Zhipeng Wei

No.6 Kexueyuan South Road, Haidian District, Beijing, China, 100190

+86 132 6993 9113 • zhipengwei.w@gmail.com
http://zhipengwei.github.io

EDUCATION

University of Chinese Academy of Sciences **Beijing**
Master of Science, Computer Architecture *2012 – Present*
  Advisor: Prof. Mingyu Chen

Huazhong University of Science and Technology **Wuhan**
Bachelor of Engineering, Computer Science and Technology *2008 – 2012*
  Major GPA: 87.07

RESEARCH EXPERIENCES

Research Center of Advanced Computing System **Beijing**
Research Assistant

Cache Balance Aware Page Placement Policy *07/2014 – Present*

- Studied cache replacement policies;
- Evaluated cache set balance on Intel Nehalem processor using SPEC CPU2006;
- Cracked the hash function Intel's Sandy Bridge uses to distribute physical addresses across all cache slices.

Kernel SamePage Merging (KSM) Optimization based on HMTT *03/2013 – 10/2013*

- Studied the existing implementation of KSM;
- Implemented the mechanism to feed back physical page reference characteristics to the OS;

HMTT: A Hybrid Memory Trace Toolkit for the Real Systems. *03/2014 – 06/2014*

- Implemented the mechanism to synchronize time stamp using a semtec cable;
- Solved clock domain crossing problem and pipeline-related timing errors;
- Implemented the Linux kernel driver that served as the control interface of the tool;

Optimization of Breadth First Search based on FPGA. *03/2012 – 05/2012*

- Studied common graph format such as compressed sparse row (CSR);
- Studied common implementations of breadth first search algorithm;
- Designed a hierarchical data structure that is adaptive to vector size and sparsity to store sparse vector;
- Implemented breadth first search based on this data structure and reduced memory access by 20%;

Wuhan National Laboratory for Optoelectronics **Wuhan**
Intern

Smartmontools Development *07/2011 – 09/2011*

- Studied the mechanism of Self-Monitoring, Analysis and Reporting Technology System (SMART);
- Separated the function of disk testing from the whole package to form an light-weighted disk testing tool.

PUBLICATIONS

- Licheng Chen, **Zhipeng Wei**, Zehan Cui, Mingyu Chen, Haiyang Pan, Yungang Bao. CMD: classification-based memory deduplication through page access characteristics. In Proceedings of VEE, 2014.

HONORS AND AWARDS

2014: Merit Student, University of Chinese Academy of Sciences;

2014: Third Place at the IET Present around the World Competition held at Institute of Computing Technology, Chinese Academy of Sciences, the Institution of Engineering and Technology;

2009: National Encouragement Scholarship, Ministry of Education of China (awarded to the top 1% students);

2009, 2010, 2011: Model Student of Academic, Huazhong University of Science and Technology;

2008: Self-Improvement Scholarship, Huazhong University of Science and Technology.

SKILLS

Platforms: Linux

Programming Language: C, C++, Shell, Verilog

Tools: GDB, Latex, Vim, Git, ISE, Modelsim, Gem5

ACTIVITIES

2013: Host of Annual Party of Research Center for Advanced Computer System

2013: Teaching Assistant, Academic Writing Class

2007 - 2008: The Class Commissary in Charge of Studies