Hao Wang

Affiliation Edward S. Rogers Sr. Department of Electrical

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Personal Information

Citizenship Chinese

EDUCATION University of Toronto, Toronto, Ontario, Canada

Department of Electrical and Computer Engineering

♦ **Ph.D. candidate**, Electrical and Computer Engineering, Sept. 2015 – Present

▷ Advisor: Baochun Li, Department of Electrical and Computer Engineering

Shanghai Jiao Tong University, Shanghai, People's Republic of China *School of Electronic Information and Electrical Engineering*

- ♦ M.Engr., Software Engineering, Mar. 2015
 - ▷ Dissertation: "Generic and Accurate Traffic Prediction for Data-parallel Cluster Computing"
 - ▷ Advisor: Haibing Guan, Department of Computer Science Zhengwei Qi, School of Software Engineering
- ♦ **B.Engr.**, Information Security, Jul. 2012

RESEARCH INTERESTS

Large-scale data analytics, machine learning system, distributed computing, cloud computing, datacenter networking.

Honours and Awards

- ♦ Student Scholarships, ACM Symposium on Cloud Computing, 2018.
- ♦ *University of Toronto Fellowship*, Department of ECE, University of Toronto, Sept. 2015 Present.
- ♦ Edward S. Rogers Sr. Graduate Scholarships, University of Toronto, Sept. 2015 Present.
- ♦ Yunfeng Prize in the 2nd Aliyun Cloud Computing Developer Competition (Top 1%), Alibaba Cloud Inc., 2013.
- ♦ Second-Class Postgraduate Scholarship, Shanghai Jiao Tong University, 2012.
- ♦ 3rd Prize in the 4th National College Information Security Contest, 2011.
- ♦ Successful Participant Award, Mathematical Contest in Modeling (MCM), 2011.
- ♦ Second-Class Academic Excellence Scholarship, Shanghai Jiao Tong University, 2009.

RESEARCH EXPERIENCE **Research Assistant**, supervised by Prof. Baochun Li *University of Toronto*, Toronto

