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### **EDUCATION**

- Doctor of Philosophy, September 2012 - June 2017  
Department of Electrical and Computer Engineering, University of Toronto
  - ▷ Supervisor: Prof. Baochun Li
  - ▷ Supervisory committee: Prof. Baochun Li, Prof. Frank Kschischang, and Prof. Cristiana Amza
- Master of Science, September 2009 - June 2012  
School of Computer Science, Fudan University, Shanghai, China
- Bachelor of Science, September 2005 - June 2009  
School of Computer Science, Fudan University, Shanghai, China

### **HONORS & AWARDS**

- Doctoral Completion Award, University of Toronto, 2016
- USENIX FAST '16 Student Travel Grant, 2016
- USENIX ATC '15 Student Travel Grant, 2015
- Shanghai Outstanding Achievement of Graduate Students (Master Thesis), 2015
- USENIX FAST '15 Student Travel Grant, 2015
- ECE Fellowship, University of Toronto, 2012-2015
- SGS Conference Grant, University of Toronto, 2013
- Scholarship for Graduate Students, 1<sup>st</sup> Prize, Fudan University, 2011, 2010
- Morgan Stanley Scholarship, 2010
- Google Excellence Scholarship, 2010
- Scholarship for Freshmen, 1<sup>st</sup> Prize, Fudan University, 2009
- Outstanding Graduate of Fudan University, 2009
- Excellent Bachelor Thesis, Fudan University, 2009
- Wangdao Scholarship, Fudan University, Summer, 2009

- People’s Scholarship, 2<sup>nd</sup> Prize, Fudan University, Autumn, 2009, 2008, 2007, 2006
- Excellent Student Award of Media Computing and Web Intelligence Lab, Fudan University, 2008

## RESEARCH INTERESTS

- Large-scale distributed storage systems with erasure coding

## RESEARCH EXPERIENCE

- Research Assistant, supervised by Prof. Baochun Li, September 2012 – now  
iQua Group, Department of Electrical and Computer Engineering, University of Toronto
- Visiting Student, supervised by Dr. Chuanxiong Guo, April 2011 – October 2011  
Wireless and Networking Group, Microsoft Research Asia (MSRA)
- Visiting Student, supervised by Prof. Baochun Li, June 2010 – August 2010  
iQua Group, Department of Electrical and Computer Engineering, University of Toronto
- Visiting Student, supervised by Prof. David Rincón and Dr. Chuanxiong Guo, June 2009 – August 2009  
Wireless and Networking Group, Microsoft Research Asia (MSRA)
- Research Assistant, supervised by Prof. Hongsik Choi, July 2008 – August 2008  
Networks and Communications Laboratory, Virginia Commonwealth University
- Research Assistant, supervised by Prof. Xin Wang, April 2007 – June 2012  
Self-Organizing Network and Information Coding (SONIC) Lab, Fudan University

## PUBLICATIONS

- Journal publications
  - [J1] **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.
  - [J2] **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.
- Conference and workshop proceedings
  - [C1] **Jun Li**, Baochun Li, “On Data Parallelism of Erasure Coding in Distributed Storage Systems,” in Proc. of the 37th IEEE International Conference on Distributed Computing (ICDCS), Atlanta, GA, June 5-8, 2017 (acceptance ratio: 16.9%).

