

Jongse Park

- CONTACT INFORMATION** School of Computer Science
Georgia Institute of Technology
266 Ferst Drive, KACB 2201
Atlanta GA 30332-0765
Mobile: +1-404-316-8506
E-mail: jspark@gatech.edu
URL: cc.gatech.edu/~jpark632
- RESEARCH INTERESTS** Computer architecture, domain-specific hardware acceleration, approximate computing technologies, programming languages, distributed and virtualized systems, machine learning.
- EDUCATION** **Georgia Institute of Technology**, Atlanta, GA, United States
Ph.D., Computer Science, 2013.8–date
 - Advisor: Prof. Hadi Esmaeilzadeh**Korea Advanced Institution of Science and Technology (KAIST)**, Daejeon, South Korea
M.S., Computer Science, Feb 2012
 - Thesis: *Dynamic Resource Reconfiguration on the Cloud for Improving Data Locality*
 - Advisor: Prof. Seungryoul Maeng and Prof. Jaehyuk Huh
 - GPA: 3.71/4.30 (93.4%)**Sogang University**, Seoul, South Korea
B.E., Computer Science and Engineering, Feb 2010
 - GPA: 3.74/4.30 (93.4%)
 - Graduated with Honors
- HONORS AND AWARDS** **Distinguished paper award.** IEEE Symposium on High Performance Computer Architecture. 2016
“TABLA: A Unified Template-Based Framework for Accelerating Statistical Machine Learning”
Paper selected for **IEEE Micro Top Picks** from the 2014 Computer Architecture Conferences. 2015
“General-Purpose Code Acceleration with Limited-Precision Analog Computation”
Kwanjeong Foundation Scholarship, Kwanjeong Educational Foundation (KEF) 2013–2017
National Full Scholarship, KAIST 2010–2012
Dean’s Honored Graduate, Ranked 3rd among graduates of the class of 2010 2010
DMC General Management Track Scholarship, Samsung Electronics Co., Ltd 2009
Academic Scholarship, Sogang University, 7 semesters 2004–2009
- PUBLICATIONS**
18. **J. Park**, E. Amaro, D. Mahajan, B. Thwaites, H. Esmaeilzadeh, “AXGAMES: Towards Crowdsourcing Quality Target Determination in Approximate Computing,” in *International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS)*, April 2016.
 17. H. Sharma, **J. Park**, D. Mahajan, E. Amaro, J. Kim, C. Shao, A. Mishra, H. Esmaeilzadeh “From High-Level Deep Neural Models to FPGAs,” in *The 49th Annual IEEE/ACM International Symposium on Microarchitecture (MICRO)*, October 2016.
 16. D. Mahajan, **J. Park**, E. Amaro, H. Sharma, A. Yazdanbaksh, J. Kim, H. Esmaeilzadeh, “TABLA: A Unified Template-based Framework for Accelerating Statistical Machine Learning,” in *The 22nd IEEE Symposium on High Performance Computer Architecture (HPCA)*, March 2016.
Distinguished Paper Award
 15. D. Mahajan, A. Yazdanbaksh, **J. Park**, B. Thwaites, H. Esmaeilzadeh, “Towards Statistical Guarantees in Controlling Quality Tradeoffs in Approximate Acceleration,” in *International Symposium on Computer Architecture (ISCA)*, June 2016.

