JINGYAO ZHANG

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AFFILIATION

State Key Laboratory of Integrated Service Networks (ISN)
School of Telecommunications Engineering, Xidian University

EDUCATION

Xidian University, Xi'an, Shaanxi, China — September 2018 - 2021
M.S. in Electronic & Telecommunication Engineering

Xidian University, Xi'an, Shaanxi, China — September 2014 - July 2018
B.S. in Telecommunication Engineering

RESEARCH INTERESTS

- Extraction and analysis of application traces in many-core chips and HPC systems.
- Optical interconnect networks for memory accessing: network architecture and optimization.
- Interconnects for distributed computing systems such as AI training acceleration systems.
- Evaluation and simulation tools for on-chip opto-electronic hybrid networks.

PUBLICATIONS

· **Kang Wang**, Kun Wang, Yintang Yang, et al., "Layout optimization methodology for ring-based on-chip optical network," IEICE Electronics Express, **16**(20), Pages 20190458, 2019.
· **Kang Wang** and Huaxi Gu, "Understanding and Modeling of the Real Application Traffic Characteristics for Fast On-chip Network Evaluation," 2018 IEEE 18th International Conference on Communication Technology (ICCT), Chongqing, 2018, pp. 237-241.
· Yue Wang, **Kang Wang**, Duan Zhou, et al., "SOIN: Scalable Optical Interconnect Network for On-Chip Parallel Memory Access," 2017 Asia Communications and Photonics Conference (ACP), Guangzhou, China, 2017, pp. 1-3.
· Yue Wang, Huaxi Gu, **Kang Wang**, et al., "Low-Power Low-Latency Optical Network Architecture for Memory Access Communication," in IEEE/OSA Journal of Optical Communications and Networking, **8**(10), pp. 757-764, 2016.
· Junhui Wang, Huaxi Gu, **Kang Wang**, et al., "DRTL: a Heat-balanced Deadlock-free Routing Algorithm for 3D Topology Network-on-Chip," ELSEVIER Microprocessors and Microsystems, **45**(A), pp. 95-104, 2016.
· Xiuhua Li, **Kang Wang**, Huaxi Gu, Ke Chen, and Wei Tan, "A High-performance Optical Network-on-Chip Based on Memory Access," in 15th Asia Communications and Photonics Conference (ACP), control number 2349524, pp. 1-3.
· **Kang Wang**, Huaxi Gu, Yintang Yang, et al., "Optical interconnection network for parallel access to multi-rank memory in future computing systems," Optics Express **23**(16), pp. 20480-20494, 2015.
· **Kang Wang**, Huaxi Gu, Yintang Yang,et al., "On the design of a 3D optical interconnected memory system," IEICE Electronics Express **11**(19), pp. 20140664, 2014. (SCI indexed)

P.R.C. PATENT

- Huaxi Gu, **Kang Wang**, Yintang Yang, Ke Chen, Xiaolu Wang. A parallel access memory system based on optical interconnect. 2014-06. Application No.201410269550.3
- Huaxi Gu, Zheng Chen, Yintang Yang, Yang Jing, **Kang Wang**. A multicast supported on-chip optical network. 2013.08. Application No.201310391130.8

HONOURS AND AWARDS

- Excellant oral presentation certificate, 2018 ICCT, Chong Qing. 2018
- Special-class award of outstanding graduation thesis (Ranking 1/700+) 2015
- Outstanding Graduate, Xidian University 2015
- National scholarship, Xidian University (Top 3% of 700+) 2014, 2015

EXPERIENCE

Xidian University September 2017 - Present
Researcher *Xi'an, China*

- Simulation tools for on-chip optical network based on OMNET++ and Netrace.
- Traces extraction and analysis in many-core computing systems based on Gem5.
- Evaluation and optimization strategies for on chip optical network.
- Placement optimization strategy for memory controllers in CPU and GPU platform.
- MPI Traces extractions in HPC systems.
- Opto-electronic interconnects for Distributed neural network training systems.

ZTE Corporation March 2016 - August 2016
Software Engineer *Xi'an, China*

- Development of Operating System Subsystem(OSS) for telecommunication platform.
- Development of tools for SVN log parsing and analysis.

Xidian University August 2013 - January 2016
Researcher *Xi'an, China*

- Research and simulation on circuit switching for on-chip network communication.
- Design an on-chip optical structure for the communication between cores and memory, including the topology, the communication method and the network interface.
- Research on the design and improvement of cache coherence protocol in optical interconnect memory system.

REFEREES

My supervisors:
Prof. Huaxi Gu
State Key Laboratory of Integrated Service Networks, Xidian University
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