SHIXIONG QI

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PERSONAL INFORMATION

Gender: Male
Age: 25
Birth date and place: 10/09/1993, Nanjing, China

AFFILIATION

State Key Laboratory of Integrated Service Networks (ISN) September 2015 - Present
School of Telecommunications Engineering, Xidian University
(Xidian University is one of the top three universities in telecommunication area in China)

EDUCATION

Xidian University, Xi'an, Shaanxi, China
M.S. in Communication & Information Systems September 2015 - Present
Overall GPA: 3.71/4 (Ranking Top 10%)

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 Top 10%)

CURRENT 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 6x6 photonic router for Optical Network," IEICE Electronics Express **21**(13), 2016, pp. 20160719 (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 (accepted and in press).
· **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. (EI indexed)
· Lei Huang, **Shixiong Qi**, Kun Wang, Huaxi Gu, "LACE: A Non-Blocking On-Chip Optical Router by Utilizing the Wavelength Routing Technology," the 16th International Conference on Optical Communications and Networks (accepted and in press)

· Xinglong Diao, Lei Huang, Wei Tan, **Shixiong Qi**, Huaxi Gu, "A Low-Crosstalk Optical Router Using Multi-Layer Coupled MR for ONoC," the 16th International Conference on Optical Communications and Networks (accepted and in press)

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

SUBMITTED PAPERS

· Kun Wang, **Shixiong Qi**, Zheng Chen, Yintang Yang, Huaxi Gu, SMONoC: A Hierarchical Optical Network-on-Chip Using Statistical Multiplexing Strategy, Submitted to Optics Communications, Elsevier.

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 - Present
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 architecture 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.

TECHNICAL STRENGTHS

Computer Languages	C++
Knowledge	Cache coherence protocol, Memory system architecture, Interconnection network, Optical interconnect
Simulation software	OMNET++, Booksim 2.0, Gem5, DRAMSim2, OPNET 14.5, Netrace, Hotspot 5.0
Operating systems	Windows, Linux(Ubuntu)

LANGUAGES

Native: Chinese
English: Fluent

REFEREES

My supervisors:
Prof. Huaxi Gu
State Key Laboratory of Integrated Service Networks, Xidian University
Email: hxgu@xidian.edu.cn