




Sung-Hwan Lee

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Research Interests

Concurrency: relaxed memory models for software/hardware, compiler correctness

Software verification: interactive theorem proving, program logics

Education

Seoul National University Ph.D. Student in Computer Science and Engineering Advisor: Chung-Kil Hur	09/2017 - 08/2023 (expected)
Seoul National University B.S. in Computer Science and Engineering	03/2013 - 08/2017
Seoul Science High School	03/2010 - 02/2013

Publications

* *equal contribution*

- [1] Putting Weak Memory in Order via a Promising Intermediate Representation.
Sung-Hwan Lee, Minki Cho, Roy Margalit, Chung-Kil Hur, Ori Lahav.
PLDI 2023: The 44th ACM SIGPLAN Conference on Programming Language Design and Implementation (*conditionally accepted*).
- [2] Sequential Reasoning for Optimizing Compilers under Weak Memory Concurrency.
Minki Cho*, **Sung-Hwan Lee***, Dongjae Lee, Chung-Kil Hur, Ori Lahav.
PLDI 2022: The 43rd ACM SIGPLAN Conference on Programming Language Design and Implementation.
- [3] Revamping Hardware Persistency Models: View-based and Axiomatic Persistency Models for Intel-x86 and ARMv8.
Kyeongmin Cho, **Sung-Hwan Lee**, Azalea Raad, Jeehoon Kang.
PLDI 2021: The 42nd ACM SIGPLAN Conference on Programming Language Design and Implementation.
- [4] Modular Data-Race-Freedom Guarantees in the Promising Semantics.
Minki Cho, **Sung-Hwan Lee**, Chung-Kil Hur, Ori Lahav.
PLDI 2021: The 42nd ACM SIGPLAN Conference on Programming Language Design and Implementation.
- [5] Promising 2.0: Global Optimizations in Relaxed Memory Concurrency.
Sung-Hwan Lee, Minki Cho, Anton Podkopaev, Soham Chakraborty, Chung-Kil Hur, Ori Lahav, Viktor Vafeiadis.
PLDI 2020: The 41st ACM SIGPLAN Conference on Programming Language Design and Implementation.
- [6] Promising-ARM/RISC-V: A Simpler and Faster Operational Concurrency Model.
Christopher Pulte, Jean Pichon-Pharabod, Jeehoon Kang, **Sung-Hwan Lee**, Chung-Kil Hur.
PLDI 2019: The 40th ACM SIGPLAN Conference on Programming Language Design and Implementation.

- [7] Illuminance During a Solar Eclipse with Limb Darkening: A Mathematical Model.
Sung-Hwan Lee, Siyul Lee.
Journal of the Korean Astronomical Society, vol. 45, no. 5, Oct. 2012.

Honors & Awards

The Presidential Science Scholarship, Korea Student Aid Foundation.

03/2013 - 08/2017

Teaching

Teaching Assistant

Principles and Practices of Software Development

Instructor: Chung-Kil Hur

Spring 2022

Spring 2021

Spring 2020

Spring 2019

Spring 2018

Principles of Programming

Instructor: Chung-Kil Hur

Fall 2018

References

Chung-Kil Hur, Associate Professor, Seoul National University.

Ori Lahav, Associate Professor, Tel Aviv University.

Jecheon Kang, Assistant Professor, KAIST.