, July 8-11, 2013.
- ▷ ACM SIGMETRICS 2013, Pittsburgh, Pennsylvania, June 17-21, 2013.
- ▷ The 2013 IEEE International Symposium on Network Coding (NetCod 2013), Calgary, Alberta, Canada, June 7-9, 2013.
- ▷ IEEE International Conference on Communications (ICC 2013), Ad-hoc and Sensor Networking Symposium, Budapest, Hungary, June 9-13, 2013.
- ▷ IEEE INFOCOM 2013, Turin, Italy, April 14-19, 2013.
- ▷ IEEE International Conference on Cloud Engineering (IC2E 2013), San Francisco, California, March 25-27, 2013.
- ▷ The 23rd ACM Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV 2013), Oslo, Norway, February 26-27, 2013.
- ▷ ACM Multimedia Systems 2013, Oslo, Norway, February 28 - March 1, 2013.
- ▷ Workshop on Hot Topics in Mobile Multimedia (HotMM 2012), in conjunction with IEEE ICME 2012, Melbourne, Australia, July 9-13, 2012.
- ▷ The 20th IEEE International Conference on Network Protocols (ICNP 2012), Austin, Texas, October 30 - November 2, 2012.
- ▷ The 18th Annual International Conference on Mobile Computing and Networking (Mobicom 2012), Istanbul, Turkey, August 22-26, 2012.
- ▷ The 2012 International Conference on Multimedia and Expo (ICME 2012), Melbourne,

Australia, July 9-13, 2012.

- ▷ The 2012 International Symposium on Network Coding (NetCod 2012), Cambridge, Massachusetts, June 29-30, 2012.
- ▷ The 9th IEEE Conference on Sensor, Mesh and Ad Hoc Communications and Networks (SECON 2012), Seoul, Korea, June 18-21, 2012.
- ▷ The 32nd International Conference on Distributed Computing Systems (ICDCS 2012), Macau, China, June 18-21, 2012.
- ▷ IEEE International Conference on Communications (ICC 2012), Ad-hoc and Sensor Networking Symposium, Ottawa, Canada, June 10-15, 2012.
- ▷ The 20th IEEE International Workshop on Quality of Service (IWQoS 2012), Coimbra, Portugal, June 4-5, 2012.
- ▷ IEEE INFOCOM 2012, Orlando, Florida, March 25-30, 2012.
- ▷ ACM Multimedia Systems 2012 (MMSys 2012), Chapel Hill, North Carolina, February 22-24, 2012.
- ▷ IEEE Globecom 2011, Ad-hoc and Sensor Networking Symposium, Houston, Texas, December 5-9, 2011.
- ▷ ACM Multimedia 2011, Scottsdale, Arizona, November 28 - December 1, 2011.
- ▷ The 2011 International Symposium on Network Coding (NetCod 2011), Beijing, China, July 25-27, 2011.
- ▷ IEEE International Conference on Multimedia and Expo (ICME 2011), Barcelona, Spain, July 11-15, 2011.
- ▷ Workshop on Hot Topics in Multimedia Delivery (HotMD 2011), in conjunction with IEEE ICME 2011, Barcelona, Spain, July 11-15, 2011.
- ▷ The 19th IEEE International Workshop on Quality of Service (IWQoS 2011), San Jose, California, June 5-7, 2011.
- ▷ The 21st International Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV 2011), Vancouver, British Columbia, Canada, June 2-3, 2011.
- ▷ IEEE INFOCOM 2011 Workshop on Cloud Computing, Shanghai, China, April 15, 2011.
- ▷ ACM Multimedia Systems 2011 (MMSys 2011), San Francisco Bay area, California, February 23 – 25, 2011.
- ▷ The 12th International Conference on Distributed Computing and Networking (ICDCN 2011), Bangalore, India, January 2 – 5, 2011.
- ▷ IEEE Globecom 2010, Ad-hoc and Sensor Networking Symposium, Miami, Florida, December 6 – 10, 2010.
- ▷ ACM CoNEXT 2010, Philadelphia, Pennsylvania, November 30 – December 3, 2010.
- ▷ The 7th IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS 2010), San Francisco, California, November 8-12, 2010.
- ▷ Meta-TPC member, Systems Track, ACM Multimedia 2010, Florence, Italy, October 25

– 29, 2010.

