Mingtao Ji

PhD Candidate, Department of Computer Science and Technology, Nanjing University

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Biography

I am pursuing a PhD degree under the supervision of Professor Zhuzhong Qian and Professor Baoliu Ye at Nanjing University. Currently, 6 first-author papers have been published and accepted. My research interests include CPN, P4 switch, SDN, Federated Learning, Edge Computing, and Big Data Analytics.

Education

Ph.D. in Distributed Computing Lab., Department of Computer Science and Technology   *Nanjing University*

ADVISOR: PROF. ZHUZHONG QIAN AND PROF. BAOLIU YE. NANJING, JIANGSU, CHINA   *Sept. 2021 - Now*

- Win the Best Paper Award in BigCom 2023

Master's Degree in Department of Computer Science and Technology   *Nanjing University*

ADVISOR: PROF. ZHUZHONG QIAN. NANJING, JIANGSU, CHINA   *Sept. 2018 - Jun. 2021*

- Get a First Prize Graduate Scholarship in NJU

B.S. in College of Computer Science and Technology   *Nanjing University of Aeronautics and Astronautics*

ADVISOR: ASSOCIATE PROF. XIN LI AND ASSOCIATE PROF. HAIYAN CHEN. NANJING, JIANGSU, CHINA   *Sept. 2014 - Jun. 2018*

- Rank 3st in Qualification Examination for Undergraduate Students (3/120)

Honors & Awards

2021-Now

2023	**Best Paper Award**, The 7th International Conference on Big Data Computing and Communications	*Hainan, China*
2022	**Graduate First Class Scholarship**, Annual Awards	*Nanjing, China*
2022	**The Excellent Prize**, Intel 2022 P4 China Hackathon	*Beijing, China*
2021	**Outstanding Student Cadre of Nanjing University**, Annual Awards	*Nanjing, China*

2014-2021

2018	**Postgraduate Qualification without Entrance Examination**, Undergraduate Evaluation	*Nanjing, China*
2017	**National Inspirational Scholarship**, Annual Awards	*Nanjing, China*
2015	**Top 100 Young Students in NUAA** , May Fourth Excellent Evaluation	*Nanjing, China*

Publications

CONFERENCE

2023	[C.9] <u>Mingtao Ji</u>, Zhuzhong Qian, Baoliu Ye. When CPN Meets AI: Resource Provisioning for Inference Query Upon Computing Power Network. **IEEE ICPADS**.	*CCF-C*
	[C.8] Yitao Fan, <u>Mingtao Ji</u>, Zhuzhong Qian. Accelerating Federated Learning With Adaptive Extra Local Updates Upon Edge Networks. **IEEE ICPADS**.	*CCF-C*
	[C.7] <u>Mingtao Ji</u>, Zhixin Zhang, Yuhan Zhang, Zhuzhong Qian, Tuo Cao, Baoliu Ye. Incentivizing Edge Inference with Accuracy Preserving via Online Randomized Auctions. **IEEE SECON Poster**.	*CCF-B Poster*
	[C.6] <u>Mingtao Ji</u>, Chenwei Su, Yuting Yan, Zhuzhong Qian, Sheng Zhang, Yu Chen, Tuo Cao, Xiaohang Shi, Luis Vasquez, Baoliu Ye. INTView: Adaptive Planner for In-Band Network Telemetry without Detours. **IEEE/ACM IWQOS Poster**.	*CCF-B Poster*

2023	**[C.5]** <u>**Mingtao Ji**</u>, Chenwei Su, Yuting Yan, Zhuzhong Qian, Yu Chen, Yibo Jin, Sheng Zhang, Baoliu Ye. INTView: Adaptive Planner for In-Band Network Telemetry without Detours. **IEEE ICC**. *CCF-C*

