

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

## EDUCATION

<b>Ph.D in Computer Science</b> , <i>University of Rochester</i>	2014.09-2019.05
<b>BS/MS in Computer Science</b> , <i>National University of Defense Technology</i>	2007.09-2013.12

## EXPERIENCE

<b>Assistant Professor</b> <i>National University of Defense Technology</i>	<b>2019.06-2021.05</b> <i>Changsha, China</i>
<b>Intern</b> <i>Qualcomm, Graphics Compiler Team</i>	<b>2018.06-2018.08</b> <i>CA, USA</i>
<b>Intern</b> <i>Qualcomm, Graphics Compiler Team</i>	<b>2016.06-2016.08</b> <i>CA, USA</i>
<b>Intern</b> <i>FutureWei Technologies, Huawei US Research Lab</i>	<b>2015.06-2015.08</b> <i>CA, USA</i>

## SKILLS

<b>Tools and Languages</b>	C++, Python, LLVM, Parallel programming (CUDA, OpenMP, MPI, etc)
<b>Communication</b>	Chinese (native), English (fluent)

## PUBLICATIONS

[Draft] Dong Chen. "Locality Analysis by Synthesizing Symbolic Reuse Intervals".  
[TACO21] Chen Ding, Dong Chen, Fangzhou Liu, Benjamin Reber, Wesley Smith. "Program Optimization Theory and Potential for a Programmable Cache".  
[ISMM21] Dong Chen, Chen Ding, Fangzhou Liu, Benjamin Reber, Wesley Smith, and Pengcheng Li. "Uniform Lease vs LRU Cache: Analysis and Evaluation". The 2021 ACM SIGPLAN International Symposium on Memory Management.  
[MEMSYS20] Ian Precht, Ben Reber, Chen Ding, Dorin Patru, Dong Chen. "CLAM: Compiler Lease of Cache Memory". The 6th International Symposium on Memory Systems.  
[PPoPP20p] Fangzhou Liu, Dong Chen, Wesley Smith, and Chen Ding. "PLUM: static parallel program locality analysis under uniform multiplexing". In Proceedings of the 25th ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming (Poster).  
[LCPC19] Dong Chen, Chen Ding, Dorin Patru. "CLAM: Compiler Leasing of Accelerator Memory". 32nd Workshop on Languages and Compilers for Parallel Computing.  
[MEMSYS19] Dong Chen, Fangzhou Liu, Mingyang Jiao, Chen Ding, Sreepathi Pai. "Statistical Caching for Near Memory Management". 5th International Symposium on Memory Systems.  
[PLDI18] Dong Chen, Fangzhou Liu, Chen Ding, Sreepathi Pai. "Locality analysis through static parallel sampling". 39th ACM SIGPLAN Conference on Programming Language Design and Implementation. (*Artifact evaluated*).  
[LCPC18] Dong Chen, Chunling Hu, Chuchew Lim, Sreepathi Pai, Chen Ding. "POSTER: Static Sampling for GPU Code". 31th International Workshop on Languages and Compilers for Parallel Computing.  
[LCPC17] Dong Chen, Fangzhou Liu, Chen Ding, Chuchew Lim. "POSTER: Static Reuse Time Analysis Using Dependence Distance". 30th International Workshop on Languages and Compilers for Parallel Computing.  
[TACO17] 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.  
[TACO17] 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.  
[MEMSYS16] Dong Chen, Chencheng Ye, Chen Ding. "Write Locality and Optimization for Persistent Memory". 2nd International Symposium on Memory Systems  
[EuroPar14] 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.  
[HPCC13] Dong Chen, Changqing Xun, Dafei Huang, Mei Wen, Chunyuan Zhang. "Automatic mapping single-device OpenCL program to heterogeneous multi-device platform". 15th International Conference on High Performance Computing and Communications.

## PROFESSIONAL ACTIVITIES

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**Professional Services:** Reviewer for JCST. 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).