Sept. 2015 – Present

Teaching Assistant

Sept. 2015 - Present

University of Toronto, Toronto

▷ CSC 444: Software Engineering

Fall 2017, Fall 2018

▷ CSC 369: Operating Systems

Summer 2017 Oct. 2016 – Apr. 2017

▷ ESC 499: Engineering Science Final Year Project

Fall 2016

▷ ECE 344: Operating Systems▷ CSC 343: Introduction to Databases

Summer 2016

▶ ECE 353: Systems Software

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COL 353. Systems Software

Winter 2016, Winter 2017, Winter 2018

▷ CSC 458: Computer Networks

Fall 2015

Research Intern, supervised by Dr. Yongqiang Xiong

Aug. 2013 - Aug. 2014

Microsoft Research Asia, Beijing, P. R. China

Visiting Research Assistant, supervised by Prof. Kai Chen

Nov. 2013 - Dec. 2014

Hong Kong University of Science and Technology, Hong Kong, P. R. China

Full-Stack Developer

Jul. 2013 - Nov. 2013

Ramy Tech Inc., Shanghai, P. R. China

Development Intern

Dec. 2011 - Dec. 2012

Intel Asia-Pacific Research and Development Ltd., Shanghai, P. R. China

Undergraduate Research Assistant, supervised by Dr. Xiaochao Zi

Nov. 2009 - Nov. 2010

Shanghai Jiao Tong University, Shanghai, P. R. China

PUBLICATIONS

- ♦ **Journal Articles** (in reverse chronological order)
- [J1] **Hao Wang**, Baochun Li. "Mitigating Bottlenecks in Wide Area Data Analytics via Machine Learning," in *IEEE Transactions on Network Science and Engineering*, 2018.
- [J2] Wei Bai, Li Chen, Kai Chen, Dongsu Han, Chen Tian, **Hao Wang**. "Information-Agnostic Flow Scheduling for Commodity Data Centers," in *IEEE/ACM Transactions on Networking (ToN)*, 2017.
- [J3] Hong Zhang, Kai Chen, Wei Bai, Dongsu Han, Chen Tian, **Hao Wang**, Haibing Guan, Ming Zhang. "Guaranteeing Deadlines for Inter-Datacenter Transfers," in *IEEE/ACM Transactions on Networking (ToN)*, 2016
- [J4] Shuihai Hu, Kai Chen, Haitao Wu, Wei Bai, Chang Lan, **Hao Wang**, Hongze Zhao, Chuanxiong Guo. "Explicit Path Control in Commodity Data Centers: Design and Applications," in *IEEE/ACM Transactions on Networking (ToN)*, 2015
- [J5] Yang Peng, Kai Chen, Guohui Wang, Wei Bai, Yangming Zhao, **Hao Wang**, Yanhui Geng, Zhiqiang Ma, Lin Gu. "Towards Comprehensive Traffic Forecasting in Cloud Computing: Design and Application," in *IEEE/ACM Transactions on Networking (ToN)*, 2015.

- ♦ **Conference Papers** (in reverse chronological order)
- [C1] **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)*, Carlsbad, California, October 11-13, 2018 (acceptance ratio: 24%).
- [C2] **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 (HotCloud 2017)*, Santa Clara, California, July 10-11, 2017 (acceptance ratio: 32%).
- [C₃] 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), Atlanta, Georgia, June 5–8, 2017 (acceptance ratio: 17%).
- [C4] **Hao Wang**, Li Chen, Kai Chen, Ziyang Li, Yiming Zhang, Haibing Guan, Zhengwei Qi, Dongsheng Li, Yanhui Geng. "FlowProphet: Generic and Accurate Traffic Prediction for Dataparallel Cluster Computing," in the Proceedings of the 35th *International Conference on Distributed Computing Systems (ICDCS 2015)*, Columbus, Ohio, June 29-July 2, 2015 (acceptance ratio: 13%).
- [C₅] Hong Zhang, Kai Chen, Wei Bai, Dongsu Han, Chen Tian, **Hao Wang**, Haibing Guan, Ming Zhang. "Guaranteeing Deadlines for Inter-Datacenter Transfers," in the Proceedings of the *ACM European Conference on Computer Systems (EuroSys 2015)*, Bordeaux, France, April 21-24, 2015 (acceptance ratio: 21%).
- [C6] Wei Bai, Li Chen, Kai Chen, Dongsu Han, Chen Tian, **Hao Wang**. "Practical Information-Agnostic Flow Scheduling for Data Center Networks," in the Proceedings of the *12th USENIX Symposium on Networked Systems Design and Implementation (NSDI 2015)*, Oakland, CA, May 4-6, 2015 (acceptance ratio: 20%).
- [C7] Shuihai Hu, Kai Chen, Haitao Wu, Wei Bai, Chang Lan, **Hao Wang**, Hongze Zhao, Chuanxiong Guo. "Explicit Path Control in Commodity Data Centers: Design and Applications," in the Proceedings of the *12th USENIX Symposium on Networked Systems Design and Implementation (NSDI 2015)*, Oakland, CA, May 4-6, 2015 (acceptance ratio: 20%).
- [C8] **Hao Wang**, Yangming Zhao, Haibing Guan. "On Pricing Schemes in Data Center Network with Game Theoretic Approach," in the Proceedings of the 23rd IEEE International Conference on Computer Communications and Networks (ICCCN 2014), Shanghai, China, August 4-7, 2014 (acceptance ratio: 28%).

Professional Services

- ♦ Web Chair: IEEE ICNP 2017
- Reviewer for Journal Manuscript Submissions: IEEE Transactions on Networking, IEEE Transactions on Network Science and Engineering, IEEE Transactions on Big Data, Multimedia Systems Springer Journals
- ♦ Reviewer for Conference Manuscript Submissions: USENIX HotCloud, ACM Multimedia, ACM MMSys, ACM NOSSDAV, IFIP Networking, IEEE INFOCOM, IEEE IWQoS, IEEE GLOBE-COM, ACM SIGCOMM poster, IEEE IC2E, WiOpt, ACM/IEEE IoTDI

REFERENCES

Baochun Li, IEEE Fellow, Professor

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Di Niu, IEEE Member, Associate Professor

Department of Electrical and Computer Engineering

University of Alberta

116 St. and 85 Ave., Edmonton, Alberta T6G 2R3, Canada

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