14. H. Sharma, **J. Park**, E. Amaro, B. Thwaites, P. Kotha, A. Gupta, J. Kim, A. Mishra, H. Esmaeilzadeh, “DNNWEAVER: From High-Level Deep Network Models to FPGA Acceleration,” in *The Second Workshop on Cognitive Architectures (CogArch) in conjunction with ASPLOS*, April 2016.
13. A. Yazdanbakhsh, **J. Park**, H. Sharma, P. Lotfi-Kamran, H. Esmaeilzadeh, “Neural Acceleration for GPU Throughput Processors,” in *The 48th Annual IEEE/ACM International Symposium on Microarchitecture (MICRO)*, December 2015.
12. **J. Park**, H. Esmaeilzadeh, X. Zhang, M. Naik, W. Harris, “FLEXJAVA: Language Support for Safe and Modular Approximate Programming,” in *The 10th Joint Meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering (FSE)*, September 2015.
11. D. Mahajan, K. Ramkrishnan, R. Jariwala, A. Yazdanbakhsh, **J. Park**, B. Thwaites, A. Nagendrakumar, A. Rahimi, H. Esmaeilzadeh, K. Bazargan, “AXILOG: Abstractions for Approximate Hardware Design and Reuse,” in *IEEE Micro, special issue on Alternative Computing Designs and Technologies*, 2015.
10. D. Mahajan, A. Yazdanbakhsh, **J. Park**, B. Thwaites, H. Esmaeilzadeh, “Prediction-Based Quality Control for Approximate Accelerators,” in *The Second Workshop on Approximate Computing Across the System Stack (WACAS) in conjunction with ASPLOS*, March 2015.
9. **J. Park**, H. Esmaeilzadeh, X. Zhang, M. Naik, B. Harris, “FLEXJAVA: Language Support for Safe and Modular Approximate Programming,” in *The First Student Computer Architecture Symposium at Georgia Tech (ArchiTECH)*, April 2015. **Best Poster Award**
8. A. Yazdanbakhsh, D. Mahajan, B. Thwaites, **J. Park**, A. Nagendrakumar, S. Sethuraman, K. Ramkrishnan, N. Ravindran, R. Jariwala, A. Rahimi, H. Esmaeilzadeh, K. Bazargan, “AXILOG: Language Support for Approximate Hardware Design,” in *Design Automation and Test in Europe (DATE)*, March 2015.
7. R. S. Amant, A. Yazdanbakhsh, **J. Park**, B. Thwaites, H. Esmaeilzadeh, A. Hassibi, L. Ceze, D. Burger, “General-Purpose Code Acceleration with Limited-Precision Analog Computation,” in *The 41th International Symposium on Computer Architecture (ISCA)*, June 2014. **(nominated for CACM Research Highlights and IEEE Micro Top Picks Honorable Mention)**
6. B. Thwaites, G. Pekhimenko, A. Yazdanbakhsh, **J. Park**, G. Mururu, H. Esmaeilzadeh, O. Mutlu, T. Mowry, “Rollback-Free Value Prediction with Approximate Loads,” in *The 24th International Conference on Parallel Architectures and Compilation Techniques (PACT)*, August 2014.
5. **J. Park**, K. Ni, X. Zhang, H. Esmaeilzadeh, M. Naik, “Expectation-Oriented Framework for Automating Approximate Programming,” in *The First Workshop on Approximate Computing Across the System Stack (WACAS) in conjunction with ASPLOS*, March 2014.
4. A. Yazdanbakhsh, B. Thwaites, **J. Park**, H. Esmaeilzadeh, “Methodical Approximate Hardware Design and Reuse,” in *The First Workshop on Approximate Computing Across the System Stack (WACAS) in conjunction with ASPLOS*, March 2014.
3. A. Yazdanbakhsh, R. Amant, B. Thwaites, **J. Park**, H. Esmaeilzadeh, A. Hassibi, L. Ceze, D. Burger, “Toward General-Purpose Code Acceleration with Analog Computation,” in *The First Workshop on Approximate Computing Across the System Stack (WACAS) in conjunction with ASPLOS*, March 2014.
2. J. Choi, **J. Park**, J. Seol, and S. Maeng, “Isolated Mini-domain for Trusted Cloud Computing,” in *The 13th International Symposium on Cluster, Cloud, and Grid Computing (CCGrid)*, May 2013.
1. **J. Park**, D. Lee, B. Kim, J. Huh, S. Maeng, “Locality-aware Dynamic VM Reconfiguration on MapReduce Clouds,” in *The 21st International ACM Symposium on High-Performance Parallel and Distributed Computing (HPDC)*, June 2012.

RESEARCH EXPERIENCE	<p>Research assistant, Alternative Computing Technology (ACT) Lab Georgia Institute of Technology Advisor: Dr. Hadi Esmaeilzadeh</p> <p>Research intern NVIDIA Research</p> <p>Research intern, Catapult team Microsoft Research Mentor: Dr. Eric Chung</p> <p>Research assistant, Computer Architecture (CA) Lab Korea Advanced Institute of Science and Technology (KAIST) Advisor: Dr. Seungryoul Maeng and Dr. Jaehyuk Huh</p>	<p>2013–present</p> <p>Summer 2017</p> <p>Spring 2016</p> <p>2010–2013</p>
TEACHING EXPERIENCE	<p>Teaching assistant</p> <ul style="list-style-type: none"> • CS3220: Processor Design. Georgia Institute of Technology • CS3220: Processor Design. Georgia Institute of Technology • CS8803: Alternative Computing Technology. Georgia Institute of Technology • CS211: Digital System and Lab. KAIST • CS311: Embedded Computer Systems. KAIST 	<p>Fall 2016</p> <p>Fall 2014</p> <p>Spring 2014</p> <p>Spring 2011</p> <p>Fall 2010</p>
TECHNICAL SKILLS	<p>Programming language: Python, Java, C/C++, Bash, Verilog, JavaScript, HTML</p> <p>Development Tools: Spark, Hadoop, Chord, LLVM</p>	