Fei Gao

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Engineering Quadrangle F2A4, 41 Olden St, Princeton, NJ 08544

Education

Ph.D. Candidate in Electrical Engineering *5/2019 - Present*
Princeton University, Princeton, NJ, USA
Advisor: Prof. David Wentzlaff

M.S. in Electrical Engineering *9/2017 - 5/2019*
Princeton University, Princeton, NJ, USA

B.S. in Microelectronics *9/2013 - 7/2017*
Tsinghua University, Beijing, China
Rank: 2/25, GPA: 94.1/100
Minor in Business Management

Publications

Fei Gao, Georgios Tziantzioulis, and David Wentzlaff, **"ComputeDRAM: In-Memory Compute Using Off-the-Shelf DRAMs"**, In Proceedings of the 52nd International Symposium on Microarchitecture (MICRO-52), October 2019, Columbus, Ohio, USA. (to appear)

Jonathan Balkind, Michael Schaffner, Katie Lim, Florian Zaruba, Fei Gao, Jinzheng Tu, David Wentzlaff, and Luca Benini, **"OpenPiton+Ariane: The First Open-Source, SMP Linux-booting RISC-V System Scaling From One to Many Cores"**, presented at the Workshops at Third Workshop on Computer Architecture Research with RISC-V (CARRV'19), June 2019, Phoenix, AZ, USA.

Research Experience & Selected Course Projects

In-Memory Compute Using Off-the-Shelf DRAMs *7/2018 - Present*
Supervised by Prof. David Wentzlaff

Add RISC-V Atomic Operation Support to OpenPiton Many-Core Processor *4/2019 - 5/2019*
Supervised by Prof. David Wentzlaff

Evaluate Different Cache Replacement Policies on OpenPiton *3/2018 - 5/2018*
Supervised by Prof. David Wentzlaff

Implementation and Evaluation of An In-Cache Hardware Transactional Memory Based on OpenPiton *12/2017 - 2/2018*
Supervised by Prof. David Wentzlaff

Parallel Markov Chain Monte Carlo(MCMC) Sampling Architecture for Bayesian Learning *7/2017 - 10/2016*
Supervised by Prof. Yangdong Deng

Accelerator for Sparse Matrix Computing *7/2016 - 9/2016*
Supervised by Prof. Trevor Mudge

Dedicated Processor for Spiking Neural Networks(SNN) *5/2016 - 9/2015*
Supervised by Prof. Yangdong Deng

GPU Acceleration for Light-Field Reconstruction *7/2015 - 9/2015*
Supervised by Prof. Yangdong Deng

Professional Skills

Language: Native Speaker of Mandarin, English.

Programming: C/C++, Verilog HDL, Matlab, Python, LaTeX, bash, Git, CUDA.

Awards and Honors

TP-LINK Scholarship *10/2016*

Scholarship of Academic Excellence, Tsinghua University *10/2015*

Scholarship of Academic Excellence, Tsinghua University *10/2014*

First Prize of the 31st National Undergrad. Physics Contest *12/2014*