



CONTACT

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SKILLS

Parallel Computing	6Y
CUDA	3Y
swgcc	3Y
MPI	3Y
High-Performance Cryptography	3Y

EDUCATION

PhD - CS, Xi'an Jiaotong University, China, High-Performance Cryptography	2021 - 2025
PhD (CSC) - CS, National University of Singapore, Singapore, LLM Serving Scheduling	2023 - 2024
MESc - CS, Xi'an Jiaotong University, China, MPI Communication modeling & CFD	2018 - 2021
BEng - IoT, Hefei University of Technology, China	2014 - 2018

JOURNAL ARTICLES

Ziheng Wang , Xiaoshe Dong, Yan Kang, Heng Chen, Qiang Wang. CUSPX: Efficient GPU Implementations of Post-Quantum Signature SPHINCS ⁺ , IEEE Transactions on Computers (TC), 2024, Just Accepted	CCF A
Ziheng Wang , Xiaoshe Dong, Heng Chen, Yan Kang. An Example of Parallel Merkle Tree Traversal: Post-Quantum Leighton-Micali Signature on the GPU, ACM Transactions on Architecture and Code Optimization (TACO), 2024, 21(3): 1-25	CCF A
Yan Kang, Xiaoshe Dong, Ziheng Wang , Heng Chen, Qiang Wang, Parallel implementations of post-quantum leighton-Micali signature on multiple nodes, The Journal of Supercomputing (TJSC), 80(4):5042–5072	CCF C
Ziheng Wang , Xiaoshe Dong, Heng Chen, Yan Kang. Efficient GPU implementations of post-quantum signature XMSS, IEEE Transaction on Parallel and Distributed Systems (TPDS), 2023, 34(3): 938-954	CCF A
Heng Chen, Ziheng Wang , Xi Xiao, Jingbo Li, Xiaoshe Dong, Xingjun Zhang, SunwayURANS: 3D full annulus URANS simulations of transonic axial compressors on Sunway TaihuLight, The Journal of Supercomputing (TJSC), 2022, 78(17): 19167–19187	CCF C
Ziheng Wang , Xiaoshe Dong, Yan Kang, Heng Chen. Parallel SHA 256 on SW26010 many-core processor for hashing of multiple messages, The Journal of Supercomputing (TJSC), 2022, 79(2): 2332–2355	CCF C
Ziheng Wang , Heng Chen, Weilin Cai, Xiaoshe Dong, Xingjun Zhang. C-Lop: Accurate contention-based modeling of MPI concurrent communication, Parallel Computing (PC), 2022, 111: 102925	CCF B
Ziheng Wang , Heng Chen, Xiaoshe Dong, Weilin Cai, Yan Kang, Xingjun Zhang, Extending τ -Lop to model MPI blocking primitives on shared memory, The Journal of Supercomputing (TJSC), 2022, 78(9): 12046–12069	CCF C
Ziheng Wang , Heng Chen, Xiaoshe Dong, Weilin Cai, Xingjun Zhang. LogSC: Model-based one-sided communication performance estimation, Future Generation Computer Systems (FGCS), 132: 25-39, 2022	Q1
Weilin Cai, Heng Chen, Ziheng Wang , Xingjun Zhang, Implementation and optimization of ChaCha20 stream cipher on Sunway TaihuLight supercomputer, The Journal of Supercomputing (TJSC), 2022, 78(3): 4199–4216	CCF C
Ziheng Wang , Heng Chen, Weiguo Wu, Client-aware negotiation for secure and efficient data transmission, Energies, 2020, 21(13): 5777	SCI

CONFERENCE PAPERS

Weilin Cai, Heng Chen, Zhimin Zhuo, Ziheng Wang , Ninggang An, Flexible supervision system: a fast fault-tolerance strategy for cloud applications in cloud-edge collaborative environments, NPC, pp 108-113, 2022	CCF C
Ziheng Wang , Heng Chen, Weilin Cai, A hybrid CPU/GPU scheme for optimizing ChaCha20 stream cipher, ISPA, pp 1171-1178, 2021	CCF C

PROJECT EXPERIENCES

Development of parallel computing software for large fluid machinery for E - class computer (National Key Research and Development Program of China, No. 2016YFB0200902). Tool and knowledge: C/C++, CFD. parallel computing, I was tasked with overhead analysis and modeling of the application's MPI communication, as well as optimizing the communication. A Confidential horizontal project. Tool: Web Server (Apache), C/C++. I am responsible for building a network security server, and in order to achieve some requirements to modify the two-way authentication code of Apache.	2018-2022
Huawei joint innovation project - I/O performance automatic tuning of WRF / LAMMPS. Tool: Python, C/C++, Slurm. I was responsible for the automatic performance tuning of WRF and coordinating the entire team.	2018-2020
	2021-2023

COMPETITIONS

The 5th China Parallel Application Challenge on domestic CPU (CPC2021): National Champion , Preliminary and final: Transformer optimization, 2021	2021
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The 9th “Intel Cup” Parallel Application Challenge (PAC2021): National bronze prize (6th place) , Preliminary: Weighted Back-Projection; final: Barcode map, 2021	2021
The 18th National Post-graduate Mathematical Contest in Modeling (2021): National Third Prize , Ultra-wide band precise positioning problem under signal interference, 2021	2021
The 9th China Parallel Application Challenge on domestic CPU (CPC2020): Parallel Fund prize (10th place), Preliminary: Breadth-first search; final: general purpose Computation on unstructured grids, 2020	2020
The 17th National Post-graduate Mathematical Contest in Modeling: National Second Prize, Research on optimal fuel supply strategy of aircraft centre of mass balance, 2020	2020
The 3rd China Parallel Application Challenge on domestic CPU (CPC2019): National bronze prize (7th place) , Research on optimal fuel supply strategy of aircraft centre of mass balance, 2019	2019
The 16th National Post-graduate Mathematical Contest in Modeling: National First Prize , Rapid track planning of intelligent aircraft under multiple constraints, 2019	2019