

# WEIGAO SU

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## EDUCATION

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**Purdue University, USA**  
Ph.D. Student in Computer Science

*August 2022 - Present*  
GPA: 3.8/4

**Hunan University, China**  
B.Eng in Computer Science

*September 2018 - June 2022*  
GPA: 3.7/4, Top 3%

## PUBLICATION

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### **EDM: A Low Latency Ethernet Fabric for Memory Disaggregation**

Weigao Su\*, Vishal Shrivastav.  
*ASPLOS, March 2025.*

### **Towards Device Independent Eavesdropping on Telephone Conversations with Built-in Accelerometer**

Weigao Su\*, Daibo Liu, Taiyuan Zhang, Hongbo Jiang.  
*UbiComp/IMWUT, September 2022.*

## RESEARCH EXPERIENCE

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### **Zero-copy packet processing**

*Supervised by Prof. Vishal Shrivastav (Purdue), Rachit Agarwal (Cornell).*

*December 2023 – Present*

- Evaluated the inefficiencies in host network stack that keep CPU from saturating linespeed.
- Offloaded the bottleneck logic onto a FPGA-based accelerator to enable TCP zero-copy Rx.
- Optimized Linux kernel network stack and driver module to enable and adopt new hardware.

### **Cache coherence over Ethernet**

*Supervised by Prof. Vishal Shrivastav (Purdue).*

*December 2023 – Present*

- Evaluated the utilization and latency overhead of RDMA-based memory disaggregation.
- Explored the use of inter-packet gap to minimize the overhead by carrying coherence message.
- Integrated adaptive cache coherence logic into PHY layer on NIC hardware from CPU.

### **Ethernet Disaggregated Memory**

*Supervised by Prof. Vishal Shrivastav (Purdue).*

*January 2023 – December 2023*

- Identified limitations of current techniques (e.g., RDMA, CXL) for disaggregated memory systems.
- Implemented a low-overhead network stack in NIC hardware for memory disaggregation on PHY layer.
- Implemented a central scheduler in switch hardware to proactively achieve zero queueing.

## SERVICE

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**AEC Member:** SOSP 2023

**Reviewer:** UbiComp/IMWUT 2022

## SKILLS

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**Languages:** C/C++(HLS), Python, Verilog.

**Tools:** Vivado, Vitis.

## TEACHING

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**TA:** CS240 - C Programming

*Fall22*