

Juno Kim

PH.D. STUDENT IN COMPUTER SCIENCE

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Research Interest

My research interest lies in building fast and reliable data storage/processing systems by leveraging next-generation memory/storage technologies including persistent memory. Specifically, I'm currently interested in supporting fast graph processing on static/dynamic graphs using such technologies.

Education

University of California, San Diego

PH.D. IN COMPUTER SCIENCE

- Advisor: Prof. Steven Swanson

La Jolla, CA

Expected Jun 2022

University of California, San Diego

M.S. IN COMPUTER SCIENCE

- Advisor: Prof. Steven Swanson

La Jolla, CA

Jun 2020

Seoul National University

B.S. IN ELECTRICAL AND COMPUTER ENGINEERING

- Graduated with summa cum laude (GPA: 4.04/4.3)

Seoul, Korea

Feb 2012

Publication

Towards Efficient Graph Processing on Persistent Memory

JUNO KIM, STEVEN SWANSON

SRC TECHCON

2020

Sub-Zero: Zero-copy IO for Persistent Main Memory File Systems

JUNO KIM, YUN JOON SOH, JOSEPH IZRAELEVITZ, JISHEN ZHAO, STEVEN SWANSON

- Awarded Best Paper

APSys

2020

An Empirical Guide to the Behavior and Use of Scalable Persistent Memory

JIAN YANG, JUNO KIM, MORTEZA HOSEINZADEH, JOSEPH IZRAELEVITZ, STEVEN SWANSON

- Accepted at NVMW'20.
- Appeared in USENIX ;login: Fall 2020.

FAST

2020

Finding and Fixing Performance Pathologies in Persistent Memory Software Stacks

JIAN XU*, JUNO KIM*, AMIRSAMAN MEMARIPOUR, STEVEN SWANSON

(* CO-FIRST AUTHORS)

ASPLOS

2019

Basic Performance Measurements of the Intel Optane DC Persistent Memory Module

JOSEPH IZRAELEVITZ, JIAN YANG, LU ZHANG, JUNO KIM, XIAO LIU, AMIRSAMAN MEMARIPOUR, YUN JOON SOH, ZIXUAN WANG,

YI XU, SUBRAMANYA R DULLLOOR, JISHEN ZHAO, STEVEN SWANSON

arXiv

2019

The FuzzyLog: A Partially Ordered Shared Log

JOSHUA LOCKERMAN, JOSE FALEIRO, JUNO KIM, SOHAM SANKARAN, DANIEL ABADI, JAMES ASPNES, SIDDHARTHA SEN,

MAHESH BALAKRISHNAN

OSDI

2018

Talks

Sub-Zero: Zero-copy IO for Persistent Main Memory File Systems

APSys

Tsukuba, Japan (virtual)

Aug 2020

Finding and Fixing Performance Pathologies in Persistent Memory Software Stacks

ASPLOS

Providence, RI

Apr 2019

Work Experience

IBM Research Storage Group

RESEARCH INTERN

Almaden, CA

Jun 2019 - Sep 2019

- Worked on building a testing tool using Pin for checking crash-consistency of programs written for persistent memories.

SAP Labs Korea

SOFTWARE ENGINEER

Seoul, Korea

Dec 2011 - Jul 2014

- Worked on building the core in-memory database engine, SAP HANA, with the focus on efficient database catalog access in distributed environment.

Teaching Experience

Modern Storage Systems (CSE 291A)

TEACHING ASSISTANT

UCSD

Fall 2019

- Instructor: Dr. Steven Swanson
- Role: Built an infrastructure for testing correctness/crash-consistency of key-value stores written for persistent memory.

Service

External Reviewer

DISC

2020

External Reviewer

IEEE MASCOTS

2019