

SELECTED AWARDS

- [ACM SIGCOMM Doctoral Dissertation Award - Honorable Mention](#) 2015
- [Fellow of Cascadia Innovation Fellowship \(6 out of 300 candidates\)](#) 2011
- Yale University Graduate Fellowship 2010
- The Second Prize in the Challenger Cup of Tsinghua University 2008
- The First Prize in Student Research Training of Tsinghua University 2007
- First Level Scholarship of Tsinghua University 2003
- Rank 1st in China's National College Entrance Examination, Liaoning Province 2003

SELECTED PUBLICATIONS [\[Google Scholar\]](#)

- [Hongqiang Harry Liu](#), Yibo Zhu, Jitu Padhye, Jiaxin Cao, Sri Tallapragada, Nuno P. Lopes, Andrey Rybalchenko, Guohan Lu, Lihua Yuan “[CrystalNet: Faithfully Emulating Large Production Networks.](#)” Proc. of **ACM SOSP'17**. Shanghai, China, Oct, 2017.
- Aaron Gember-Jacobson, Aditya Akella, Ratul Mahajan, [Hongqiang Harry Liu](#) “[Automatically Repairing Network Control Planes Using an Abstract Representation.](#)” Proc. of **ACM SOSP'17**. Shanghai, China, Oct, 2017.
- Omid Alipourfard, [Hongqiang Harry Liu](#), Jianshu Chen, Shivaram Venkataraman, Minlan Yu, Ming Zhang, “Efficiently delivering online services over integrated infrastructure” Proc. of **USENIX NSDI'17**. Boston, MA, Mar, 2017.
- Tianlong Yu, Shadi A. Noghabi, Shachar Raindel, [Hongqiang Harry Liu](#), Jitu Padhye, Vyas Sekar, “FreeFlow: High Performance Container Networking” Proc. of **HotNets'16**. Atlanta, GA, Nov, 2016.
- [Hongqiang Harry Liu](#), Raajay Viswanathan, Matt Calder, Aditya Akella, Ratul Mahajan, Jitendra Padhye, and Ming Zhang, “[Efficiently delivering online services over integrated infrastructure.](#)” Proc. of **USENIX NSDI'16**. Santa Clara, CA, Mar, 2016 (to appear).
- Rohan Gandhi, Y. Charlie Hu, Cheng-Kok Koh, [Hongqiang Harry Liu](#), Ming Zhang. “[Rubik: Unlocking the Power of Locality and End-Point Flexibility in Cloud Scale Load Balancing.](#)” Proc. of **USENIX ATC'15**. Santa Clara, CA, Jul, 2015
- [Hongqiang Harry Liu](#), David Gelernter, Srikanth Kandula, Ratul Mahajan, Ming Zhang. “[Traffic Engineering with Forward Fault Correction.](#)” Proc. of ACM Special Interest Group on Data Communication (**SIGCOMM'14**). Chicago, IL, Aug, 2014
- Xin Jin, [Hongqiang Harry Liu](#), Rohan Gandhi, Srikanth Kandula, Ratul Mahajan, Jennifer Rexford, Roger Wattenhofer, Ming Zhang. “[Dionysus: Dynamic Scheduling of Network Updates.](#)” Proc. of ACM Special Interest Group on Data Communication (**SIGCOMM'14**). Chicago, IL, Aug, 2014

- Rohan Gandhi, Hongqiang Harry Liu, Y. Charlie Hu, Guohan Lu, Jitu Padhye, Lihua Yuan, Ming Zhang. “[Duet: Cloud Scale Load Balancing with Hardware and Software.](#)” Proc. of ACM Special Interest Group on Data Communication (**SIGCOMM’14**). Chicago, IL, Aug, 2014
- Hongqiang Harry Liu, Xin Wu, Ming Zhang, Roger Wattenhofer, Lihua Yuan, David A. Maltz. “[zUpdate: Updating Data Center Networks with Zero Loss.](#)” Proc. of ACM Special Interest Group on Data Communication (**SIGCOMM’13**). Hong Kong, China, Aug, 2013
- Hongqiang Harry Liu, Ye Wang, Yang Richard Yang, Hao Wang, Chen Tian. “[Optimizing Cost and Performance for Content Multihoming.](#)” Proc. of ACM Special Interest Group on Data Communication (**SIGCOMM’12**). Helsinki, Finland, Aug, 2012
- Richard Alimi, Lijiang Chen, Dirk Kutscher, Hongqiang Harry Liu, Akbar Rahman, Haibin Song, Yang Richard Yang, David Zhang, Ning Zong. “[An Open Content Delivery Infrastructure Using Data Lockers.](#)” Proc. of ACM SIGCOMM Workshop on Information-Centric Networking. (**ICN’12**). Helsinki, Finland, Aug, 2012.
- Hongqiang Liu, Yongqiang Xiong, Congxiao Bao, Xing Li, Guobin Shen, Dan Li. “[WIND: A Scalable and Lightweight Network Topology Service for Peer-to-Peer Applications.](#)” In Proc. of 12th IEEE/IFIP Network Operations and Management Symposium (**NOMS’10**). Osaka, Japan, Apr. 2010.
- Zengbin Zhang, Yuan Lin, Yang Chen, Yongqiang Xiong, Jacky Shen, Hongqiang Liu, Beixing Deng, Xing Li. “[Experimental Study of Broadcatching in BitTorrent.](#)” In Proc. of 2009 IEEE Consumer Communications and Networking Conference (**CCNC’09**). Las Vegas, Nevada, Jan. 2009.

