

Changmin Shin

Accelerated Intelligent Systems Lab. (AISys) @ Seoul National University

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Research Interest: MEMORY SYSTEMS & ARCHITECTURES

Computer System, Memory Architecture, Processing-In-Memory, Near Memory Processing, Graph Processing, Accelerators, Large Language Models (LLMs)

EDUCATION

- | | |
|--|-----------------------------------|
| Seoul National University | Seoul, Korea |
| • <i>Ph.D. Student - Electrical & Computer Engineering</i> | <i>March 2024 - Current</i> |
| Seoul National University | Seoul, Korea |
| • <i>B.S. - Electrical & Computer Engineering</i> | <i>March 2020 - February 2024</i> |

PUBLICATIONS

¹: indicates co-first authors.

- **A Cost-Effective Near-Storage Processing Solution for Offline Inference of Long-Context LLMs:**
Hongsun Jang, Jaeyong Song, Changmin Shin, Siung Noh, Jaewon Jung, Jisung Park, Jinho Lee *ASPLOS*, 2026
- **LoCaLUT: Harnessing Capacity-Computation Tradeoffs for LUT-Based Inference in DRAM-PIM:**
Junguk Hong, Changmin Shin, Sukjin Kim, Si Ung Noh, Taehee Kwon, Seongyeon Park, Hanjun Kim, Youngsok Kim, Jinho Lee *HPCA*, 2026
- **FlexiWalker: Extensible GPU Framework for Efficient Dynamic Random Walks with Runtime Adaptation:**
Seongyeon Park, Jaeyong Song, Changmin Shin, Sukjin Kim, Junguk Hong, and Jinho Lee *EuroSys*, 2026
- **FALA: Locality-Aware PIM-Host Cooperation for Graph Processing with Fine-Grained Column Access:**
Changmin Shin, Jaeyong Song, Seongmin Na, Jun Sung, Hongsun Jang, and Jinho Lee *MICRO*, 2025
- **Piccolo: Large-Scale Graph Processing with Fine-Grained In-Memory Scatter-Gather:**
Changmin Shin, Jaeyong Song, Hongsun Jang, Dogeun Kim, Jun Sung, Taehee Kwon, Jae Hyung Ju, Frank Liu, Yeonkyu Choi, and Jinho Lee *HPCA*, 2025
- **A Case for In-Memory Random Scatter-Gather for Fast Graph Processig:**
Changmin Shin¹, Taehee Kwon¹, Jaeyong Song, Jae Hyung Ju, Fank Liu, and Jinho Lee *IEEE CAL*, 2024
- **PSA: Accelerating On-Device Long-Context LLM Inference with PIM-Centric Sparse Attention:**
Seongmin Na, Changmin Shin, Jun Sung, Woobeen Jo, Dongha Jung, Minseong Kim, Jinho Lee *undersubmission*, 2026
- **SePArate: Segmenting Patterns from Defects in Wafer Manufacturing Using Weak Supervision:**
Dain Kwon, Changmin Shin, Sunjong Park, Kanghyun Choi, Hyeyoon Lee, Jaewon Jang, Minseok Choi and Jinho Lee *undersubmission*, 2026

HONORS AND AWARDS

- **Outstanding Paper Honorable Mention Award** @ Samsung DS Division - Dec. 2025
- **Student Travel Grant** @ MICRO'25 - Oct. 2025
- **Student Travel Grant** @ HPCA'25 - Mar. 2025
- **Outstanding Poster Award** @ KIISE Computer System Society Winter Workshop - Feb. 2025

TEACHING EXPERIENCE

- | | |
|--|---------------------------|
| Digital Systems Design and Lab. | Seoul National University |
| • <i>Teaching Assistant</i> | <i>Fall 2025</i> |
| Embedded Systems Design. | Seoul National University |
| • <i>Teaching Assistant</i> | <i>Fall 2024</i> |