BAOHUA YANG

PRESENT ADDRESS
Room 3-421, FIT Building
Tsinghua University
Beijing, China, 100084

CONTACT INFORMATION
(+86) 010-6277-2656
ybh07@mails.tsinghua.edu.cn
security.riit.tsinghua.edu.cn/∼bhyang

EDUCATION

Sep 2007 - Jan 2013	**Tsinghua University**, Beijing, China
	M.E. and Ph.D. in Control Science and Engineering
Sep 2010 - Sep 2011	**UC Berkeley**, CA 94720, United States
	Visiting Researcher on Computer Science
Aug 2003 - July 2007	**Tsinghua University**, Beijing, China
	B.E. in Department of Automation

RESEARCH INTEREST

Algorithmic, optimization and performance issues in computer networking and architecture.
Key problems in traffic control and network management, e.g., classification and identification;
New techniques in Data Center Networking and Software Defined Networking;

EXPERIENCE

Visiting Researcher	**EECS, UC Berkeley**	Sep 2010 ∼ Sep 2011
	Berkeley, CA 94720	

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 two papers (One is already published in ACM HotNets.).

R&D Researcher	**IBM China Research Lab**	July ∼ Dec 2008
	Beijing, China, 100094	

Design high-performance packet classification and pattern matching algorithms with Mentor Kai Zheng. A paper on pattern matching was published on IEEE INFOCOM.

R&D Researcher	**Tsinghua University**	Aug 2007 ∼ Oct 2009
	Beijing, China, 100084	

Work on 863 Program (2007AA01Z468). Design core modules in router and firewall. Several papers were published.

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	

COMPUTER SKILL

- Highly proficient in C/C++, Python, Java, etc.
- Proficient in development tools like GCC/VC, VIM, Eclipse, Git, etc.
- Extensive knowledge of operating systems: Unix/Linux, Windows

PATENT

A System for Multi-field Packet Classification (China Patent CN101714948A)
Baohua Yang, Yibo Xue, Jun Li, May 2010.

A System for Network Protocol Identification based on Semi-supervised Learning (China Patent CN102611706A)
Baohua Yang, Jun Li, April 2012.

RECENT PUBLICATION

- **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* (to appear).

- **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, Novermber 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%)

- **Towards High-performance Network Intrusion Prevention System on Multi-core Network Service Processor**
  Xiang Wang, Yaxuan Qi, Baohua Yang, Yibo Xue and Jun Li, *15th IEEE International Conference on Parallel and Distributed System* (*ICPADS 2009*), Shenzhen, China, December 2009.(acceptance rate=28.8%)

- **Bitmap data structure: Towards high-performance network algorithms designing**
  Baohua Yang, Yaxuan Qi, Yibo Xue and Jun Li, *Computer Engineering and Application*, Vol. 45, no.15, pp. 1-5, May 2009.

- **Discrete Bit Selection: Towards a Bit-level Heuristic Framework for Multi-dimensional Packet Classification**
  Baohua Yang, Yaxuan Qi, Fe He, Yibo Xue and Jun Li, *28th IEEE International Conference on Computer Communications* (*INFOCOM 2009*) workshop, Rio de Janeiro, Brazil, April 2009.

- **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%)

- **Towards Effective Network Algorithms on Multi-core Network Processors**
  Yaxuan Qi, Zongwei Zhou, Baohua Yang, Fei He, Yibo Xue and Jun Li, *4th ACM/IEEE Symposium on Architectures for Networking and Communications Systems* (*ANCS 2008*) short paper, May 2008.(acceptance rate=25.4%)

- **Towards High-performance Flow-level Packet Processing on Multi-core Network Processors**
  Yaxuan Qi, Bo Xu, Fei He, Baohua Yang, Jianming Yu and Jun Li, *3rd ACM/IEEE Symposium on Architectures for Networking and Communications Systems* (*ANCS 2007*), July 2007.(acceptance rate=28.5%)

- **Towards System-level Optimization for High Performance Unified Threat Management**
  Yaxuan Qi, Baohua Yang, Bo Xu, and Jun Li, *3rd International Conference on Networking and Services* (*ICNS 2007*), Athens, June 2007.(acceptance rate=32%)