- ▷ The 18th IEEE International Conference on Network Protocols (ICNP 2010), Kyoto, Japan, October 5 – 8, 2010.
- ▷ ACM Mobicom 2010, Chicago, Illinois, September 20 – 24, 2010.
- ▷ The Seventh IEEE Conference on Sensor, Mesh and Ad Hoc Communications and Networks (IEEE SECON 2010), Boston, Massachusetts, June 21 – 25, 2010.
- ▷ The 30th International Conference on Distributed Computing Systems (ICDCS 2010), Genoa, Italy, June 21 – 25, 2010.
- ▷ The 18th International Workshop on Quality of Service (IWQoS 2010), Beijing, China, June 16 – 18, 2010.
- ▷ The 20th ACM International Workshop on Network and Operating Systems Support for Digital Audio and Video (NOSSDAV 2010), Amsterdam, The Netherlands, June 2 – 4, 2010.
- ▷ The 9th International Workshop on Peer-to-Peer Systems (IPTPS 2010), co-located with the 7th USENIX Symposium on Networked Systems Design and Implementation (NSDI 2010), San Jose, California, April 28, 2010.
- ▷ IEEE INFOCOM 2010, San Diego, California, March 2010.
- ▷ ACM Multimedia Systems 2010 (MMSys 2010), Scottsdale, Arizona, February 22-23, 2010.
- ▷ The 17th IEEE International Conference on Network Protocols (ICNP 2009), Princeton, New Jersey, October 14 – 17, 2009.
- ▷ The Sixth IEEE International Conference on Mobile Ad-hoc and Sensor Systems (IEEE MASS 2009), Macau SAR, P. R. China, October 5 – 9, 2009.
- ▷ The 17th International Workshop on Quality of Service (IWQoS 2009), Charleston, South Carolina, July 13 – 15, 2009.
- ▷ The 6th Annual IEEE Communications Society Conference on Sensor, Mesh and Ad Hoc Communications and Networks (SECON 2009), Rome, Italy, June 22 – 26, 2009.
- ▷ The Second IEEE International Workshop on Wireless Network Coding (WiNC 2009), Rome, Italy, June 22, 2009.
- ▷ The 29th International Conference on Distributed Computing Systems (ICDCS 2009), Montreal, Quebec, Canada, June 22 – 26, 2009.
- ▷ IEEE International Conference on Communications (ICC 2009), Symposium on Wireless Networking, Dresden, Germany, June 14 – 18, 2009.
- ▷ The 19th ACM International workshop on Network and Operating Systems Support for Digital Audio and Video (ACM NOSSDAV 2009), Williamsburg, Virginia, June 3 – 5, 2009.
- ▷ The 1st ACM International Workshop on Medical-grade Wireless Networks (WiMD 2009), New Orleans, LA, May 18, 2009.
- ▷ The Tenth ACM International Symposium on Mobile Ad Hoc Networking and Computing (ACM MobiHoc 2009), New Orleans, LA, May 18 – 21, 2009.

- ▷ IEEE INFOCOM 2009, Rio de Janeiro, Brazil, April 19 – 25, 2009.
- ▷ IEEE Globecom 2008, Ad Hoc, Sensor and Mesh Networking Symposium, New Orleans, LA, November 30 – December 4, 2008.
- ▷ The Third International Workshop on Self-Organizing Systems (IWSOS 2008), Vienna, Austria, December 2008.
- ▷ ACM Multimedia 2008, Vancouver, Canada, October 27 – November 1, 2008.
- ▷ The Sixteenth International Conference on Network Protocols (ICNP 2008), Orlando, Florida, October 19 – 22, 2008.
- ▷ The 37th International Conference on Parallel Processing (ICPP 2007), Portland, Oregon, September 8 – 12, 2008.
- ▷ The Fifth International Conference on Heterogeneous Networking for Quality, Reliability, Security and Robustness (QShine 2008), Hong Kong, July 28 – 31, 2008.
- ▷ The 28th International Conference on Distributed Computing Systems (ICDCS 2008), Beijing, China, June 17 – 20, 2008.
- ▷ The Sixteenth IEEE International Workshop on Quality of Service (IEEE IWQoS 2008), Enschede, the Netherlands, June 2 – 4, 2008.
- ▷ The Ninth ACM International Symposium on Mobile Ad Hoc Networking and Computing (ACM MobiHoc 2008), Hong Kong, May 26 – 30, 2008.
- ▷ IEEE International Conference on Communications (ICC 2008), Symposium on Wireless Networking, Beijing, China, May 19 – 23, 2008.
- ▷ IFIP Networking 2008, Singapore, May 5 – 9, 2008.
- ▷ IEEE INFOCOM 2008, Phoenix, Arizona, April 13 – 19, 2008.
- ▷ The Fourth International Workshop on Network Coding, Theory and Applications (NetCod 2008), Hong Kong, January 3 – 4, 2008.
- ▷ The Fifteenth Annual ACM/SPIE Conference on Multimedia Computing and Networking (MMCN 2008), San Jose, California, January 30 – 31, 2008.
- ▷ IEEE Global Telecommunications Conference (Globecom 2007), Symposium on Ad-hoc and Sensor Networks, Washington DC, November 26 – 30, 2007.
- ▷ The Fifteenth IEEE International Conference on Network Protocols (ICNP 2007), Beijing, China, October 16 – 19, 2007.
- ▷ ACM Multimedia 2007, Augsburg, Germany, September 23 – 29, 2007.
- ▷ International Workshop on Hot Topics in Mobile Peer-to-Peer Networks (HOT-MP2P), in conjunction with the 36th Annual Conference of the International Conference on Parallel Processing (ICPP 2007), Xi'An, China, September 10 – 14, 2007.
- ▷ New Trends in Network Architectures and Services: Second International Workshop on Self-Organizing Systems (IWSOS 2007), English Lake District, UK, September 11 – 13, 2007.
- ▷ The Fourth International Conference on Quality of Service on Heterogeneous Networking for Quality, Reliability, Security and Robustness (QShine 2007), Vancouver,

British Columbia, Canada, August 14 – 17, 2007.