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<tr><td rowspan="2">2023</td><td>[C.5] <u>Mingtao Ji</u>, Chenwei Su, Yuting Yan, Zhuzhong Qian, Yu Chen, Yibo Jin, Sheng Zhang, Baoliu Ye. INTView: Adaptive Planner for In-Band Network Telemetry without Detours. IEEE ICC.</td><td>CCF-C</td></tr>
<tr><td>[C.4] <u>Mingtao Ji</u>, Mingxian Zhou, Haodong Zou, Ming Tang, Zhuzhong Qian, Xiaoliang Wang. SAC: Dynamic Caching upon Sketch for In-Memory Big Data Analytics. BigCom.</td><td></td></tr>
<tr><td rowspan="3">2019</td><td>[C.3] Yu Chen, Sheng Zhang, Yuting Yan, Zhuzhong Qian, Yibo Jin, Ning Chen, <u>Mingtao Ji</u>, Mingjun Xiao. Crowd2: Multi-agent Bandit-based Dispatch for Video Analytics upon Crowdsourcing. IEEE INFOCOM.</td><td>CCF-A</td></tr>
<tr><td>[C.2] Zhuzhong Qian, Yuan Gao, <u>Mingtao Ji</u>, Hui Peng, Peng Chen, Yibo Jin, Sanglu Lu. Workload-Aware Scheduling for Data Analytics upon Heterogeneous Storage. IEEE ISPA.</td><td>CCF-C</td></tr>
<tr><td>[C.1] Yefei Li, Yibo Jin, Haiyang Chen, Wenchao Xi, <u>Mingtao Ji</u>, Sheng Zhang, Zhuzhong Qian, Sanglu Lu. Run Data Run! Re-Distributing Data via Piggybacking for Geo-Distributed Data Analytics. IEEE ISPA.</td><td>CCF-C</td></tr>
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JOURNAL

<table>
<tr><td rowspan="2">2024</td><td>[J.3] <u>Mingtao Ji</u>, Chenwei Su, Yitao Fan, Zhuzhong Qian, Yuting Yan, Yibo Jin, Tuo Cao, Yu Chen, Sheng Zhang, Baoliu Ye. INTaaS: Provisioning In-band Network Telemetry as a Service via Online Learning. Computer Networks.</td><td>CCF-B</td></tr>
<tr><td>[J.2] Tuo Cao, Qinhui Wang, Yuhan Zhang, Zhuzhong Qian, Yue Zeng, <u>Mingtao Ji</u>, Hesheng Sun, Baoliu Ye. Walking on Two Legs: Joint Service Placement and Computation Configuration for Provisioning Containerized Services at Edges. Computer Networks.</td><td>CCF-B</td></tr>
<tr><td>2023</td><td>[J.1] Yibo Jin, Lei Jiao, <u>Mingtao Ji</u>, Zhuzhong Qian, Sheng Zhang, Ning Chen, Sanglu Lu. Scheduling In-Band Network Telemetry with Convergence-Preserving Federated Learning. IEEE TON.</td><td>CCF-A</td></tr>
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PATENT

<table>
<tr><td>2023</td><td>[P.2] <u>Ji Mingtao</u> (first student inventor), Qian Zhuzhong. Deployment methods, devices, and systems for intelligent monitoring application tasks in cloud data centers (CN116032778A, 2023/06/06) .</td></tr>
<tr><td>2022</td><td>[P.1] <u>Ji Mingtao</u>, Qian Zhuzhong, Wei Lei, Miao Weiwei, Zeng Zeng. A Cloud Oriented Inband Computing Deployment Method, Device, and System (CN114124732A, 2022/11/25) .</td></tr>
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OTHERS

2023	**[O.1]** <u>**Ji Mingtao**</u>. Three papers are under review and one paper is in major revision.

Grants

2023	**Short-term study abroad program for doctoral students of Nanjing University**, (About $9600).

Experiences

PROJECTS

Natural Science Foundation of China (NSFC) Project
- Research on Theory, Methods and Key Technologies of Cloud based Fusion Based on edge computing, 61832005.

State Grid Technology Project
- Research and Application of Key Technologies for Collaborative Operation and Intelligent Operation and Maintenance of Multiple Data Centers for Multisite Fusion, SGJSXT00XTJS2000102, 2021-2022
- Research on Collaborative Scheduling Allocation of Computing Resources and Key Operation Technology for Cloud-edge Datacenters, 5700-202218180A-1-1-ZN, 2022-2024.

SERVICES

Journal/Conference Reviewer
- INFOCOM'20, JCST'21, TMC'21, INFOCOM'21, CN'22, MASS'22, INFOCOM'22, INFOCOM'23, ToN'23.

Course Assistant
- Distributed Systems 22, 23: Lectured by Prof. Zhuzhong Qian.
- Computational Thinking 21, 22, 23: Lectured by Prof. Daoxu Chen, Prof. Xianping Tao, Prof. Zhuzhong Qian.
- Problem Solving 21: Lectured by Prof. Daoxu Chen, Prof. Sanglu Lu, Prof. Sheng Zhang.

Skills

Programming	Python, LaTeX, C, C++
System	Linux, Kubernetes, Git, Hadoop
Language	Chinese (Native), English (CET-6)