

Yizhou Shan

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RESEARCH INTERESTS

My research interests span Operating Systems, Distributed Systems, and Non-Volatile Memory Systems, with a focus on building fast and reliable systems for datacenters. I work at Wuklab, Purdue ECE, under the supervision of Prof. Yiying Zhang.

EDUCATION

Purdue University Ph.D. in Computer Engineering	2020 (expected)
Institute of Computing Technology, Chinese Academy of Sciences Graduate Coursework in Computer Science	2016
Beijing University of Aeronautics and Astronautics B.E. in Computer Engineering	2014

PUBLICATIONS

Yizhou Shan, Shin-Yeh Tsai, Yiying Zhang, “**Distributed Shared Persistent Memory**”, 9th Annual Non-Volatile Memories Workshop (**NVMW '18**)

Yizhou Shan, Shin-Yeh Tsai, Yiying Zhang, “**Distributed Shared Persistent Memory**”, Proceedings of the ACM Symposium on Cloud Computing 2017 (**SoCC'17**)

Yiying Zhang, **Yizhou Shan**, Sumukh Hallymysore, “**Disaggregated Operating System**”, 17th International Workshop on High Performance Transaction Systems (**HPTS'17**)

POSTER AND TECHNICAL REPORTS

Yizhou Shan, Yilun Chen, Yutong Huang, Sumukh Hallymysore, Yiying Zhang, “**Lego: A Distributed, Decomposed OS for Resource Disaggregation**”, Poster at the 26th ACM Symposium on Operating Systems Principles (**SOSP'17**)

Yizhou Shan, Sumukh Hallymysore, Yutong Huang, Yilun Chen, Yiying Zhang, “**Disaggregated Operating System**”, Poster at the ACM Symposium on Cloud Computing 2017 (**SoCC'17**)

RESEARCH EXPERIENCE

Disaggregated Operating System 2017-
Purdue University
Proposed a new OS architecture called *splitkernel* to manage disaggregated hardware resources in future datacenters. The basic idea of *splitkernel* is to decompose traditional OSes into independent, stateless *micro-OS services*. As the first author, we plan to submit this work to OSDI'18.

Distributed Shared Persistent Memory 2016-2017
Purdue University
Proposed Distributed Shared Persistent Memory (DSPM), a new framework for using persistent memories in datacenter environments. Designed and implemented *Hotpot*, the first DSPM system in Linux kernel. Hotpot provides low-latency, transparent memory accesses, data persistence, data reliability and high availability.

NVM Emulator 2015-2016
Institute of Computing Technology, Chinese Academy of Sciences
Designed and implemented a NVM emulator in Linux kernel, which leverages Intel's performance monitoring unit to emulate NVM's slower read/write latency and smaller bandwidth on physical DRAM.

ARMv8 CPU Project 2013
Institute of Computing Technology, Chinese Academy of Sciences
Participated in the Register-Transfer Level design and verification of some blocks within cache unit and load-store unit. It is commercial project collaborated with Huawei.