# **BAOHUA YANG**

Basic Info

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## **Technical SKILL**

Years of development experience on computer networking and cloud computing; Love open-souce projects, e.g., OpenStack and OpenvSwitch. Master the fundamental principles of networking and key solutions and unserstand the architecture of cloud datacenters.

- Highly proficient in common language and tools, e.g., C, Python, Java, GCC, Git, Vim.
- Understand the networking architecture and protocols, including the TCP/IP model and tools.
- Extensive knowledge of cloud datacenters, including network virtualization and management.

#### **EDUCATION**

Sep 2007 $\sim$ Jan 2013	Tsinghua University	M.E. and Ph.D. in Computer Networking
Sep 2010 ∼ Sep 2011	UC Berkeley	Visiting Researcher on Computer Science
Aug 2003 $\sim$ July 2007	Tsinghua University	B.E. in Department of Automation

## **EXPERIENCE**

## Researcher and Developer IBM Research China

Jan 2013  $\sim$  present

Design and develop the network solutions and security architecture under network virtualization in new cloud computing platform and Software Defined Networking. Main techniques include typical cloud platforms like OpenStack, and SDN techniques.

**R&D Intern** IBM Research China July ∼ Dec 2012

Design new SDN scalable Control architecture to overcome the performance bottleneck problem. Hack the core code in OpenvSwitch and Floodlight to implement the platform.

Visiting Scholar UC Berkeley

Sep 2010 ∼ Sep 2011

Research on network management problems with OpenFlow/NOX under the supervision of Prof. Scott Shenker. Proposed a new routing mechanism to guarantee failure resilience. Wrote 2 papers (1 in IEEE INFOCOM and 1 in ACM HotNets).

**R&D Staff** Tsinghua University Aug 2007 ∼ Oct 2009

Work on the 863 Program. Design core modules in router and firewall. Several papers were published (1 in ACM ANCS and 1 in IEEE Transactions on Computers).

## **SELECTED HONOR AND AWARD**

IBM Ph.D. Fellowship Awards IBM Corporation 2011 9 winners in China

First Class Scholarship Tsinghua Univ. 2006, 2009, 2011 Top 5%

Best Paper Award 3rd ICNS 2007

## **PATENT**

Published 8 patents on Cloud Computing, Software Defined Networking, security and traffic processing.

## **SELECTED PUBLICATION**

- Keep Forwarding: Towards K-link Failure Resilient Routing
   Baohua Yang, Junda Liu, Scott Shenker, Jun Li and Kai Zheng, 33rd IEEE International Conference on Computer Communications (INFOCOM 2014), Toronto, Canada, April 2014.
- Practical Multi-tuple Packet Classification using Dynamic Discrete Bit Selection
  Baohua Yang, Jeffrey Fong, Weirong Jiang, Yibo Xue and Jun Li, *IEEE Transactions on Computers*, pp 424-434, Vol. 63, No. 2, Feb 2014.
- Data-Driven Network Connectivity
   Junda Liu, Baohua Yang, Scott Shenker and Michael Schapira, 10th ACM Workshop on Hot Topics in Networks (HotNets-X), Cambridge, MA, November 2011.
- SMILER: Towards Practical Online Traffic Classification
   Baohua Yang, Guangdong Hou, Lingyun Ruan, Yibo Xue and Jun Li, 7th ACM/IEEE Symposium on Architectures for Networking and Communications Systems (ANCS 2011), Brooklyn, NY, October 2011.
- DFC: Towards Effective Feedback Flow Management for Datacenters

  Baohua Yang, Guodong Li, Yaxuan Qi, Yibo Xue and Jun Li, 9th International Conference on Grid and Cloud Computing (GCC 2010), Nanjing, China, Novermber 2010.
- Scalable NIDS via Negative Pattern Matching and Exclusive Matching
  Kai Zheng, Xin Zhang, Zhiping Cai, Zhijun Wang and Baohua Yang, 29th IEEE International
  Conference on Computer Communications (INFOCOM 2010), San Diego, CA, USA, March
  2010.(acceptance rate=17.5%)
- DBS: A Bit-level Heuristic Packet classification Algorithm for High Speed Network
  Baohua Yang, Xiang Wang, Yibo Xue and Jun Li, 15th IEEE International Conference on Parallel and Distributed System (ICPADS 2009), Shenzhen, China, December 2009.(acceptance rate=28.8%)
- Packet Classification Algorithms: From Theory to Practice
   Yaxuan Qi, Lianghong Xu, Baohua Yang, Yibo Xue and Jun Li, 28th IEEE International Conference on Computer Communications (INFOCOM 2009), Rio de Janeiro, Brazil, April 2009.(acceptance rate=19.7%)