- ▷ International Workshop on Theoretical and Algorithmic Aspects of Sensor and Ad-hoc Networks (WTASA 2007), Miami, Florida, June 28 – 29, 2007.
- ▷ The 27th International Conference on Distributed Computing Systems (ICDCS 2007), Toronto, Canada, June 25 – 29, 2007.
- ▷ IEEE International Conference on Communications 2007 (ICC 2007), Symposium of Wireless Ad Hoc and Sensor Networks, Glasgow, Scotland, UK, June 24 – 28, 2007.
- ▷ The Fifteenth IEEE International Workshop on Quality of Service (IWQoS 2007), Chicago, Illinois, June 20 – 22, 2007.
- ▷ The Seventeenth ACM International Workshop on Network and Operating System Support for Digital Audio and Video (NOSSDAV 2007), Champaign-Urbana, Illinois, June 4 – 5, 2007.
- ▷ The Second IFIP/IEEE International Workshop on Feedback Control Implementation and Design in Computing Systems and Networks (FeBID 2007), in conjunction with the 10th IFIP/IEEE Symposium on Integrated Management (IM 2007), Munich, Germany, May 25, 2007.
- ▷ IFIP Networking 2007, Atlanta, Georgia, May 14 – 18, 2007.
- ▷ IEEE INFOCOM 2007, Anchorage, Alaska, May 6 – 12, 2007.
- ▷ The Third International Workshop on Network Coding, Theory and Applications (Net-Cod 2007), San Diego, California, January 29, 2007.
- ▷ The Fourteenth Annual ACM/SPIE Conference on Multimedia Computing and Networking (MMCN 2007), San Jose, California, January 28 – February 1, 2007.
- ▷ Workshop on Peer-to-Peer Multicasting 2007 (P2PM 2007), in conjunction with IEEE Consumer Communications and Networking Conference 2007 (CCNC 2007), Las Vegas, Nevada, January 11, 2007.
- ▷ Technical Review Committee, Real-Time Systems Journal, Special Issue on Real-Time Wireless Sensor Networks (Guest Editors: Insup Lee, Chenyang Lu), 2007.
- ▷ IEEE Global Telecommunications Conference (Globecom 2006), Symposium on Wireless Ad Hoc and Sensor Networks, San Francisco, California, November 27 – December 1, 2006.
- ▷ The Fourteenth IEEE International Conference on Network Protocols (ICNP 2006) (*both the main conference and its poster session*), Santa Barbara, California, USA, November 12 – 15, 2006.
- ▷ ACM Multimedia 2006, Santa Barbara, California, October 22 – 28, 2006.
- ▷ First International Conference on Communications and Networking in China (China-com 2006), Beijing, China, October 16 – 19, 2006.
- ▷ New Trends in Network Architectures and Services: International Workshop on Self-Organizing Systems (IWSOS 2006), University of Passau, Germany, September 18 – 20, 2006.
- ▷ 2006 International Conference on Parallel Processing (ICPP 2006), Columbus, Ohio,

USA, August 14 – 18, 2006.