- [C2] Wei Wang, Baochun Li, Ben Liang, **Jun Li**, “Multi-Resource Fair Sharing for Datacenter Jobs with Placement Constraints,” in Proc. of the International Conference for High Performance Computing, Networking, Storage and Analysis (SC), Salt Lake City, UT, November 13-18, 2016, pp. 1-12 (acceptance ratio: 18%).
- [C3] **Jun Li**, Baochun Li, “Zebra: Demand-aware Erasure Coding for Distributed Storage Systems,” in Proc. of the 24th IEEE/ACM International Symposium on Quality of Service (IWQoS), Beijing, China, June 20-21, 2016, pp. 1-10 (acceptance ratio: 21%).
- [C4] Wei Wang, Baochun Li, Ben Liang, **Jun Li**, “Towards Multi-Resource Fair Allocation with Placement Constraints,” in Proc. of ACM SIGMETRICS 2016 (2-page poster paper), Antibes Juan-les-Pins, France, June 14-18, 2016, pp. 415-416 (acceptance ratio: 24%).
- [C5] **Jun Li**, Baochun Li, “Beehive: Erasure Codes for Fixing Multiple Failures in Distributed Storage Systems,” in Proc. of the USENIX Workshop on Hot Topics in Storage and File Systems (HotStorage), Santa Clara, CA, July 6-7, 2015 (acceptance ratio: 30%).
- [C6] **Jun Li**, Baochun Li, “Cooperative Repair with Minimum-Storage Regenerating Codes for Distributed Storage,” in Proc. of the IEEE Conference on Computer Communications (INFOCOM), Toronto, ON, April 27 - May. 2, 2014, pp. 316-324 (acceptance ratio: 19%).
- [C7] **Jun Li**, Xin Wang, and Baochun Li, “Cooperative Pipelined Regeneration in Distributed Storage Systems,” in Proc. of the IEEE Conference on Computer Communications (INFOCOM), Turin, Italy, April 14-19, 2013, pp. 2346-2354 (acceptance ratio: 17%).
- [C8] **Jun Li**, Xin Wang, and Baochun Li, “Pipelined Regeneration with Regenerating Codes for Distributed Storage Systems,” in Proc. of International Symposium on Network Coding (NetCod), Beijing, China, July 25-27, 2011, pp. 1-6.
- [C9] **Jun Li**, Shuang Yang, Xin Wang, “Building Regeneration Trees in Distributed Storage Systems with Asymmetric Links,” in Proc. of the 6th International Conference on Collaborative Computing: Networking, Applications, and Worksharing (CollaborateCom 2010), Chicago, IL, October 9-12, 2010, pp. 1-10 (acceptance ratio: 37%).
- [C10] Markus Kliegl, Jason Lee, **Jun Li**, Xinchao Zhang, Chuanxiong Guo, David Rincón, “Generalized DCell Structure for Load-Balanced Data Center Network,” in Proc. of the 29th IEEE Conference on Computer Communications (INFOCOM), Work-In-Progress Track, San Diego, CA, March 15-19, 2010, pp. 1-5 (acceptance ratio: 28%).  
– The first four authors share equal contributions.
- [C11] **Jun Li**, Shuang Yang, Xin Wang, Baochun Li, “Tree-structured Data Regeneration in Distributed Storage Systems with Regenerating Codes,” in Proc. of the IEEE Conference on Computer Communications (INFOCOM), San Diego, CA, March 15-19, 2010, pp. 1-9 (acceptance ratio: 17%).

[C12] **Jun Li**, Shuang Yang, Xin Wang, Xiangyang Xue, Baochun Li, “Tree-structured Data Regeneration with Network Coding in Distributed Storage Systems,” in Proc. of the 17th IEEE International Workshop on Quality of Service (IWQoS), Charleston, SC, July 13-15, 2009, pp. 1-9 (acceptance ratio: 33%).

- Technical Reports

[TR1] Markus Kliegl, Jason Lee, **Jun Li**, Xinchao Zhang, David Rincón, Chuanxiong Guo, “The Generalized DCell Network Structures and Their Graph Properties,” Microsoft Research TechReport, MSR-TR-2009-140.

- Papers under review

[R1] **Jun Li**, Baochun Li, Bo Li, “Mist: Efficient Dissemination of Erasure-coded Data in Data Centers,” submitted to IEEE Transactions on Emerging Topics in Computing, Special Issue on Emerging Trends and Design Paradigms for Memory Systems and Storage, under review.

## PRESENTATIONS

[P1] “Zebra: Demand-aware Erasure Coding for Distributed Storage Systems,” Poster Presentation, SAVI Annual General Meeting, Toronto, ON, July 6, 2016.

