SHIXIONG QI

AFFILIATION

Department of Computer Science and Engineering September 2018 - Present
University of California, Riverside

State Key Laboratory of Integrated Service Networks (ISN) September 2015 - June 2018
School of Telecommunications Engineering, Xidian University

EDUCATION

University of California, Riverside
PhD ongoing in Computer Science September 2018 - Present
Overall GPA: 3.80/4

Xidian University, Xi'an, Shaanxi, China
M.S. in Communication & Information Systems September 2015 - June 2018
Overall GPA: 3.71/4 (Ranking 25/284)

Nanjing University of Posts and Telecommunications, Nanjing, Jiangsu, China
B.S. in Electronic Information Engineering September 2011 - July 2015
Overall GPA: 3.69/4 (Ranking 5/97)

PAST RESEARCH INTERESTS

Optical interconnect network for on-chip computing system

- Topology, communication scheme and interface design for core-to-core and core-to-memory communication.
- Design and improvement of cache coherence protocol in optical interconnect memory system.
- Application specific memory system design, processing in memory (PIM).

PUBLICATIONS

Journal

- Lei Huang, Kun Wang, **Shixiong Qi**, Huaxi Gu and Yintang Yang, "Panzer: A 6 x 6 photonic router for Optical Network," IEICE Electronics Express **21**(13), 2016, pp. 20160719 (SCI indexed).
- Kun Wang, **Shixiong Qi**, Zheng Chen, Yintang Yang, Huaxi Gu, SMONoC: A Hierarchical Optical Network-on-Chip Using Statistical Multiplexing Strategy, Optical Switching and Networking, Elsevier(accepted and in press, SCI indexed).
- Jiaxiang Li, Huaxi Gu, **Shixiong Qi**, Haoran Wang,and Kang Wang, ALPHA: A Hybrid Topology for Memory-centric Network, IEICE Electronics Express, 2019 (SCI indexed).

Conference

- **Shixiong Qi**, Huaxi Gu, Haibo Zhang, Yawen Chen, Testudo: A Low Latency and High-Efficient Memory-Centric Network Using Optical Interconnect, Globecom 2017.
- **Shixiong Qi**, Kun Wang, Huaxi Gu, Kang Wang, Xiaolu Wang, "Crosstalk Analysis for Closed Ring-Based Optical Network-on-Chip," 2015 International Conference on Communication Problem-solving (ICCP2015), pp.331-333.

- Lei Huang, **Shixiong Qi**, Kun Wang, Huaxi Gu, "LACE: A Non-Blocking On-Chip Optical Router by Utilizing the Wavelength Routing Technology," 2017 16th International Conference on Optical Communications and Networks (ICOCN). IEEE, 2017.
- Xinglong Diao, Lei Huang, Wei Tan, **Shixiong Qi**, Huaxi Gu, "A Low-Crosstalk Optical Router Using Multi-Layer Coupled MR for ONoC," 2017 16th International Conference on Optical Communications and Networks (ICOCN). IEEE, 2017.

P.R.C. PATENT

- Kun Wang, **Shixiong Qi**, Zheng Chen, Huaxi Gu, Yintang Yang, Long Zhao. An Optical Network-on-Chip System and Communication Scheme based on Statistical Multiplexing Strategy. 2016-03. Application No.201610165497.1
- Lei Huang, Kun Wang, Huaxi Gu, Yintang Yang, **Shixiong Qi**, Wei Tan. A Multi-port Scalable On-chip Optical Router Supporting Multicast Communication. 2016-05. Application No.201610312528.1

HONOURS AND AWARDS

- Second-class scholarship, Nanjing University of Posts and Telecommunications 2012, 2013, 2014
- Excellent Student Award, Nanjing University of Posts and Telecommunications 2013
- First Prize in Jiangsu Province, the National Mathematical Modeling Contest 2013
- Honorable Mention, Mathematical Contest In Modeling 2014
- First-class scholarship, Xidian Univertsity 2015
- Second-class scholarship, Xidian Univertsity 2016
- Excellent Student Award, Xidian University 2016
- National scholarship, Xidian University (Top 3% of 700+) 2017

EXPERIENCE

Xidian University August 2015 - June 2018
Research assistant *Xi'an, China*

- Lead the application for the Opening Foundation of State Key Laboratory of Computer Science by Institute of Computing Technology, Chinese Academy of Sciences.
- Take part in the application for National Natural Science Foundation of China as the main participant.
- Develop the simulation platform for optically connected memory system based on OMNET++ simulator.
- Design interconnection network for the communication between cores and Hybrid Memory Cube (HMC) by using optical interconnect technology, 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.
- Research on the design of on-chip optical router with high scalability.
- Arrange the visiting activity for Prof. P. Pande, Professor in Washington State University.
- Serve as the teaching assistant (TA) in Switching Principle and Technology (Autumn 2016) and Communication Networks Theory (Spring 2017).

University of Otago August 2017
Visiting Student *Dunedin, New Zealand*

- Research on efficient design on Optical Network-on-Chips.

· Develop a C++ based simulator for testing the on-chip multicast communication algorithm, which can realize non-blocking multicast communication between different cores.

REFEREES

Prof. Huaxi Gu
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Dr. Yawen Chen
Department of Computer Science, University of Otago
Email: yawen@cs.otago.ac.nz