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Institute of Computing Technology
Chinese Academy of Science

Mingzhe Zhang

Assistant Professor

Education

- 2004–2008 **Bachelor of Computer Science**, Nanking University of Posts and Telecommunications, Nanking, China.
- 2009–2013 **Master of Computer Science**, Inner Mongolian University, Hohhot, China.
- 2013–2018 **Ph.D Candidate of Computer Science**, Institute of Computing Technology, Chinese Academy of Science (ICT,CAS), Beijing, China.

Experience

Jul.2018 to present, Assistant Professor, Institute of Computing Technology, Chinese Academy of Sciences (ICT, CAS)

Jun.2008–Sep.2009, Engineer, Institute of Software, Chinese Academy of Science (ISCAS)

Jul.2008–
Dec.2008 **Project Manager**, "Web-based Management System For "Torch Plan" Software Park Around China".

Duty:
Project Management
Design the testing plan
Modify MVC framework for web design based on C#

Dec.2008–
Sep.2009 **Engineer**, "Network Control System For China Railway High-speed (CRH)".

Duty:
Design and implement the signal translation system for on-board signal analysis based on C and C#

Oct.2010 - Jun.2013, Visiting Student, Institute of Computing Technology, Chinese Academy of Science (ICT,CAS)

Oct.2010–
Jul.2011 **Project Manager and Developer**, "Simulator for Rad-Hard 32-bit SPARC V8 Processor".

Duty:
Implement of SPARC V8 Instruction Set in SimpleScalar simulator
Modify the simulator for SPARC V8 support
Implement of debug support on simulator
Make test plan
Document Work

Nov.2012– **Architect**, "*Many-core Processor for High-throughput Applications (Godson-D)*".

Feb.2013 Duty:
Design the NoC sub-system
Evaluate the NoC design on simulator

Jan.2013– **Project Manager**, "*Full-system Simulator for ARMv8 Instruction Set*".

Sep.2013 Duty:
Project Management
Develop automatic tool of code generation for ARMv7 Decoding Module based on Python

Nov.2015 - Nov.2016, Visiting PhD student, Department of Computer Science,
University of Chicago (Supported by China Scholarship Council)

Nov.2010– , *Write Scheme for MLC PCM lifetime improvment.*
current

Languages

English	CET4	512/710
English	CET6	498/710
English	PETS-5/WSK	71/100

Computer skills

Programming Languages:	C/C++, Python, C#, Verilog(few)
Architecture Simulation:	SimpleScalar, Graphite, PhoenixSim, GEM5, DRAMsim, Simics
Others:	Latex, Matlab

Honor

- * 2011 Outstanding Student of State Key Laboratory of Computer Architecture, ICT, CAS
- * 2012 Outstanding Student of State Key Laboratory of Computer Architecture, ICT, CAS
- * 2012 Excellent Presentation Award of 2nd Ph.D Forum of Micro-electronic in Beijing
- * 2014 Outstanding Student of University of Chinese Academy of Sciences
- * 2017 Outstanding Student of University of Chinese Academy of Sciences
- * 2017 National Scholarship for Outstanding Student

Self-presentation

- | | |
|-------------------|--------------------------------|
| o Hard-working | o Optimistic |
| o Self-confidence | o Ambitious attitude essential |
| o Dedication | o Dynamic and honest |

Publications

- * **Mingzhe Zhang**, Lunkai Zhang, Lei Jiang, Frederic T. Chong, Zhiyong Liu, "Quick-and-Dirty: Improving Performance of MLC PCM by Using Temporary Short Writes", ICCD 2017
- * **Mingzhe Zhang**, Lunkai Zhang, Lei Jiang, Zhiyong Liu, Frederic T. Chong, "Balancing Performance and Lifetime of MLC PCM by Using a Region Retention Monitor", HPCA 2017
- * **Mingzhe Zhang**, Yangguang Shi, Fa Zhang, Zhiyong Liu, "COMRANCE: A rapid method for Network-on-Chip design space exploration", IGSC 2016
- * Shaoli Liu, Tianshi Chen, Ling Li, Xi Li, **Mingzhe Zhang**, Chao Wang, Haibo Meng, Xuehai Zhou, and Yunji Chen, "FreeRider: Non-local Adaptive Network-on-Chip Routing with Packet-Carried Propagation of Congestion Information", IEEE Transaction on Parallel and Distributed Systems. Vol 26(8), pp. 2272-2285, 2015.
- * Lunkai Zhang, Dmitri B. Strukov, Hebatallah Saadeldeen, Dongrui Fan, **Mingzhe Zhang**, Diana Franklin, "SpongeDirectory: flexible sparse directories utilizing multi-level memristors". PACT 2014: 61-74
- * Xiaochun Ye, Dongrui Fan, Ninghui Sun, Shibin Tang, **Mingzhe Zhang**, Hao Zhang, "SimICT: A fast and flexible framework for performance and power evaluation of large-scale architecture". ISLPED 2013: 273-278
- * Lunkai Zhang, **Mingzhe Zhang**, Lingjun Fan, Da Wang, Paolo Ienne, "Spontaneous Reload Cache: Mimicking a Larger Cache with Minimal Hardware Requirement". NAS 2013: 31-40
- * Shuai Zhang, Zhiyong Liu, Dongrui Fan, Fenglong Song, **Mingzhe Zhang**, "Energy-Performance Modeling and Optimization of Parallel Computing in On-Chip Networks". TrustCom/ISPA/IUCC 2013: 879-886
- * **Mingzhe Zhang**, Da Wang, Xiaochun Ye, Liqiang He, Dongrui Fan, Zhiyong Liu, "A Path-Adaptive Opto-electronic Hybrid NoC for Chip Multi-processor". TrustCom/ISPA/IUCC 2013: 1198-1205
- * **Mingzhe Zhang**, Liqiang He, Dongrui Fan, "Self-Correction Trace Model: A Full-System Simulator for Optical Network-on-Chip". IPDPS Workshops 2012: 242-247