- ▷ The Second International Workshop on Incentive Based Computing (IBC 2006), in conjunction with the IEEE International Conference on Distributed Computing Systems (ICDCS 2006), Lisbon, Portugal, July 4 – 7, 2006.
- ▷ The 26th International Conference on Distributed Computing Systems (ICDCS 2006), Lisboa, Portugal, July 4 – 7, 2006.
- ▷ Symposium on Next Generation Mobile Networks (NGMN 2006), in conjunction with International Wireless Communications and Mobile Computing Conference (IWCMC 2006), Vancouver, British Columbia, Canada, July 3 – 6, 2006.
- ▷ The Fourteenth IEEE International Workshop on Quality of Service (IWQoS 2006), Yale University, New Haven, Connecticut, June 19 – 21, 2006.
- ▷ IFIP Networking 2006, Coimbra, Portugal, May 15 – 19, 2006.
- ▷ Second Workshop on Network Coding, Theory, and Applications (NetCod 2006), in conjunction with WiOpt 2006, Boston, Massachusetts, April 3 – 7, 2006.
- ▷ IEEE International Conference on Communications 2006 (ICC 2006), Istanbul, Turkey, June 11 – 15, 2006.
- ▷ The Fourth Annual IEEE International Conference on Pervasive Computing and Communications (Percom 2006), Pisa, Italy, March 13 – 17, 2006.
- ▷ The Thirteenth Annual ACM/SPIE Conference on Multimedia Computing and Networking (MMCN 2006), San Jose, California, January 17 – 20, 2006.
- ▷ The 2005 International Conference on Embedded And Ubiquitous Computing (EUC 2005), Nagasaki, Japan, December 6 – 9, 2005.
- ▷ IEEE Globecom 2005, Wireless Communications Symposium, St. Louis, Missouri, November 28 – December 2, 2005.
- ▷ ACM Multimedia 2005, Singapore, November 6 – 12, 2005.
- ▷ Second IEEE International Conference on Mobile Ad Hoc and Sensor Systems (MASS 2005), Washington DC, November 7 – 10, 2005.
- ▷ The Second International Conference on Quality of Service in Heterogeneous Wired /Wireless Networks (QShine 2005), Orlando, Florida, August 20 – 24, 2005.
- ▷ The 2005 IEEE International Conference on Multimedia and Expo (ICME 2005), Amsterdam, The Netherlands, July 6 – 8, 2005.
- ▷ The Thirteenth IEEE International Workshop on Quality of Service (IWQoS 2005), Passau, Germany, June 21 – 23, 2005.
- ▷ The 34th International Conference on Parallel Processing (ICPP 2005), Oslo, Norway, June 14 – 17, 2005.
- ▷ The First Workshop on Network Coding, Theory and Applications (NetCod 2005), in conjunction with WiOpt 2005, Riva del Garda, Italy, April 7, 2005.
- ▷ IEEE Wireless Communications and Networking Conference (WCNC) 2005, New Orleans, Louisiana, March 13 – 17, 2005.

- ▷ IEEE INFOCOM 2005, Miami, Florida, March 13 – 17, 2005.
- ▷ IEEE Percom 2005, Kauai Island, Hawaii, March 8 – 12, 2005.
- ▷ The Twelfth Annual ACM/SPIE Conference on Multimedia Computing and Networking (MMCN) 2005, San Jose, California, January 17 – 20, 2005.
- ▷ The 8th International Conference On Principles Of Distributed Systems (OPODIS 2004), Grenoble, France, December 15 – 17, 2004.
- ▷ IEEE Globecom 2004, Dallas, Texas, November 29 – December 3, 2004.
- ▷ Workshop on Coordinated Quality of Service in Distributed Systems (COQODS), in conjunction with the 2004 IEEE International Conference On Networks (ICON 2004), Singapore, November 16 – 19, 2004.
- ▷ First International Conference on Quality of Service in Heterogeneous Wired/Wireless Networks (QShine 2004), Dallas, Texas, October 18 – 20, 2004.
- ▷ IEEE International Conference on Distributed Computing Systems (ICDCS) 2004, Tokyo, Japan, March 23 – 26, 2004.
- ▷ EUROMICRO 2003, Track on “Multimedia Telecommunications: Multimedia Content Management and Distribution”, Turkey, September 1 – 6, 2003.
- ▷ IEEE International Conference on Distributed Computing Systems (ICDCS) 2003, Providence, Rhode Island, May 19 – 22, 2003.
- ▷ IEEE International Conference on Communications (ICC) 2003, Anchorage, Alaska, May 11 – 15, 2003.

**Departmental
and University
Service Activities**

- ◇ Associate Chair, Research, Department of Electrical and Computer Engineering, University of Toronto, July 2021 – present
- ◇ Chair, Departmental Awards Committee, Department of Electrical and Computer Engineering, University of Toronto, July 2022 – Present
- ◇ Chair, Departmental Faculty Search Committee, Deep Learning, Department of Electrical and Computer Engineering, University of Toronto, July 2022 – Present
- ◇ Chair, Departmental Faculty Search Committee, Neuromodulation, Department of Electrical and Computer Engineering, University of Toronto, July 2022 – Present
- ◇ Member, Faculty Awards Committee, Faculty of Applied Science and Engineering, University of Toronto, July 2022 – present
- ◇ Voting Member, Faculty Research Committee, Faculty of Applied Science and Engineering, University of Toronto, July 2021 – present
- ◇ Member, Interim Review Committee for Professor Nicolas Papernot, Department of Electrical and Computer Engineering, University of Toronto, September – November 2022
- ◇ Chair, Curriculum Matters Committee, Department of Electrical and Computer Engineering, University of Toronto, July 2015 – June 2020
- ◇ Voting Member, Faculty Curriculum Committee, Faculty of Applied Science and Engineering, University of Toronto, July 2015 – June 2020

