

Jinbin Hu | Curriculum Vitae

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I am currently a Post-doctoral from Department of Computer Science and Engineering, Hong Kong University of Science and Technology, Hong Kong SAR, advised by Prof. Kai Chen. Meanwhile, I am working in the School of Computer and Communication Engineering, Changsha University of Science and Technology, Hunan Province, Changsha, China. My current research centers on transport protocols and load balancing for large-scale datacenter networks, RDMA networking, learning-based network systems, communication optimization for deep neural network, and programmable switching architectures*.

Education

- **PostDoc, Dept. of CSE, Hong Kong University of Science and Technology** **Hong Kong SAR**
Computer Science and Engineering 1.2022–
Advisor: Prof. Kai Chen.
- **Ph.D., School of Computer Science & Engineering, Central South University** **Changsha, China**
Computer Science and Technology 9.2016–12.2020
Advisor: Prof. Jiawei Huang.
- **M.S., School of Electronic & Information Engineering, Beijing Jiaotong University** **Beijing, China**
Microelectronics and Solid State Electronics 9.2008–1.2011
Advisor: Prof. Xiaoguang Li.
- **B.S., School of Electronic & Information Engineering, Beijing Jiaotong University** **Beijing, China**
Electronic Science and Technology 9.2004–7.2008

Experiences

- **Changsha University of Science & Technology** **Changsha, China**
Associate Professor 12.2021–
Teaching and researching in School of Computer and Communication Engineering.
- **Hunan Mechanical & Electrical Polytechnic** **Changsha, China**
Engineer 8.2014–12.2021
Teaching and researching in School of Electrical Engineering.
- **National University of Defense Technology** **Changsha, China**
FPGA Verification Engineer 8.2013–8.2014
Responsible for FPGA verification of multi-core CPU in Microelectronics Institute.
- **Empyrean Technology Co., Ltd** **Beijing, China**
IC Software Test Engineer 1.2011–8.2013
Responsible for IC simulation software testing.

*Last Updated Mar. 2024

Representative Publications

1. **TaLB: Tensor-aware Load Balancing for Distributed DNN Training Acceleration**
Jinbin Hu, Yi He, Wangqing Luo, Jiawei Huang, Jianxin Wang. 4.2024
In Proc. IEEE/ACM IWQoS, 2024. (CCF B)
2. **Load Balancing with Multi-level Signals for Lossless Datacenter Networks**
Jinbin Hu, Chaoliang Zeng, Zilong Wang, Junxue Zhang, Kun Guo, Hong Xu, Jiawei Huang, Kai Chen. 2.2024
IEEE/ACM Transactions on Networking, 2024, DOI: 10.1109/TNET.2024.3366336 (CCF A)
3. **Enabling Load Balancing for Lossless Datacenters**
Jinbin Hu, Chaoliang Zeng, Zilong Wang, Junxue Zhang, kun Guo, Hong Xu, Jiawei Huang, kai chen. 10.2023
In Proc. IEEE ICNP, 2023. (CCF B, Best Paper Award)
4. **Adaptive Routing for Datacenter Networks Using Ant Colony Optimization**
Jinbin Hu, Man He, Shuying Rao, Yue Wang, Jing Wang and Shiming He. 10.2023
In Proc. IEEE ICA3PP, 2023. (CCF C, Best Paper Award)
5. **RLB: Reordering-Robust Load Balancing in Lossless Datacenter Networks**
Jinbin Hu, Yi He, Jin Wang, Wangqing Luo, Jiawei Huang. 8.2023
In Proc. ACM ICPP, 2023. (CCF B)
6. **A Receiver-Driven Transport Protocol with High Link Utilization Using Anti-ECN Marking in Data Center Networks**
Jinbin Hu, Jiawei Huang, Zhaoyi Li, Jianxin Wang and Tian He. 6.2023
IEEE Transactions on Network and Service Management, 2023, 20(2):1898-1912. (CCF C)
7. **Load Balancing in PFC-Enabled Datacenter Networks**
Jinbin Hu, Chaoliang Zeng, Zilong Wang, Hong Xu, Jiawei Huang, Kai Chen. 7.2022
In Proc. ACM APNet, 2022. (CCF C)
8. **RPO: Receiver-driven Transport Protocol Using Opportunistic Transmission in Data Center**
Jinbin Hu, Jiawei Huang, Zhaoyi Li, Yijun Li, Wenchao Jiang, Kai Chen, Jianxin Wang and Tian He. 11.2021
In Proc. IEEE ICNP, 2021. (CCF B)
9. **Adjusting Switching Granularity of Load Balancing for Heterogeneous Datacenter Traffic**
Jinbin Hu, Jiawei Huang, Wenjun Lv, Weihe Li, Zhaoyi Li, Wenchao Jiang, Jianxin Wang and Tian He. 6.2021
IEEE/ACM Transactions on Networking, 2021, 29(5): 2367-2384. (CCF A)
10. **AMRT: Anti-ECN Marking to Improve Utilization of Receiver-driven Transmission in Data Center**
Jinbin Hu, Jiawei Huang, Zhaoyi Li, Jianxin Wang and Tian He. 8.2020
In Proc. ACM ICPP, 2020. (CCF B)
11. **CAPS: Coding-based Adaptive Packet Spraying to Reduce Flow Completion Time in Data Center**
Jinbin Hu, Jiawei Huang, Wenjun Lv, Yutao Zhou, Jianxin Wang and Tian He. 10.2019
IEEE/ACM Transactions on Networking, 2019, 27(6): 2338-2353. (CCF A)

- TLB: Traffic-aware Load Balancing with Adaptive Granularity in Data Center**
12. **Networks**
Jinbin Hu, Jiawei Huang, Wenjun Lv, Weihe Li, Jianxin Wang and Tian He. 8.2019
In Proc. ACM ICPP, 2019. (CCF B, Best Paper Candidate)
- CAPS: Coding-based Adaptive Packet Spraying to Reduce Flow Completion Time**
13. **in Data Center**
Jinbin Hu, Jiawei Huang, Wenjun Lv, Yutao Zhou, Jianxin Wang and Tian He. 4.2018
In Proc. IEEE INFOCOM, 2018. (CCF A)

Research Project

- **The National Natural Science Foundation of China**
Study on Transport Control in Data Center Lossless Network Based on Priority-based Flow Control, NO.62102046, 2022.1.1-2024.12.31. (PI)
- **The Natural Science Foundation of Hunan Province**
Study on Communication Optimization Technology for Distributed Deep Neural Network, NO.2022JJ30618, 2022.1.1-2024.12.31. (PI)
- **The Scientific Research Fund of Hunan Provincial Education Department**
Study on Load Balancing for Lossless Datacenter Networks, NO.22B0300, 2023.1.1-2025.12.31. (PI)