|  |  |
| --- | --- |
|  | **Jiao Zhang**  **Professor, PhD advisor**  School of Information and Communication Engineering, BUPT  State key Laboratory of Networking and Switching Technology, BUPT  **Email:** [jiaozhang@bupt.edu.cn](mailto:jiaozhang@bupt.edu.cn)  **Addess:** No. 10, Xitucheng Road, Haidian District, Beijing, China |

|  |
| --- |
| **Bio:**  I am now a Professor at the School of Information and Communication Engineering, BUPT. I am interested in datacenter networking, transport control protocols, and future Internet architecture. I got my Ph.D. degree in July 2014 in Tsinghua University, advised by Prof. Fengyuan Ren. From August 2012 to August 2013, I was a visiting student with the Networking Group of ICSI, UC Berkeley.  **Publications:**  **[Conference]**   1. Zirui Wan, **Jiao Zhang**\*, Mingxuan Yu, Junwei Liu, Jun Yao, Xinghua Zhao and Tao Huang, "BiCC: Bilateral Congestion Control in Cross-datacenter RDMA Networks," to appear in *IEEE INFOCOM*, 2024. 2. Dehui Wei, **Jiao Zhang\***, Haozhe Li, Zhichen Xue, Jialin Li, Yajie Peng, Xiaofei Pang, Yuanjie Liu, Rui Han, "Pscheduler: QoE-Enhanced MultiPath Scheduler for Video Services in Large-scale Peer-to-Peer CDNs", to appear in *IEEE INFOCOM*, 2024. 3. Tian Pan, Kun Liu, Xionglie Wei, Yisong Qiao, Jun Hu, Zhiguo Li, Jun Liang, Tiesheng Cheng, Wenqiang Su, Jie Lu, Yuke Hong, Zhengzhong Wang, Zhi Xu, Chongjing Dai, Peiqiao Wang, Xuetao Jia, Jianyuan Lu, Enge Song, Jun Zeng, Biao Lyu, Ennan Zhai, **Jiao Zhang**, Tao Huang, Dennis Cai and Shunmin Zhu, LuoShen: A Hyper-Converged Programmable Gateway for Multi-Tenant Multi-Service Edge Clouds, to appear in *USENIX NSDI*, 2024. 4. Tian Pan, Shuihai Hu, Guangyu An, Xincai Fei, Fanzhao Wang, Yueke Chi, Minglan Gao, Hao Wu, **Jiao Zhang**, Tao Huang, Jingbin Zhou and Kun Tan, Amphis: Rearchitecturing Congestion Control for Capturing Internet Application Variety, *ACM APNet*, 2023. 5. QEnge Song, Nianbing Yu, Tian Pan,Qiang Fuo, Liang Xu, Xionglie Wei,Yisong Qiao,Jianyuan Lu, Yijian Dong,Mingxu Xie,Jun He, Jinkui Mao, Zhengjie Luo, Chenhao jia, **Jiao Zhang**, Tao Huang Biao Lyu,Shunmin Zhu: MIMIC: SmartNIC-aided Flow Backpressure for CPU Overloading Protection in Multi-Tenant Clouds, in proc. of *IEEE ICNP*, 2022. 6. QEnge Song, Tian Pan, Qiang Fu, Chenhao Jia, **Jiao Zhang**, Tao Huang, Yun-lie Liu: WebQMon.ai: Gateway-Based WebQoE Assessment Using Lightweight Neural Networks. in proc. of *Springer ICSOC*, 2022. 7. Xiaolong Zhong, **Jiao Zhang\***, Yali Zhang, Zixuan Guan, Zirui Wan, PACC: Proactive and Accurate Congestion Feedback for RDMA Congestion Control, in proc. of *IEEE INFOCOM*, 2022. 8. **Jiao Zhang**, Shi Jiaming, Zhong Xiaolong, Wan Zirui, Tian Yu, Pan Tian, Huang Tao. Receiver-Driven RDMA Congestion Control by Differentiating Congestion Types in Datacenter Networks. In proc. of *IEEE ICNP*, 2021. 9. Jiao Zhang, Gao Yuxuan, Wen Shubo, Pan Tian, Huang Tao. Loom: Switch-based Cloud Load Balancer with Compressed States. In proc. of *IEEE ICNP*, 2021. 10. Tian Pan, Nianbing Yu, Chenhao Jia, Jianwen Pi, Liang Xu, Yisong Qiao, Zhiguo Li, Kun Liu, Jie Lu, Jianyuan Lu, Enge Song, Jiao Zhang, Tao Huang and Shunmin Zhu, Sailfish: Accelerating Cloud-Scale Multi-Tenant Multi-Service Gateways with Programmable Switches, in proc. of *ACM SIGCOMM*, 2021. 