- ◇ Member, Planning Committee for the University of Toronto-Tsinghua Innovation and Entrepreneurship Forum, July 2017 – June 2019
- ◇ Member, President's International Council, East Asia, July 2017 – June 2020
- ◇ Member, Core 8 Curriculum Committee, Faculty of Applied Science and Engineering, University of Toronto, July 2015 – June 2017
- ◇ Chair, Software Systems Search Committee, Department of Electrical and Computer Engineering, University of Toronto, September 2011 – June 2013
- ◇ Director of Curriculum and Chair of Curriculum Matters Committee, Department of Electrical and Computer Engineering, University of Toronto, July 2009 – June 2013
- ◇ Voting Member, Faculty Curriculum Committee, Faculty of Applied Science and Engineering, University of Toronto, July 2009 – June 2013
- ◇ Member, Working Group on Course Scheduling Software Systems, Faculty of Applied Science and Engineering, July 2012 – June 2013
- ◇ Member, Quality Assurance Working Group on CEAB Graduate Attributes and Degree Level Expectations, Faculty of Applied Science and Engineering, University of Toronto, April 2010 – June 2012
- ◇ Co-Chair, Working Group on Software Curriculum in Engineering Science, Faculty of Applied Science and Engineering, University of Toronto, July 2009 – June 2012
- ◇ Chair, Computer Engineering Group, Department of Electrical and Computer Engineering, University of Toronto, July 2008 – July 2009
- ◇ Member, ECE Advisory Committee, Department of Electrical and Computer Engineering, University of Toronto, July 2008 – July 2009
- ◇ Member, ECE Curriculum Matters Committee, Department of Electrical and Computer Engineering, October 2007 – July 2009
- ◇ Member, ECE PTR Committee, Department of Electrical and Computer Engineering, University of Toronto, May 2008 – June 2008
- ◇ Member, Task Force on On-Line System Integrating Curriculum Change Management, Course Option Selection, AU Tracking, Calendaring and Degree Verification, Faculty of Applied Science and Engineering, University of Toronto, April 2008 – July 2008
- ◇ Member, ECE Awards Committee, Department of Electrical and Computer Engineering, July 2007 – June 2008
- ◇ Member, Design and Implementation Committee on Web-based Graduate Admissions (in which I have led the design and implementation effort, and authored all on-line documentation), Department of Electrical and Computer Engineering, May 2004 – July 2006
- ◇ Supervisor, the *Magellan* Project, a web-based course administration and selection system for the flexible undergraduate curriculum, Department of Electrical and Computer Engineering, July 2003 – July 2006
- ◇ Member, Research Management Committee, Bell Canada University Laboratories, University of Toronto, June 2003 – October 2004
- ◇ Member, Undergraduate Curriculum Committee, Department of Electrical and Computer

Engineering, September 2002 – May 2005

- ◇ Member, Executive Search Committee for the ECE Department Chair, Faculty of Applied Science and Engineering, September 2002 – May 2003
- ◇ Member, Departmental Faculty Search Committee, Computer and Communications, Department of Electrical and Computer Engineering, September 2002 – May 2003
- ◇ Member, Departmental Faculty Search Committee, Communications Networks, Department of Electrical and Computer Engineering, September 2000 – May 2002

Teaching Recognitions

Letter of Commendation for Teaching Excellence, from Department Chair, Department of Electrical and Computer Engineering, in recognition of teaching performance:

- ◇ APS 105F, *Computer Fundamentals*, Fall 2009.
- ◇ APS 105S, *Computer Fundamentals*, Winter 2008.
- ◇ ECE 419S, *Distributed Systems*, Winter 2006.
- ◇ APS 105F, *Computer Fundamentals*, Fall 2005.
- ◇ ECE 419F, *Distributed Systems*, Fall 2004.
- ◇ ECE 419F, *Distributed Systems*, Fall 2003.
- ◇ ECE 419F, *Distributed Systems*, Fall 2002.

Teaching Activities

University of Toronto, Toronto, Ontario, Canada
Edward S. Rogers Sr. Department of Electrical and Computer Engineering

Academic Term	Course	Enrollment
Fall 2000	ECE 419F: Distributed Systems	109
Winter 2001	ECE 1724S: Quality of Service Provisioning in Mobile Networks	32
Fall 2001	ECE 419F: Distributed Systems	65
Fall 2001	APS 105F: Computer Fundamentals	85
Winter 2002	ECE 1771S: Quality of Service Provisioning in Mobile Networks	12
Fall 2002	ECE 419F: Distributed Systems	100
Fall 2002	APS 105F: Computer Fundamentals	80
Winter 2003	ECE 1771S: Quality of Service Provisioning in Mobile Networks	23
Fall 2003	ECE 419F: Distributed Systems	118
Fall 2003	APS 105F: Computer Fundamentals	88
Winter 2004	ECE 1771S: Quality of Service Provisioning in Mobile Networks	16

