

Chaemin Lim

High Performance Computing Platform (HPCP) Lab.

College of Computing

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REASEARCH INTERESTS

- Database Systems on Modern Hardwares
- Concurrent Computing

PUBLICATIONS

- FaScalSQL: A Fast and Scalable GPU-Accelerated SQL Query Engine for Out-of-Memory Tables
Chaemin Lim, Suhyun Lee, Jinwoo Choi, Kwanghyun Park, Jinho Lee, Joonsung Kim, and Youngsok Kim
42nd IEEE International Conference on Data Engineering (**ICDE**), May 2026
- DMO-DB: Mitigating the Data Movement Bottlenecks of GPU-Accelerated Relational OLAP
Chaemin Lim, Suhyun Lee, Jinwoo Choi, Joonsung Kim, Jinho Lee, and Youngsok Kim
34th International Conference on Parallel Architectures and Compilation Techniques (**PACT**), Nov. 2025
- SPID-Join: A Skew-resistant Processing-in-DIMM Join Algorithm Exploiting the Bank- and Rank-level Parallelisms of DIMMs
Suhyun Lee, **Chaemin Lim**, Jinwoo Choi, Heelim Choi, Chan Lee, Yongjun Park, Kwanghyun Park, Hanjun Kim, and Youngsok Kim
2025 ACM International Conference on Management of Data (**SIGMOD**), June 2025
- PID-Comm: A Fast and Flexible Collective Communication Framework for Commodity Processing-in-DIMMs
Si Ung Noh¹, Junguk Hong¹, **Chaemin Lim**, Seongyeon Park, Jeehyun Kim, Hanjun Kim, Youngsok Kim, and Jinho Lee
51st IEEE/ACM International Symposium on Computer Architecture (**ISCA**), June–July 2024
- Design and Analysis of a Processing-in-DIMM Join Algorithm: A Case Study with UPMEM DIMMs
Chaemin Lim, Suhyun Lee, Jinwoo Choi, Joungwoo Lee, Seongyeon Park, Hanjun Kim, Jinho Lee, and Youngsok Kim
2023 ACM SIGMOD International Conference on Management of Data (**SIGMOD**), June 2023
- GuardiaNN: Fast and Secure On-Device Inference in TrustZone Using Embedded SRAM and Cryptographic Hardware
Jinwoo Choi¹, Jaeyeon Kim¹, **Chaemin Lim**¹, Suhyun Lee, Jinho Lee, Dokyung Song, and Youngsok Kim
23rd ACM/IFIP International Middleware Conference (**Middleware**), Nov. 2022

PROJECTS

- **Development of New Concept PIM Semiconductor Leading Technology**
Institute for Information and communication Technology Planning and evaluation (IITP) 2022-Present
- **STACK: Smart, Attack-Resistant Internet of Things Networks**
Korea Institute for Advancement of Technology (KIAT) 2021-Present

EDUCATION

- **Yonsei University** Seoul, Korea
Ph.D Student, Computer Science September 2023 - Present
- **Yonsei University** Seoul, Korea
Master, Artificial Intelligence March 2021 - August 2023
- **Hankuk University of Foreign Studies** Seoul, Korea
B.Eng. in Computer Engineering March 2017 - February 2021
- **Hankuk University of Foreign Studies** Seoul, Korea
B.A. in Journalism March 2017 - February 2021

TEACHING EXPERIENCE

- **Logic Circuit Design (CSI2111)**: Teaching Assistant, Fall 2022
- **Open Source Projects (CSI2115)**: Teaching Assistant, Fall 2021
- **Information Security (CSI4109)**: Teaching Assistant, Spring 2021

SKILLS

- **C, C++, Python, Scala, Rust, SQL**