

Hanjun Kim

Curriculum Vitae

CONTACT INFORMATION

Department of Creative IT Engineering
Postech
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EDUCATION

Princeton University, Princeton, NJ
Ph.D. in Computer Science, September 2013
Thesis: "ASAP: Automatic Speculative Acyclic Parallelization for Clusters,"
Advisor: Prof. David I. August
M.A. in Computer Science, April 2009
Advisor: Prof. David I. August
Seoul National University, Seoul, Republic of Korea
Bachelor of Science in Electrical Engineering, June 2007
Thesis: "Design and Implementation of XCP Network Analyzer"
Advisor: Prof. Wook Hyun Kwon
Bachelor of Business Administration, June 2007
Thesis: "Case study: iRiver"
Advisor: Prof. Jungsuk Oh

EXPERIENCE

Assistant Professor, July 2013 to present
Department of Creative IT Engineering and Department of Computer Science, Postech, South Korea
Research Intern, June 2011 - September 2011
Intel Labs, Santa Clara, CA
Research Intern, July 2009 - August 2009
IBM Tokyo Research Laboratory, Japan
Research Intern, June 2009
Parakinetics, Princeton, NJ
Software Developer, January 2004 - November 2005
Army Computer Center, Headquarters of ROK Army
Programmer, July 2003 - August 2003
Mamurian Design, Seoul, Republic of Korea

RECOGNITION

- Appointed as a Siebel Scholar based on academic achievement and excellence by the Siebel Scholars Foundation, 2012
- Awarded the Intel Corporation PhD Fellowship for pursuing leading-edge work in fields related to Intel's business and research interests, 2012
- Highest ranked paper in double-blind review process at the 43rd IEEE/ACM International Symposium on Microarchitecture (MICRO), 2010
- "Addressing the Multicore Problem" selected among the top innovations with commercial potential at the 4th Annual Innovation Forum held by the Keller Center for Innovation in Engineering Education, 2009
- Princeton University Graduate Fellowship, 2007-2008
- Grand Prize for embedded mobile messenger on XScale PXA255 at Embedded Software Contest hosted by Ministry of Information and Communication, Republic of Korea, December 2003

- Best Design Award, 2002 Samsung-SNU Digital ASIC Design course with Video game on ALTERA FPGA, July 2002

ACTIVITIES

PAPER SUBMISSION CHAIR

- The 42nd Annual IEEE/ACM International Symposium on Microarchitecture (MICRO), 2009.

TALKS

- “ASAP: Automatic Speculative Acyclic Parallelization on Clusters” presented at the SIGCS Winter Workshop, Korea, January 2014.
- “ASAP: Automatic Speculative Acyclic Parallelization on Clusters” presented at SungKyunKwan University, Samsung Electronics, and Postech, December 2011 - January 2012.
- “Speculative Parallelization Using Software Multi-threaded Transactions,” presented at IBM Tokyo Research Laboratory, July 2009.

TEACHING

- CSED 423: Compiler Design
Fall 2013
- CITE 202: Creative IT Design II
Fall 2013

STUDENTS

CURRENT GRADUATE STUDENTS

Kyoungju Sim (year 2), Hyunjoon Park (year 1)

PUBLICATIONS

BOOK CHAPTERS

- [1] David I. August, Jialu Huang, Thomas B. Jablin, Hanjun Kim, Thomas R. Mason, Prakash Prabhu, Arun Raman, and Yun Zhang, “Automatic Extraction of Parallelism from Sequential Code,” in *Fundamentals of Multicore Software Development* edited by Ali-Reza Adl-Tabatabai, Chapman Hall / CRC Press, December 2011. (ISBN: 978-1439812730)

REFEREED JOURNAL PUBLICATIONS

- [2] Junwon Jang, Soohee Han, Hanjun Kim, Choon Ki Ahn, and Wook Hyun Kwon, “Rapid control prototyping for robot soccer,” in *Robotica*, 27 : 1091-1102 Cambridge University Press , 2009.

REFEREED CONFERENCE PUBLICATIONS

- [3] Taewook Oh, Hanjun Kim, Nick P. Johnson, Jae W. Lee, and David I. August, “Practical Automatic Loop Specialization,” in *Proceedings of the Eighteenth International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS)*, March 2013.
- [4] Nick P. Johnson, Hanjun Kim, Prakash Prabhu, Ayal Zaks, and David I. August, “Speculative Separation for Privatization and Reductions,” in *Proceedings of the 33rd ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI)*, June 2012.
- [5] Hanjun Kim, Nick P. Johnson, Jae W. Lee, Scott A. Mahlke, and David I. August, “Automatic Speculative DOALL for Clusters,” in *Proceedings of the 2012 International Symposium on Code Generation and Optimization (CGO)*, March 2012.

- [6] Prakash Prabhu, Thomas B. Jablin, Arun Raman, Yun Zhang, Jialu Huang, Hanjun Kim, Nick P. Johnson, Feng Liu, Soumyadeep Ghosh, Stephen Beard, Taewook Oh, Matthew Zoufaly, David Walker, and David I. August, “A Survey of the Practice of Computational Science,” in *Proceedings of the 24th ACM/IEEE Conference on High Performance Computing, Networking, Storage and Analysis (SC)*, November 2011.
- [7] Arun Raman, Hanjun Kim, Taewook Oh, Jae W. Lee, and David I. August, “Parallelism Orchestration using DoPE: the Degree of Parallelism Executive,” in *Proceedings of the 32nd ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI)*, June 2011.
- [8] Hanjun Kim, Arun Raman, Feng Liu, Jae W. Lee, and David I. August, “Scalable Speculative Parallelization on Commodity Clusters,” in *Proceedings of the 43rd IEEE/ACM International Symposium on Microarchitecture (MICRO)*, December 2010.
Highest ranked paper in double-blind review process.
- [9] Arun Raman, Hanjun Kim, Thomas R. Mason, Thomas B. Jablin, and David I. August, “Speculative Parallelization Using Software Multi-threaded Transactions,” in *Proceedings of the Fifteenth International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS)*, March 2010.

REFEREED WORKSHOP PUBLICATIONS

- [10] Thomas B. Jablin, Yun Zhang, James A. Jablin, Jialu Huang, Hanjun Kim, and David I. August, “Liberty Queues for EPIC Architectures,” in *Proceedings of the Eighth Workshop on Explicitly Parallel Instruction Computer Architectures and Compiler Technology (EPIC)*, April 2010.

OTHER PUBLICATIONS

- [11] Hanjun Kim, “ASAP: Automatic Speculative Acyclic Parallelization for Clusters,” Ph.D. Dissertation, Princeton University, September 2013.