

# Chaemin Lim

High Performance Computing Platform (HPCP) Lab.  
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## RESEARCH INTERESTS

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- Database Systems on Modern Hardwares
- Concurrent Computing

## PUBLICATIONS

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- 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 Noh<sup>1</sup>, Junguk Hong<sup>1</sup>, **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, Jounghoo 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 Choi<sup>1</sup>, Jaeyeon Kim<sup>1</sup>, **Chaemin Lim**<sup>1</sup>, Suhyun Lee, Jinho Lee, Dokyung Song, and Youngsok Kim  
23rd ACM/IFIP International Middleware Conference (**Middleware**), Nov. 2022

## PROJECTS

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- **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

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- **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

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

## SKILLS

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