JINGYUE WU

1600 Amphitheater Parkway, Mountain View, CA 94043

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WORK EXPERIENCE

Google, Inc   Jan 2014 – present
Software Engineer   *1600 Amphitheater Parkway, Mountain View, CA 94043*

· Building an open-source GPU compiler
· Optimizing the performance of the GPU compiler

Facebook, Inc   Jun 2012 – Sep 2012
Software Engineer Intern   *1601 Willow Rd, Menlo Park, CA 94025*

· Designed and implemented the linear scan register allocation algorithm in the HipHop compiler.
· Optimized register usage with rematerialization, register coalescing, pre-coloring, and callee-saved registers.
· Optimized the reference counting in the HipHop compiler.

Microsoft Research   May 2010 – August 2010
Research Intern   *1288 Pear Ave, Mountain View, CA 94043*

· Designed and implemented a tool that predicts performance metrics of DryadLINQ tasks.

EDUCATION

Columbia University   Sep 2008 – October 2014
Ph.D. in Computer Science   *116th Street and Broadway, New York, NY 10027*
Adviced by Junfeng Yang

Tsinghua University   Sep 2004 – July 2008
B.E. in Computer Science   *30 Shuang Qing Lu, Beijing 100084, China*
Andrew Yao's CS Pilot Class (only 25 of all undergraduates at Tsinghua selected)

REFEREED PUBLICATIONS

Determinism Is Not Enough: Making Parallel Programs Reliable with Stable Multithreading
Junfeng Yang, Heming Cui, Jingyue Wu, Yang Tang, Gang Hu   *2013*

· Communications of the ACM (2013)

Determinism Is Overrated: What Really Makes Multithreaded Programs Hard to Get Right and What Can Be Done About It
Junfeng Yang, Heming Cui, Jingyue Wu   *Jun, 2013*

· 5th USENIX Workshop on Hot Topics in Parallelism (HotPar '13)

Effective Dynamic Detection of Alias Analysis Errors
Jingyue Wu, Gang Hu, Yang Tang, Junfeng Yang   *August, 2013*

· Nineth Joint Meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE '13). (acceptance rate: 20%, 51/251)

Verifying Systems Rules Using Rule-Directed Symbolic Execution

Gang Hu, Heming Cui, Jingyue Wu, Junfeng Yang   *March, 2013*

· Eighteenth International Conference on Architecture Support for Programming Languages and Operating Systems (ASPLOS '13). (acceptance rate: 23%)

Sound and Precise Analysis of Multithreaded Programs through Schedule Specialization

Jingyue Wu, Yang Tang, Gang Hu, Heming Cui, Junfeng Yang   *June, 2012*

· Proceedings of the 2012 ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI '12). (acceptance rate: 18.8%, 48/255)

Efficient Deterministic Multithreading through Schedule Relaxation

Heming Cui, Jingyue Wu, John Gallagher, Huayang Guo, Junfeng Yang   *October, 2011*

· Proceedings of the 23rd ACM Symposium on Operating Systems Principles (SOSP '11). (acceptance rate: 18.3%, 28/153)

Optimizing Data Partitioning for Data-Parallel Computing

Qifa Ke, Vijayan Prabhakaran, Yinglian Xie, Yuan Yu, Jingyue Wu, Junfeng Yang   *May, 2011*

· 13th Workshop on Hot Topics in Operating Systems (HotOS '11)

Bypassing Races in Live Applications with Execution Filters

Jingyue Wu, Heming Cui, Junfeng Yang   *October, 2010*

· Proceedings of the Ninth Symposium on Operating Systems Design and Implementation (OSDI '10). (acceptance rate: 16.1%, 32/199)

Stable Deterministic Multithreading Through Schedule Memoization

Heming Cui, Jingyue Wu, Chia-Che Tsai, Junfeng Yang   *October, 2010*

· Proceedings of the Ninth Symposium on Operating Systems Design and Implementation (OSDI '10). (acceptance rate: 16.1%, 32/199)

PATENTS

Optimizing Data Partitioning for Data-Parallel Computing

Qifa Ke, Vijayan Prabhakaran, Yinglian Xie, Yuan Yu, Jingyue Wu, Junfeng Yang

· US 20130152057 A1, filed December 13, 2011, and issued June 13, 2013.

Methods, Systems, and Media for Providing Determinism in Multithreaded Programs

Junfeng Yang, Heming Cui, Jingyue Wu

· US 20120102470 A1, filed July 25, 2011, and issued April 26, 2012

Methods, Systems, and Media for Protecting Applications from Races

Junfeng Yang, Heming Cui, Jingyue Wu

· US 20120096449 A1, filed July 22, 2011, and issued April 19, 2012

CONFERENCE PRESENTATIONS

Effective Dynamic Detection of Alias Analysis Errors. The 9th Joint Meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE 13), Saint Petersburg, Russia. August, 2013

Sound and Precise Analysis of Multithreaded Programs through Schedule Specialization. The 2012 ACM SIGPLAN Conference on Programming Language Design and Implementation, Beijing, China. June, 2012.

Bypassing Races in Live Applications with Execution Filters. 9th Symposium on Operating Systems Design and Implementation, Vancouver, Canada. October, 2010.

AWARDS

Paul Charles Michelman Memorial Award for Exemplary Service to the CS Department	2012
Service Award in the CS Department	2011 − 2012
2nd place at the 2011 ACM/ICPC Great New York Regional Contest (as coach)	2011
3rd place at the 2010 ACM/ICPC Great New York Regional Contest (as coach)	2011
OSDI '10 Student Traval Award	2010
36th place at the 2010 ACM/ICPC World Finals	2010
2nd place the at 2009 ACM/ICPC Great New York Regional Contest	2009
19th place at the 2006 ACM/ICPC World Finals	2006
1st place at the 2005 ACM Asia Programming Contest in Chengdu	2005
Tsinghua Outstanding Scholarship for Undergraduates	2004 − 2007
5th place at the 2003 China National Olympiad in Informatics (NOI 2003)	2003

SERVICES

Program Committee for 2015 International Symposium on Code Generation and Optimization	2014
Shadow Program Committee for the 23rd USENIX Security Symposium	2014
Coach for the programming contest team at Columbia University	2011 − 2012
Coach for China Team participating the 2005 International Olympiad in Informatics	2004 − 2005

TECHNICAL STRENGTHS

Programming Languages	C/C++ (expert), Java (proficient), Python (proficient)
	PHP (prior experience), C# (prior experience)
Software	Vim, Eclipse, Makefile, SVN, Git