11. Pan T, Lin X, Song H, Song E, Bian Z, Li H, **Jiao Zhang**, Li F, Huang T, Jia C, Liu B. INT-probe: Lightweight In-band Network-Wide Telemetry with Stationary Probes. In proc. of *IEEE ICDCS*, 2021. 12. **Jiao Zhang**, Yali Zhang, Zixuan Guan, Zirui Wan, Yinben Xia, Tian Pan, Tao Huang, Dezhi Tang, Yun Lin, HierCC: Hierarchical RDMA Congestion Control, in proc. of *ACM APNet*, 2021. 13. Song, E., Pan, T., Jia, C., Cao, W., Zhang, J., Huang, T. and Liu, Y., 2021, May. INT-label: Lightweight In-band Network-Wide Telemetry via Interval-based Distributed Labelling. In proc. of *IEEE INFOCOM*, 2021. 14. Song, Enge, Tian Pan, Chenhao Jia, Wendi Cao, Jiao Zhang, Tao Huang, and Yunjie Liu. "Int-filter: Mitigating data collection overhead for high-resolution in-band network telemetry." In proc. of *IEEE GLOBECOM*, 2020. 15. Wang Zenan, Jiao Zhang, Haoran Wei, et al. Hieﬀ: Enabling Eﬀicient VNF Clusters by Coordinating VNF Scaling and Flow Scheduling. In Proc. of *IPCCC*，Nov. 2020. 16. Qian Li, Jiao Zhang, Tian Pan, Tao Huang, Yunjie Liu, Data-driven Routing Optimization based on Programmable Data Plane, in proc. of *IEEE ICCCN*, 2020. 17. Chengyuan Huang, Jiao Zhang, Tao Huang. “Objective-Oriented Resource Pooling in MPTCP: A Deep Reinforcement Learning Approach”, In Proc. of *IEEE HotICN*, 2020. 18. Kefei Liu, Jiao Zhang, Dehui Wei, Kai Zhang, Tao Huang. PLB: Adaptive Partial Congestion-aware Load Balancing for Datacenter Networks. In Proc. of *IEEE GLOBECOM*，2020. 19. Hua Chai, Jiao Zhang, Jiaming Shi, Zenan Wang, Tao Huang, “A Parallel Placement Approach for Service Function Chain Using Deep Reinforcement Learning”, in proc. of *IEEE ICCC*, 2019. 20. Ping Zhang, Kai Niu, Hui Tian, Gaofeng Nie, Xiaoqi Qin, Qi Qi, Jiao Zhang, “Technology prospect of 6G mobile communications”, 通信学报，2019. 21. Pan T, Lin X, **Zhang J**, Li H, Lv J, Huang T, Liu B, Zhang B. Nb-cache: non-blocking in-network caching for high-speed content routers. In proc. of *IEEE/ACM IWQoS*, 2019. 22. Tian Pan, Enge Song, Zizheng Bian, Xingchen Lin, Xiaoyu Peng, Jiao Zhang, Tao Huang, Bin Liu, Yunjie Liu, INT-path: Towards Optimal Path Planning for In-band Network-Wide Telemetry, in proc. of *IEEE INFOCOM*, 2019. 23. Jiao Zhang, Zenan Wang, Chunyi Peng, Linquan Zhang, Tao Huang, Yunjie Liu, “RABA: Resource-Aware Backup Allocation For A Chain of Virtual Network Functions”, in proc. of *IEEE INFOCOM*, 2019. 24. Ziwei Zhang, Jiao Zhang, Tao Huang, “The Reliability Mapping Monitoring Method of Network Function Virtualization”, in proc. of *IEEE ICCC*, 2018. 25. Ningning Ma, Jiao Zhang, Tao Huang. A Model Based on Genetic Algorithm for Service Chain Resource Allocation in NFV, in proc. of *IEEE ICCCC*, 2018. 26. Zenan Wang, Jiao Zhang, Tao Huang, Yunjie Liu, A Clustering-based Approach for Virtual Network Function Mapping and Assigning, Jun. 14-16, in proc. of *IEEE/ACM IWQoS (Work-in-Progress)*, 2017. 27. Shuo Wang, Jiao Zhang, Tao Huang, Tian Pan, Jiang Liu, Yunjie Liu, Jin Li, Feng Li, Skipping Congestion-links for Coflow Scheduling, Jun. 14-16, in proc. of *IEEE/ACM IWQoS*, Spain, 2017. 28. Shuo Wang, Jiao Zhang, Tao Huang, Tian Pan, Jiang Liu, Yunjie Liu,Adaptively Adjusting ECN Marking Thresholds for Datacenter Networks, in proc. of *IEEE ICNP (poster)*, Oct. 2017. 29. Shuo Wang, Jiao Zhang, Tao Huang, Tian Pan, Jiang Liu, Yunjie Liu，Leveraging Multiple Coflow Attributes for Information-Agnostic Coflow Scheduling, in proc. of *IEEE ICC*, France, 2017. 