TECHNICAL REPORTS

- Hongqiang Harry Liu, Raajay Viswanathan, Matt Calder, Aditya Akella, Ratul Mahajan, Jitendra Padhye, and Ming Zhang, “[Efficiently delivering online services over integrated infrastructure.](#)” MSR-TR-2015-73, 25 September 2015.
- Ennan Zhai, David Isaac Wolinsky, Hongda Xiao, Hongqiang Liu, Xueyuan Su, Bryan Ford “[Auditing the structural reliability of the clouds.](#)” Technical Report YALEU/DCS/TR-1479, July 2013.

PROFESSIONAL ACTIVITIES

- TPC members: ACM CoNext 2015 (shadow), ACM HotPOST 2015 (co-chair), ACM HotCon-Net 2017 (co-chair)
- External Reviews: ACM PODC 2014, IEEE INFOCOM 2014, SoCC 2017
- Journal Reviews: IEEE Transaction on Cloud Computing, ACM/IEEE Transaction on Networking (ToN), ACM SIGCOMM Computer Communications Review (CCR), IEEE Transactions on Reliability, IEEE Transactions on Wireless Communications, IEEE Transactions on Pervasive Computing, Computer Communications

INVITED & CONFERENCE PRESENTATIONS

- *Traffic Engineering with Forward Fault Correction*, DIMACS SDN-Algorithm Workshop 2016, Rutgers, NJ
- *Achieving Efficiency and Robustness Simultaneously in Cloud Infrastructures*, Microsoft Research (2016), Purdue University (2016), UCLA (2016), Tsinghua University (2016)
- *Traffic Planning under Network Dynamics*, Microsoft Research (2014), HP Labs (2014), NEC Lab American (2014)
- *Traffic Engineering with Forward Fault Correction*, SIGCOMM 2014, Chicago, IL
- *zUpdate: Updating Datacenter Network with Zero Loss*, SIGCOMM 2013, Hong Kong, China
- *Optimizing Cost and Performance for Content Multihoming*, SIGCOMM 2012, Helsinki, Finland

MENTORING & TEACHING EXPERIENCES

- *Research Mentor* at Microsoft Research, Redmond Lab. 2015
Mentoring Yang Wu, a Ph.D. student from University of Pennsylvania, on network measurement driven by BigData.
- *Research Mentor* at Microsoft Research, Redmond Lab. 2015
Mentoring Omid Alipourfard, a Ph.D student from University of South California, on workload-aware computing optimization in clouds.
- *Teaching Assistant* at Department of Computer Science, Yale University. 2014
"Graphic User Interface" taught by Prof. David Gelernter.
- *Teaching Assistant (giving lectures)* at Department of Computer Science, Yale University. 2012
"Computer Networks" taught by Prof. Yang Richard Yang.
- *Teaching Assistant* at Department of Computer Science, Yale University. 2011
"Introduction to Programming" taught by Prof. Daniel Abadi.

INDUSTRIAL EXPERIENCES

Research Intern: Microsoft Research, Redmond, WA 07/2013 - 2/2014
Mentor: Ratul Mahajan, Srikanth Kandula, Ming Zhang
Project: Traffic engineering robust to both control and data plane faults

Research Intern, Microsoft Research, Redmond, WA 06/2012 - 09/2012
Mentor: Ming Zhang, Dave Maltz, Lihua Yuan
Project: Automate network updates with software defined networks

Software Engineer Intern, Impinj Inc., Seattle, WA 06/2011 - 09/2011
Mentor: Vadim Lobanov

Project: Design & develop a TCP based remote control system for chip testers with nice user interfaces.

Research Intern, Microsoft Research Asia, Beijing, China 09/2008 - 03/2009
Mentor: Yongqiang Xiong
Project: HTTP and SMB traffic analysis in Microsoft enterprise networks.

Research Intern, Microsoft Research Asia, Beijing, China 01/2007 - 09/2007
Mentor: Guobin Jacky Shen
Project: Bittorrent using HTTP and web caches.

PATENTS

- Effectively Operating and Adjusting an Infrastructure for Supporting Distributed Applications (in US application) 2015
- Dynamic Scheduling of Network Updates (in US application 14/298794) 2014
- Proactive Handling of Network Faults (in US application 14/298820) 2014

REFERENCES

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