Fall 2004	ECE 419F: Distributed Systems	93
Fall 2004	APS 105F: Computer Fundamentals	93
Winter 2005	ECE 1771S: Quality of Service Provisioning in Mobile Networks	29
Fall 2005	APS 105F: Computer Fundamentals	97
Winter 2006	ECE 419S: Distributed Systems	100
Winter 2006	ECE 1771S: Quality of Service Provisioning in Mobile Networks	15
Winter 2008	ECE 344S: Operating Systems	78
Winter 2008	APS 105S: Computer Fundamentals	52
Winter 2008	ECE 1771S: Quality of Service	16
Fall 2008	APS 105F: Computer Fundamentals	94
Winter 2009	ECE 344S: Operating Systems	95
Winter 2009	ECE 1771S: Quality of Service	25
Fall 2009	APS 105F: Computer Fundamentals	66
Winter 2010	ECE 344S: Operating Systems	69
Winter 2010	ECE 1771S: Quality of Service	4
Fall 2010	APS 105F: Computer Fundamentals	90
Winter 2011	ECE 344S: Operating Systems	76
Winter 2011	ECE 1771S: Quality of Service	15
Fall 2011	APS 105F: Computer Fundamentals	101
Winter 2012	ECE 344S: Operating Systems	64
Winter 2012	ECE 1771S: Quality of Service	11
Fall 2012	APS 105F: Computer Fundamentals	110
Fall 2012	APS 105F: Computer Fundamentals	90
Fall 2012	ECE 1771F: Quality of Service	30
Fall 2014	APS 105F: Computer Fundamentals	90
Winter 2015	ECE 353S: Systems Software	64
Fall 2014	ECE 1771F: Quality of Service	25
Fall 2015	APS 105F: Computer Fundamentals	85
Winter 2016	ECE 353S: Systems Software	52
Fall 2015	ECE 1771F: Quality of Service	33
Fall 2016	APS 105F: Computer Fundamentals	90
Winter 2017	ECE 353S: Systems Software	27
Fall 2016	ECE 1771F: Quality of Service	33

Winter 2018	APS 105S: Computer Fundamentals	101
Winter 2018	ECE 353S: Systems Software	84
Fall 2017	ECE 1771F: Quality of Service	33
Winter 2018	APS 105S: Computer Fundamentals	101
Winter 2018	ECE 353S: Systems Software	84
Fall 2017	ECE 1771F: Quality of Service	33
Winter 2019	APS 105S: Computer Fundamentals	118
Winter 2019	ECE 353S: Systems Software	78
Fall 2018	ECE 1771F: Quality of Service	40
Winter 2020	APS 105S: Computer Fundamentals	115
Winter 2020	ECE 353S: Systems Software	66
Fall 2019	ECE 1771F: Quality of Service	30
Winter 2020	APS 105S: Computer Fundamentals	115
Winter 2020	ECE 353S: Systems Software	66
Fall 2019	ECE 1771F: Quality of Service	30
Winter 2022	APS 105S: Computer Fundamentals	85
Fall 2021	ECE 1771F: Quality of Service	27
Fall 2022	ECE 1771F: Quality of Service	66
Fall 2023	ECE 1771F: Quality of Service	63

Postdoctoral Research Supervision

Zhiming Hu	December 2016 – January 2019	Now Research Scientist, Samsung AI Centre, Toronto, Ontario
Xu Yuan	May 2016 – July 2017	Now tenured Associate Professor, Department of Computer and Information Sciences, University of Delaware
Yanjiao Chen	May 2015 – April 2016	Now Professor, College of Electrical Engineering, Zhejiang University, P. R. China
Tara Small	August 2005 – July 2006	Unknown

Graduate Supervision

◇ Students Graduated with the Doctor of Philosophy Degree (Total: 25)

<i>Name</i>	<i>Starting Date, Graduation Date and Current Employment</i>	<i>Dissertation Title</i>
Hao Lan	September 2018 – September 2023, now Postdoctoral Researcher, Tsinghua University	Device Placement Optimization with Deep Reinforcement Learning

Tianhang Zheng	September 2019 – July 2023, now Tenure-Track Assistant Professor, Division of Computing, Analytics, and Mathematics, University of Missouri (Kansas City Campus), Kansas City, Missouri, USA	Exploring Poisoning Effects on Deep Learning
Chen Ying	September 2017 – February 2023, now Researcher, Huawei Technologies Canada Co., Ltd.	Improving Training Performance in Federated Learning
Salma Emara	September 2018 – November 2022, now Teaching-Stream Assistant Professor, Department of Electrical and Computer Engineering, University of Toronto	Sequential Decision-Making in Networking Algorithms Using Deep Reinforcement Learning
Wanyu Lin	September 2015 – August 2020, now Research Assistant Professor, Department of Computing, Hong Kong Polytechnic University	Social Media Analytics with Graph Convolutional Networks
Hao Wang	September 2015 – July 2020, now tenure-track Assistant Professor, Division of Computer Science and Engineering, Louisiana State University	Optimizing Distributed Computing Systems via Machine Learning
Shuhao Liu	September 2014 – October 2018	Optimizing Big Data Analytics Frameworks in Geographically Distributed Datacenters
Li Chen	September 2014 – July 2018, now tenure-track Assistant Professor, School of Computing and Informatics, University of Louisiana at Lafayette	Optimizing Data Analytics Jobs with Fairness Constraints in Datacenter Networks
Liyao Xiang	September 2014 – August 2018, now tenure-track Assistant Professor, John Hopcroft Center for Computer Science, Shanghai Jiaotong University	Learning Towards Better Accuracy and Privacy