[P2] “Zebra: Demand-aware Erasure Coding for Distributed Storage Systems,” Oral Presentation, IEEE/ACM International Symposium on Quality of Service (IWQoS), Beijing, China, June 20, 2016.

[P3] “Beehive: Erasure Codes for Fixing Multiple Failures in Distributed Storage Systems,” Oral Presentation, USENIX Workshop on Hot Topics in Storage and File Systems (HotStorage), Santa Clara, CA, July 6, 2015.

[P4] “Repairing Erasure Codes Cooperatively in Storage-Intensive Applications,” Poster Presentation, SAVI Annual General Meeting, Toronto, ON, July 7, 2014.

[P5] “Cooperative Repair with Minimum-Storage Regenerating Codes for Distributed Storage,” Oral Presentation, IEEE Conference on Computer Communications (INFOCOM), Toronto, ON, April 29, 2014.

[P6] “Cooperative Pipelined Regeneration in Distributed Storage Systems,” Oral and Poster Presentation, Annual ECE Connections Graduate Symposium, Toronto, ON, May 7, 2013.

[P7] “Cooperative Pipelined Regeneration in Distributed Storage Systems,” Oral Presentation, IEEE Conference on Computer Communications (INFOCOM), Turin, Italy, April 18, 2013.

[P8] “Pipelined Regeneration with Regenerating Codes for Distributed Storage Systems,” Oral Presentation, International Symposium on Network Coding (NetCod), Beijing, China, July 25, 2011.

- [P9] “Tree-structured Data Regeneration in Distributed Storage Systems with Regenerating Codes,” Oral Presentation, IEEE Conference on Computer Communications (INFOCOM), San Diego, CA, March 18, 2010.
- [P10] “Generalized DCell Structure for Load-Balanced Data Center Network,” Oral Presentation, IEEE Conference on Computer Communications (INFOCOM), San Diego, CA, March 15, 2010.
- [P11] “Router-supported Data Regeneration in Distributed Storage Systems,” Poster Presentation, USENIX Conference on File and Storage Technologies (FAST), San Jose, CA, February 24, 2010.
- [P12] “Router Caching for Video Streaming Systems”, Poster Presentation, USENIX Conference on File and Storage Technologies (FAST), San Jose, CA, February 24, 2010.
- [P13] “A Fast-repair P2P Data Backup System with Network Coding,” Oral Presentation, Universitas 21 (U21) Undergraduate Research Conference, Glasgow, UK, October 20, 2009.
- [P14] “Tree-structured Data Regeneration with Network Coding in Distributed Storage Systems,” Oral Presentation, IEEE International Workshop on Quality of Service (IWQoS), Charleston, SC, July 13, 2009.

## **PROFESSIONAL ACTIVITIES**

- Reviewer for:
  - IEEE Transactions on Parallel and Distributed Systems
  - ACM Transactions on Storage
  - IEEE Transactions on Cloud Computing
  - IEEE Transactions on Mobile Computing
  - IEEE Communications Letters
  - Springer Multimedia System
  - PeerJ Computer Science
- Membership: IEEE member and USENIX student member
- Conference volunteer
  - INFOCOM 2014
  - INFOCOM 2014 TPC meeting

## TEACHING EXPERIENCE

- “Teaching in Higher Education”

Participated in Teaching in Higher Education, a course offered by the University of Toronto for senior Ph.D. candidates. Topics of study included: course design, lecturing techniques, assessment strategy, learning styles and technology tools.

- Teaching Assistant

Duties included orchestrating tutorials, supervising labs, holding office hours, assisting students with programming, and marking assignments and exams.

- Programming Languages, CSC326, University of Toronto, Fall 2016
- Distributed Systems, ECE419, University of Toronto, Winter 2014, Winter 2015, Winter 2016
- Introduction to Computer Programming, CSC180, University of Toronto, Fall 2015
- Introduction to Computer Programming, CSC108, University of Toronto, Fall 2014
- Computer Fundamentals, APS105, University of Toronto, Fall 2013
- Operating Systems, ECE344, University of Toronto, Winter 2013
- Operating Systems, INFO130055.04, Fudan University, Fall 2010