

# DONG CHEN

Assistant Professor in NUDT, Changsha, China  
jameschennerd@gmail.com  $\diamond$  dongchen-coder.github.io  
Last updated: 03/04/2021

## EDUCATION

---

**University of Rochester, USA**  
Ph.D  
Department of Computer Science

*September 2014 - May 2019*

**National University of Defense Technology, China**  
Bachelor/Master of Engineering  
Department of Computer Science

*July 2007 - December 2013*

## RESEARCH INTERESTS

---

My current research focuses on static and dynamic program analysis on locality for both sequential and parallel programs. I have broad interests on system software, parallel computing, memory management and program synthesis. (ALL of my research is public and open-sourced)

## PUBLICATIONS

---

Fangzhou Liu, **Dong Chen**, Wesley Smith, and Chen Ding. 2020. PLUM: static parallel program locality analysis under uniform multiplexing. In Proceedings of the 25th ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming (PPoPP '20).

Chen Ding, **Dong Chen**, Dorin Patru. "CLAM: Compiler Leasing of Accelerator Memory". 32nd Workshop on Languages and Compilers for Parallel Computing (LCPC'19)

**Dong Chen**, Fangzhou Liu, Mingyang Jiao, Chen Ding, Sreepathi Pai. "Statistical Caching for Near Memory Management". 5th International Symposium on Memory Systems (MEMSYS'19)

**Dong Chen**, Fangzhou Liu, Chen Ding, Sreepathi Pai. "Locality analysis through static parallel sampling". 39th ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI'18)

**Dong Chen**, Chunling Hu, Chucheow Lim, Sreepathi Pai, Chen Ding. "POSTER: Static Sampling for GPU Code". 31th International Workshop on Languages and Compilers for Parallel Computing (LCPC'18)

**Dong Chen**, Fangzhou Liu, Chen Ding, Chucheow Lim. "POSTER: Static Reuse Time Analysis Using Dependence Distance". 30th International Workshop on Languages and Compilers for Parallel Computing (LCPC'17)

Chencheng Ye, Chen Ding, Hao Luo, Jacob Brock, **Dong Chen**, Hai Jin. "Cache Exclusivity and Sharing: Theory and Optimization". ACM Transactions on Architecture and Code Optimization (TACO'17)

Pengcheng Li, Xiaoyu Hu, **Dong Chen**, Jacob Brock, Hao Luo, Eddy Z Zhang, Chen Ding. "LD: Low-Overhead GPU Race Detection Without Access Monitoring". ACM Transactions on Architecture and Code Optimization (TACO'17)

**Dong Chen**, Chencheng Ye, Chen Ding. "Write Locality and Optimization for Persistent Memory". 2nd International Symposium on Memory Systems (MEMSYS'16)

Mei Wen, Da-fei Huang, Chang-qing Xun, **Dong Chen**. "Improving performance portability for GPU-specific OpenCL kernels on multi-core/many-core CPUs by analysis-based transformations". Frontiers of Information Technology and Electronic Engineering (JZUS'15)

Dafei Huang, Mei Wen, Changqing Xun, **Dong Chen**, Xing Cai, Yuran Qiao, Nan Wu, Chunyuan Zhang. "Automated Transformation of GPU-Specific OpenCL Kernels Targeting Performance Portability on Multi-Core/Many-Core CPUs". 20th International European Conference on Parallel and Distributed Computing (EuroPar'14)

Changqing Xun, **Dong Chen**, Qiang Lan, Chunyuan Zhang. “Efficient fine grained shared buffer management for multiple OpenCL devices”. Journal of Zhejiang University-SCIENCE C: Computers and Electronics (JZUS’13)

**Dong Chen**, Changqing Xun, Dafei Huang, Mei Wen, Chunyuan Zhang. “Automatic mapping single-device OpenCL program to heterogeneous multi-device platform”. The 15th International Conference on High Performance Computing and Communications (HPCC’13)

**Dong Chen**, Huayou Su, Wen Mei, Lixuan Wang, Chunyuan Zhang. “Scalable Parallel Motion Estimation on Multi-GPU system”. International Conference on Communications and Information Processing (ICCIP’13)

## INTERNSHIP EXPERIENCES

---

**FutureWei Technologies, HUAWEI US Research Lab** *Jun.2015-Aug.2015*  
Work on memory allocator in Android runtime in Compiler Group, Software Lab

**Qualcomm** *Jun.2016-Aug.2016*  
Work on OpenCL performance model in Graphics Compiler Team

**Qualcomm** *Jun.2018-Aug.2018*  
Work on static locality analysis for GPU code in Graphics Compiler Team

## OTHER EXPERIENCES

---

**Professional Services:** Sub-reviewer for MEMSYS 2019, ICS 2019, LCPC 2018, ICS 2017, MEMSYS 2017, NPC 2017.

**Teaching Assistant:** Data Structure, Programming Language Design and Implementation, Software Analysis and Improvement (Advanced Compiler).

## SKILLS

---

<b>Languages</b>	Chinese(native), English(fluent), Japanese(little)
<b>Programming</b>	C++, Python, LLVM, Clang, C, CUDA, OpenCL, OpenMP, Pthread, MPI, Coq, Lisp, Verilog, Latex