Jun Li	September 2012 – June 2017, now tenure-track Assistant Professor, School of Computing and Information Sciences, Florida International University	Efficient Erasure Coding in Distributed Storage Systems
Wei Wang	September 2010 – August 2015, now tenured Associate Professor, Department of Computer Science, Hong Kong University of Science and Technology, Hong Kong	Fair Scheduling in Cloud Datacenters with Multiple Resource Types (<i>co-supervised with Professor Ben Liang</i>)
Zimu Liu	January 2010 – March 2015, now Software Development Manager, Amazon Inc., Toronto, Ontario, Canada	Bellini: Optimizing Mobile Application Traffic Flows through the Cloud
Chen Feng	January 2009 – August 2014, now tenure-track Assistant Professor, Faculty of Applied Science, School of Engineering, University of British Columbia, Okanagan Campus	An Algebraic Approach to Physical-Layer Network Coding (<i>co-supervised with Professor Frank Kschischang</i>)
Di Niu	September 2008 – April 2013, now tenure-track Assistant Professor, Department of Electrical and Computer Engineering, University of Alberta	Demand Forecast, Resource Allocation and Pricing for Multimedia Delivery from the Cloud
Hong Xu	September 2009 – March 2013, now tenured Associate Professor, Department of Computer Science, Chinese University of Hong Kong	Efficient Workload and Resource Management in Datacenters
Yuan Feng	September 2010 – March 2013, now Senior Algorithmic Trading Developer, Scotiabank, Toronto, Canada	On Improving the Performance of Mobile Applications using the Cloud
Jin Jin	September 2006 – September 2010, now Senior Business Analyst, Canada Pension Plan Investment Board, Toronto, Canada	On Improving Multi-Channel Wireless Networks Through Network Coding and Dynamic Resource Allocation

Yunfeng Lin	September 2005 – February 2010, now Senior Software Engineer, Citigroup Inc.	Decentralized Coding in Unreliable Communication Networks (<i>co-supervised with Professor Ben Liang</i>)
Hassan Shojania	January 2006 – February 2010, now Software Engineer, Apple Inc., Cupertino, California	Making Coding Practical: From Servers to Smartphones
Chuan Wu	September 2004 – July 2008, now tenured Full Professor, Department of Computer Science, University of Hong Kong, Hong Kong, China	Large-Scale Peer-to-Peer Streaming: Modeling, Measurements, and Optimizing Solutions
Mea Wang	September 2004 – April 2008, now tenured Associate Professor, Department of Computer Science, University of Calgary, Calgary, Alberta, Canada	A Quest for High-Performance Peer-to-Peer Live Streaming
Jiang Guo	September 2001 – August 2007, now Senior Software Developer, CNIB, Toronto, Canada	Efficient Algorithms in Selfish Peer-to-Peer Networks: Design and Implementation
Ying Zhu	June 2001 – August 2006, now tenured Associate Professor, Faculty of Business and Information Technology, University of Ontario Institute of Technology	High-bandwidth Data Dissemination in Overlay Networks
Weihong Wang	September 2001 – December 2005, now Software Engineer, Google Inc., Sunnyvale, California	Market-based Distributed Optimization in Autonomous Networks
Zongpeng Li	June 2001 – September 2005, now tenured Full Professor, Department of Computer Science, Tsinghua University, Beijing, P. R. China	On Achieving Optimal Throughput in Data Networks

◇ **Students Graduated with the Masters of Applied Science Degree** (Total: 24¹)

<i>Name</i>	<i>Starting Date, Graduation Date and Current Employment</i>	<i>Dissertation Title and Grade</i>
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¹In the case that a student is co-supervised, each co-supervisor contributed equally to the supervision of the student.

