

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 2023

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

Ayudante: A Deep Reinforcement Learning Approach to Assist Persistent Memory Programming

HANXIAN HUANG, ZIXUAN WANG, **JUNO KIM**, STEVEN SWANSON, AND JISHEN ZHAO

ATC

2021

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 DULLOOR, 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

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