

Wei Zhao

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EDUCATION

Huazhong University of Science of Technology

B.E. in Electrical Science and Technology

School of Optical and Electrical Information (OEI)

○ Cumulative Ranking – 33/160

Huazhong University of Science of Technology

Ph.D. in Computer Science

Wuhan National Laboratory for Optoelectronics (WNLO)

Wuhan, Hubei province

Sep 2014 – Jun 2018

Wuhan, Hubei province

Sep 2018 – Jun 2023 (Expected)

○ Research Areas in my Ph.D. career:

Non-volatile Memory (NVM), Approximate Storage, Memory and Storage System.

PUBLICATIONS

○ Conference Papers

1. **Wei Zhao**, Dan Feng, Yu Hua, Wei Tong, Jingning Liu, Jie Xu, Chunyan Li, Gaoxiang Xu and Yiran Chen. "MORE²: Morphable Encryption and Encoding for Secure NVM", in Proceedings of 40-th International Conference On Computer-Aided Design (**ICCAD'21, CCF B**).
2. **Wei Zhao**, Wei Tong, Dan Feng, Jingning Liu, Zhangyu Chen, Jie Xu, Bing Wu, Chengning Wang and Bo Liu. "Improving the energy efficiency of STT-MRAM based approximate cache", in Proceedings of 25-th Design, Automation and Test in Europe Conference (**DATE'21, CCF B**).
3. **Wei Zhao**, Wei Tong, Dan Feng, Jingning Liu, Jie Xu, Xueliang Wei, Bing Wu, Chengning Wang, Weilin Zhu, Bo Liu. "OSwrite: Improving the lifetime of MLC STT-RAM with One-Step write", in proceedings of 36-th International Conference on Massive Storage Systems and Technology (**MSST'20, CCF B**).
4. Bing Wu, Dan Feng, Wei Tong, Jingning Liu, Chengning Wang, **Wei Zhao**, Mengye Peng. "ReRAM Crossbar-Based Analog Computing Architecture for Naive Bayesian Engine", in Proceedings of International Conference of Computer Design (**ICCD'19, CCF B**).

○ Journal Papers

1. **Wei Zhao**, Jie Xu, Xueliang Wei, Bing Wu, Chengning Wang, Weilin Zhu, Wei Tong, Dan Feng, Jingning Liu. "A Low Latency and High Endurance MLC STT-MRAM based Cache System" in Transactions on Computer-Aided Design of Integrated Circuits and Systems (**TCAD, CCF A**), 2022.
2. Chengning Wang, Dan Feng, Wei Tong, Yu Hua, Jingning Liu, Bing Wu, **Wei Zhao**, Linghao Song, Yang Zhang, Jie Xu, Xueliang Wei, Yiran Chen. "Improving Multilevel Writes on Vertical 3D Cross-Point Resistive Memory", accepted by Transactions on Computer-Aided Design of Integrated Circuits and Systems (**TCAD, CCF A**), 2020.
3. Chengning Wang, Dan Feng, Wei Tong, Jingning Liu, Bing Wu, **Wei Zhao**, Yang Zhang, Yiran Chen. "Improving Write Performance on Cross-Point RRAM Arrays by Leveraging Multidimensional Non-Uniformity of Cell Effective Voltage", accepted by Transactions on Computers (**TC, CCF A**), 2020.
4. Chengning Wang, Dan Feng, Wei Tong, Jingning Liu, Bing Wu, **Wei Zhao**, Yang Zhang. "Design and Analysis of Address-Adaptive Read Reference Settings for Multilevel Cell Cross-Point Memory Arrays", accepted by IEEE Transactions on Electron Devices (**TED**), 2019.
5. Bing Wu, Dan Feng, Wei Tong, Jingning Liu, Chengning Wang, **Wei Zhao**, Yang Zhang. "A low

power reconfigurable memory architecture for complementary resistive switches", accepted by IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD, CCF A), 2019.

6. Chengning Wang, Dan Feng, Wei Tong, Jingning Liu, Zheng Li, Jiayi Chang, Yang Zhang, Bing Wu, Jie Xu, **Wei Zhao**, Yilin Li, Ruoxi Ren, "*Cross-point resistive memory: Nonideal properties and solutions*", ACM Transactions on Design Automation of Electronic Systems (TODAES, CCF B), 2019.

TALKS

- "MORE2: Morphable Encryption and Encoding for Secure NVM", oral presentation in ICCAD 2021.
- "Improving the energy efficiency of STT-MRAM based approximate cache", oral presentation in DATE 2021.
- "OSwrite: Improving the lifetime of MLC STT-RAM with One-Step write", oral presentation in MSST 2020.

SKILLS

- **Programming Language** – C, C++, Python, Shell, CUDA
- **Tools** – Git, L^AT_EX
- **Simulators** – Gem5, NVmain, GPGPUsim. NVsim.
- **Language** – Good English Writing, Reading.

AWARDS

- Outstanding undergraduate graduate of HUST in 2018.
- Excellent Postgraduate Student in HUST, 2019.
- ZhiXing Excellent Postgraduate Scholarship (1000 CNY), 2020.
- WNLO Excellent Postgraduate Scholarship (10000 CNY), 2021