Yifan Gong	September 2017 – September 2019, now Ph.D. candidate, Department of Electrical and Computer Engineering, Northeastern University	Minimizing the Completion Time of Distributed Learning Workloads via Deep Reinforcement Learning (<i>co-supervised with Professor Ben Liang</i>)
Siqi Ji	September 2015 – September 2017, now Software Engineer, Square (NYSE:SQ)	Resource Optimization across Geographically Distributed Datacenters
Yinan Liu	September 2014 – September 2016	Improving Network Performance for Applications running over Wide Area Networks
Li Chen	September 2012 – December 2014, now Assistant Professor, University of Louisiana at Lafayette	Performance-Centric Bandwidth Allocation for Data Parallel Applications in Private Datacenters
Liyao Xiang	September 2012 – January 2015, now Assistant Professor, Shanghai Jiaotong University	Mobile Offloading for Energy-Efficient Computation on Smartphones
Yiwei Pu	September 2010 – June 2013, now Director, Global Markets at BMO Capital Markets, Toronto	On the Benefits of Network Coding in Multi-party Conferencing
Yuefei Zhu	September 2010 – September 2012, now Software Engineer, Google Inc.	Auction Design for Secondary Spectrum Markets
Yuan Feng	September 2008 – January 2011, now tenure-track Assistant Professor, Department of Computing, Hong Kong Polytechnic University	On the Use of Double Auctions in Resource Allocation Problems in Large-Scale Distributed Systems
Junqi Yu	September 2008 – September 2010, now Software Developer, Fidelity Investments, Toronto, Ontario	Risk Management and Profit Optimization in Cognitive Radio Networks (<i>co-supervised with Professor Ben Liang</i>)
Zimu Liu	September 2007 – December 2009, now Software Development Manager, Amazon Inc., Toronto, Ontario, Canada	Measurements on Large-Scale Peer-Assisted Live Streaming: A Survival Analysis Approach
Hong Xu	September 2007 – October 2009, now tenured Associate Professor, Department of Computer Science, Chinese University of Hong Kong	On Improving Spectrum Utilization Through Cooperative Diversity and Dynamic Spectrum Trading

Jiahua Wu	September 2007 – September 2009, now Assistant Professor of Operations, Department of Management, Imperial College London	On the Design of Peer-Assisted Video-On-Demand Systems
Elias Kehdi	September 2007 – August 2009, now Financial Software Developer, Bloomberg Inc., New York, New York	On the Application of Random Linear Network Coding for Network Security and Diagnosis
Di Niu	September 2006 – January 2009, now tenure-track Assistant Professor, Department of Electrical and Computer Engineering, University of Alberta	On the Resilience of Network Coding in Peer-to-Peer Networks and its Applications
Chen Feng	September 2006 – January 2009, now tenure-track Assistant Professor, Faculty of Applied Science, School of Engineering, University of British Columbia, Okanagan Campus	On Large-Scale Peer-to-Peer Streaming Systems
Xinyu Zhang	September 2005 – May 2007, now tenure-track Assistant Professor, Department of Electrical and Computer Engineering, University of Wisconsin, Madison	Drift: A Highly Condensed Emulation Framework for Mobile Nodes in Server Clusters
Kevin Yuen	September 2004 – April 2006, now at IBM Toronto Laboratories, Toronto, Ontario	A Distributed Framework for Correlated Data Gathering in Sensor Networks (<i>co-supervised with Professor Ben Liang</i>)
Xin Zhou	September 2001 – September 2004, now at Protractor Software Inc., Toronto, Ontario	<i>iFlow</i> and Beyond: Bandwidth-Efficient and Delay-Aware Information Access in Mobile Ad Hoc Networks
Gregory Hartl	September 2002 – August 2004, now Business Consultant, Varicent Software, Toronto, Ontario	On the Use of Data Inference for Energy Conservation in Wireless Sensor Networks
Mea Wang	September 2002 – April 2004, now Associate Professor, Department of Computer Science, University of Calgary, Calgary, Alberta, Canada	<i>sFlow</i> : Towards Resource-Efficient and Agile Service Federation in Service Overlay Networks

Selwyn Yuen	September 2002 – January 2004, now PhD Candidate, Northwestern University, Evanston, Illinois	<i>iEvolve</i> : Incentive Mechanisms for Evolutionary Topology Formation in Autonomous Networks with Strategic Agents
Shahid Bashir	September 2000 – September 2002, now Lead C&I Engineer, BP Biofuels, Houston, Texas	QoS-aware Service Discovery Protocols in Mobile Ad Hoc Networks
Edmond Poon	September 2000 – September 2002, now at Dr Robot, Inc, Markham, Ontario	Fair Scheduling and Power-aware Protocols in Wireless Ad Hoc Networks
Jilei Liu	September 2000 – September 2002, now Development Manager, Bank of Montreal, Toronto, Ontario	Power-aware Protocols in Wireless Ad Hoc Networks
Karen H. Wang	September 1999 – September 2001, now Software Engineer, Pivotal Labs, San Francisco Bay Area, California	Mobility-based Clustering and Partition Prediction in Wireless Ad Hoc Networks (<i>co-supervised with Professor Alberto Leon-Garcia</i>)

◇ **Current Students in the Masters of Applied Science Program** (Total: 1)

<i>Name</i>	<i>Duration of Study</i>
Tim-Cheng Gu	September 2022 – present

◇ **Current Students in the Doctor of Philosophy Program** (Total: 6)

<i>Name</i>	<i>Duration of Study</i>
Dixi Yao	September 2022 – present
Fei Wang	January 2022 – present
Ningxin Su	September 2020 – present
Chenghao Hu	September 2020 – present
Yufei Kang	September 2019 – present
Sijia Chen	September 2019 – present