

## YI ZHANG

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### EDUCATION Duke University, Durham, NC

Ph.D. in Computer Science

May 2012

M.S. in Computer Science

December 2009

Advisor: Dr. Jun Yang Cumulative GPA: 3.98/4.00

**Tsinghua University**, Beijing, China

B.E. in Computer Software, *summa cum laude*

July 2006

Cumulative GPA: 3.89/4.00

**PUBLICATIONS** Yi Zhang and Jun Yang. I/O and Data Layout Optimization for Big Array Analytics. Technical report, Duke University, February 2012.

Yi Zhang and Jun Yang. Optimizing I/O for Big Array Analytics. In *Proceedings of the 38th International Conference on Very Large Data Bases (VLDB 2012)*, to appear, Istanbul, Turkey, August 2012.

Yi Zhang, Kristian Lum, and Jun Yang. Failure-Aware Cascaded Suppression in Wireless Sensor Networks. *IEEE Transaction on Knowledge and Data Engineering (TKDE)*, in print, 2012.

Yi Zhang, Kamesh Munagala, and Jun Yang. Storing Matrices on Disk: Theory and Practice Revisited. In *Proceedings of the 37th International Conference on Very Large Data Bases (VLDB 2011)*, Seattle, Washington, USA, August 2011.

Yi Zhang, Weiping Zhang, and Jun Yang. I/O-Efficient Statistical Computing with RIOT. In *Proceedings of the 26th IEEE International Conference on Data Engineering (ICDE 2010)*, Long Beach, California, USA, March 2010.

Zhengyuan Zhu, Jun Yang, Yi Zhang, and Xuanlong Nguyen. Optimal Design of Sensor Networks Under Communication and Energy Budget Constraints. In *the 2009 Joint Statistical Meetings (JMS 2009)*, Washington, DC, USA, August 2009. Poster.

Yi Zhang, Herodotos Herodotou, and Jun Yang. RIOT: I/O-Efficient Numerical Computing without SQL. In *Proceedings of the 4th Biennial Conference on Innovative Data Systems Research (CIDR 2009)*, Asilomar, California, USA, January 2009.

**RESEARCH** Research Assistant, Department of Computer Science, Duke University

2008–2011

**EXPERIENCE** Designed and implemented RIOT, a system that transparently brings I/O efficiency to data-intensive statistical computing with the R language. Achieved more than 2X speedup than MATLAB and 30X speedup than a scientific database.

Research Assistant, Department of Computer Science, Duke University

2007–2008

Designed and implemented a failure-aware model-based spatiotemporal suppression scheme for data collection in wireless sensor networks.

**WORK** RSDE Intern, Microsoft Jim Gray Systems Lab, Madison, WI

05/2010–08/2010

**EXPERIENCE** Designed and implemented a data movement optimizer for the Microsoft SQL Server Parallel Data Warehouse; achieved up to 4X speedup in query execution.

IT Consultant, International Society for Bayesian Analysis, Durham, NC

06/2009–07/2009

Created a web-based membership management system.

Intern, Spirent Communications, Raleigh, NC

06/2007–08/2007

Designed and implemented 1) a test specification mapping and viewing tool and 2) an interactive test trace visualizer.

	Intern, Xiamen Municipal Bureau of Finance, Fujian, China Lead a team and developed a fixed-asset inventory management system.	07/2005–08/2005
AWARDS AND HONORS	CIDR Student Scholarship Duke University Graduate Fellowship <i>summa cum laude</i> Graduate of Tsinghua University <i>summa cum laude</i> Graduate of Beijing The Highest Comprehensive Excellence Scholarship of Tsinghua University HP Distinguished Chinese Student Scholarship Outstanding Student Award of Beijing National First-Class Scholarship of China Freshman Scholarship of Tsinghua University	2009 2006–2008 2006 2006 2005 2004 2004 2003 2002
SKILLS	Programming Languages: C, C++, Java, C#, R, Python, Ruby Web Development: HTML/CSS, ASP.NET, PHP, JSP Operating Systems: Linux, Windows, Solaris	
COURSES	Design and Analysis of Algorithms, Computational Complexity, Advanced Database Systems, Information Management and Mining, Artificial Intelligence, Probability and Statistical Modeling, Wireless Networking and Mobile Computing, Sensor Networks for Environmental Monitoring, Sensor Data Processing, Computational Economics, Advanced Computer Architecture	
TEACHING EXPERIENCE	Teaching assistant for CPS116 <i>Introduction to Database Systems</i> Teaching assistant for CPS1 <i>Principles of Computer Science</i>	Fall 2007 Spring 2007
PROFESSIONAL SERVICE	Reviewer for International Journal of Data Engineering (IJDE) External reviewer for SIGMOD External reviewer for VLDB External reviewer for ICDE External reviewer for EDBT External reviewer for Middleware External reviewer for WAIM	2011 2008, 2009 2008, 2010 2009 2010 2009 2008
UNIVERSITY SERVICE	Arts and Sciences Committee on Information Science and Technology, Duke University Vice President, Student Science and Technology Association, School of Software, Tsinghua University	2008–2009 2005–2006