30. Keqiang He, Weite Qin, Qiwei Zhang, Wenfei Wu, Junjie Yang, Tian Pan, Chengchen Hu, Jiao Zhang, Brent Stephens, Aditya Akella, Ying Zhang, "Low Latency Software Rate Limiters for Cloud Networks." In Proc. of *ACM APNet*, 2017. 31. Chengyuan Huang, Jiao Zhang, Tao Huang, Yunjie Liu, DMTCP: Deadline-Aware Multipath TCP, in proc. of *IEEE ICC* *(Workshop)*, 2017. 32. Jiao Zhang, Fengyuan Ren, Ran Shu, Peng Cheng, “TFC: Token Flow Control in Data Center Networks ”, in proc. of *ACM EuroSys*, Apr. 2016, London, UK. 33. Tian Pan, Tao Huang, Jiang Liu, Jiao Zhang, Fan Yang, Shufang Li, and Yunjie Liu, “Fast Content Store Lookup Using Locality-Aware Skip List in Content-Centric Networks” in proc. of *IEEE Infocom (Workshop)*, Apr. 2016. 34. Shuo Wang, Jiao Zhang, Tao Huang, Tian Pan, Jiang Liu and Yunjie Liu, “FDALB: Flow Distribution Aware Load Balancin for Datacenter Networks”， in Proc. of *IEEE IWQoS (Poster)*, Beijing, China, June 2016. 35. Jiao Zhang, Deadline-Aware Bandwidth Sharing by Allocating Switch Buffer in Data Center Networks, in Proc. of *IEEE INFOCOM*, Apr. 2016. 36. Jiao Zhang, Fengyuan Ren, Chuang Lin. “Delay Guaranteed Live Migration of Virtual Machines”, in Proc. of *IEEE INFOCOM*, 2014. 37. Ran Shu, Jiao Zhang, Fengyuan Ren and Chuang Lin. “Analysing Convergence of Quantized Congestion Notification in Data Center Ethernet”, in Proc. of *IEEE IWQoS*, Hongkong, China, May 2014. 38. Jiao Zhang, Fengyuan Ren, Chuang Lin, “Modeling and Understanding TCP Incast in Data Center Networks”, in Proc. of *IEEE INFOCOM*, 2011. 39. Jiao Zhang, Fengyuan Ren, Li Tang, Chuang Lin, “Taming TCP Incast Throughput Collapse in Data Center Networks”, in Proc. of *IEEE ICNP*, Oct. 2013. 40. Jiao Zhang, Fengyuan Ren, Tao He, Chuang Lin. “Attribute-aware Data Aggregation Using Dynamic Routing in Wireless Sensor Networks”, in Proc. of *IEEE WoWMoM*, 2010. 41. Jiao Zhang, Qian Wu, Fengyuan Ren, Tao He, Chuang Lin. “Effective Data Aggregation Supported by Dynamic Routing in Wireless Sensor Networks”, in Proc. of *IEEE ICC*, 2010. 42. Hongkun Yang, Fengyuan Ren, Chuang Lin, Jiao Zhang. “Frequency-Domain Packet Scheduling for 3GPP LTE Uplink”. In Proc. of *IEEE INFOCOM*, 2010.   **[Journal]**   1. Dehui Wei, Jiao Zhang, Haozhe Li, Zhichen Xue, Yalie Peng and Rui Han, "Multipath Smart Preloading Algorithms in Short Video Peer-to-Peer CDN Transmission Architecture,", IEEE NETWOEK, 2023. 2. **Jiao Zhang**, Xiaolong Zhong, Zirui Wan, Yu Tian, Tian Pan and Tao Huang, "[RCC: Enabling Receiver-Driven RDMA Congestion Control With Congestion Divide-and-Conquer in Datacenter Networks](papers/RCC_Enabling%20Receiver-Driven%20RDMA%20Congestion%20Control%20With%20Congestion%20Divide-and-Conquer%20in%20Datacenter%20Networks.pdf)", IEEE/ACM Transactions on Networking, 2023. 3. **Jiao Zhang**, Shubo Wen, Jinsheng Zhang, Hua Chai, Tian Pan, Tao Huang, Linquan Zhang, Yunjie Liu, and F. Richard Yu, “Fast Switch-based Load Balancer Considering Application Server States”, IEEE/ACM Transactions on Networking (TON), vol. 28, no. 3, pp. 1391-1404, Jun. 2020 4. Chengyuan Huang, **Jiao Zhang**, Tao Huang. SLIT: Achieving Fast Bandwidth Isolation across Virtual Machines[J]. IEEE Transactions on Network and Service Management (TNSM), 2022. 5. Dehui Wei, **Jiao Zhang**, Xuan Zhang, Chengyuan Huang. Plume: Lightweight and Generalized Congestion Control with Deep Reinforcement Learning. China Communications，2022. |