Xuesi Chen

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Research Interests

I am broadly interested in topics related to computer architecture. My current research focuses on the energy efficiency of computing, dataflow architecture, and reconfigurable technologies.

Education

Carnegie Mellon University ..... 2022 - Present
Ph.D. in Electrical and Computer Engineering
Advisor: Brandon Lucia and Nathan Beckmann

Tufts University ..... 2018 - 2022
B.S. in Computer Engineering
Advisor: Mark Hempstead

Publications

Dataflow Blocks: Modular Time-Multiplexing for CGRAs ..... YArch 2023
Xuesi Chen, Nishanth Subramanian, Karthik Ramanathan, Nathan Beckmann, Brandon Lucia

PInTE: Probabilistic Induction of Theft Evictions ..... IISWC 2022
Cesar Gomes, Xuesi Chen, Mark Hempstead

NNShim: Thermal Hotspots Simulation on ML Accelerators ..... HSSB 2022 (@ ISCA)
Xuesi Chen, Daniel Ernst, Margret Riegert, Mark Hempstead

Designing Equitable Scheduling Systems ..... CWIDCA 2022 (@ MICRO)
Sahana Rangarajan, Xuesi Chen, Pratyush Patel, Sara Mahdizadeh Shahri, Jaylen Wang, Akshitha Sriraman

Experience

Research Assistant ..... 2022 - Present
Carnegie Mellon University, Department of Electrical and Computer Engineering
Researching time-multiplexing algorithms on CGRAs for PE utilization enhancement

Research Assistant ..... 2020 - 2022
Tufts University, Department of Electrical and Computer Engineering
Researched tunable cache contention simulator on multi-core CPUs
Analyzed and verified the in-cache behavior of cache contention simulator PInTE

SWE, Intern ..... summer 2021
Amazon, Cambridge MA
Implemented wake word termination upon receiving false awake signals for Alexa

Teaching

Tufts EE156: Advanced Computer Architecture ..... Spring 2022
Graded homework and labs, hosted office hours, and advised student projects

Awards and Honors

Harry Poole Burden Prize 2022
Best research project by ECE undergraduates