

# Wei Bai

## Education

- 2013–2017 **Ph.D. Computer Science**, *The Hong Kong University of Science and Technology (HKUST)*, Hong Kong.  
Thesis Supervisor: Prof. Kai Chen  
Thesis: Congestion Control Mechanisms for Data Center Networks
- 2009–2013 **B.E. Information Security**, *Shanghai Jiao Tong University (SJTU)*, China.

## Research Interests

Data center networks

## Awards and Honors

- 2016, 2017 **Research Travel Grant**, *HKUST*.
- 2015, 2016 **Student Grant**, *USENIX NSDI*.
- 2015 **Microsoft Research Asia Fellowship**.
- 2013–2017 **Postgraduate Scholarship**, *HKUST*.
- 2013 **Outstanding Bachelor Thesis Award (Top 1%)**, *SJTU*.
- 2012 **Second Prize**, *Shanghai Information Security Contest*.
- 2012 **First Prize (Software Group)**, *Information Security Contest, National Undergraduate Electronic Design Contest*.
- 2011, 2012 **Second-Class Academic Excellence Scholarship (Top 15%)**, *SJTU*.
- 2010 **FUDI Scholarship (Top 5%)**, *SJTU*.

## Publications

### Conference and Workshop Publications

13. Hong Zhang, Junxue Zhang, **Wei Bai**, Kai Chen, Mosharaf Chowdhury, "Resilient Datacenter Load Balancing in the Wild" **ACM SIGCOMM**, 2017 (to appear).
12. Ziyang Li, **Wei Bai**, Kai Chen, Dongsu Han, Yiming Zhang, Dongsheng Li, Hongfang Yu, "Rate-Aware Flow Scheduling for Commodity Data Center Networks" **IEEE INFOCOM**, 2017.
11. **Wei Bai**, Kai Chen, Li Chen, Changhoon Kim, Haitao Wu, "Enabling ECN over Generic Packet Scheduling" **ACM CoNEXT**, 2016.
10. Li Chen, Kai Chen, **Wei Bai**, Mohammad Alizadeh "Scheduling Mix-flows in Commodity Datacenters with Karuna" **ACM SIGCOMM**, 2016.

9. **Wei Bai**, Li Chen, Kai Chen, Haitao Wu "Enabling ECN in Multi-Service Multi-Queue Data Centers" **USENIX NSDI**, 2016
8. Shuihai Hu, **Wei Bai**, Kai Chen, Chen Tian, Ying Zhang, Haitao Wu, "Providing Bandwidth Guarantees, Work Conservation and Low Latency Simultaneously in the Cloud", **IEEE INFOCOM**, 2016.
7. Hong Zhang, Kai Chen, **Wei Bai**, Dongsu Han, Chen Tian, Hao Wang, Haibing Guan, Ming Zhang, "Guaranteeing Deadlines for Inter-Datacenter Transfers" **ACM EuroSys**, 2015.
6. **Wei Bai**, Li Chen, Kai Chen, Dongsu Han, Chen Tian, Hao Wang, "Information-Agnostic Flow Scheduling for Commodity Data Centers" **USENIX NSDI**, 2015.
5. 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" **USENIX NSDI**, 2015.
4. Yangming Zhao, Kai Chen, **Wei Bai**, Minlan Yu, Chen Tian, Yanhui Geng, Yiming Zhang, Dan Li, Sheng Wang, "RAPIER: Integrating Routing and Scheduling for Coflow-aware Data Center Networks" **IEEE INFOCOM**, 2015.
3. **Wei Bai**, Li Chen, Kai Chen, Dongsu Han, Chen Tian, Weicheng Sun, "PIAS: Practical Information-Agnostic Flow Scheduling for Data Center Networks" **ACM HotNets**, 2014.
2. **Wei Bai**, Kai Chen, Haitao Wu, Wuwei Lan, Yangming Zhao, "PAC: Taming TCP Incast Congestion Using Proactive ACK Control" **IEEE ICNP**, 2014.
1. Yang Peng, Kai Chen, Guohui Wang, **Wei Bai**, Zhiqiang Ma, Lin Gu, "HadoopWatch: A First Step Towards Comprehensive Traffic Forecasting in Cloud Computing" **IEEE INFOCOM**, 2014.

#### Journal Publications

4. **Wei Bai**, Li Chen, Kai Chen, Dongsu Han, Chen Tian, Hao Wang, "Information-Agnostic Flow Scheduling for Commodity Data Centers" **IEEE/ACM Transactions on Networking** (to appear).
3. Hong Zhang, Kai Chen, **Wei Bai**, Dongsu Han, Chen Tian, Hao Wang, Haibing Guan, Ming Zhang, "Guaranteeing Deadlines for Inter-Datacenter Transfers" **IEEE/ACM Transactions on Networking**, 2017.
2. 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" **IEEE/ACM Transactions on Networking**, 2016.
1. 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" **IEEE/ACM Transactions on Networking**, 2016.

#### Selected Talks

- Dec. 2016 **Enabling ECN over Generic Packet Scheduling**, *CoNEXT 2016, Irvine, CA, USA*.

- Mar. 2016 **Enabling ECN in Multi-Service Multi-Queue Data Centers**, *NSDI 2016, Santa Clara, CA, USA*.
- May. 2015 **Information-Agnostic Flow Scheduling for Commodity Data Centers**, *NSDI 2015, Oakland, CA, USA*.

### Professional Activities

- 2017 **ACM/IEEE ANCS**, (*External*) *Reviewer*.
- 2017 **IEEE Transactions on Network and Service Management**, *Reviewer*.
- 2015–Present **IEEE/ACM Transactions on Networking**, *Reviewer*.
- 2015–Present **Elsevier Computer Networks**, *Reviewer*.
- 2014–Present **IEEE INFOCOM**, (*External*) *Reviewer*.

### Teaching Experience in HKUST

- 2017 Spring **Computer Communication Networks I**, *Teaching Assistant*.
- 2016 Spring **Computer Communication Networks I**, *Teaching Assistant*.
- 2014 Fall **Operating Systems**, *Teaching Assistant*.
- 2014 Spring **Computer Communication Networks I**, *Teaching Assistant*.

### Computer Skills

- Programming C, Python
- Miscellaneous Linux Netfilter, NS-2 simulation, switch configuration

### References

Available upon request