




Sung-Hwan Lee

Compiler Engineer at Rebellions Inc.

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Education

Seoul National University Ph.D. in Computer Science and Engineering Advisor: Chung-Kil Hur Thesis: Understanding and Fulfilling the Desiderata for Relaxed Memory Models	09/2017 - 08/2023
Seoul National University B.S. in Computer Science and Engineering	03/2013 - 08/2017
Seoul Science High School	03/2010 - 02/2013

Experience

Rebellions Inc. , South Korea Compiler Engineer	11/2023 - Current
Seoul National University , South Korea Postdoctoral Researcher	09/2023 - 10/2023

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.
- [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

SNU CSE PhD Dissertation Award Department of Computer Science and Engineering, Seoul National University.	08/2023
Star Student Researcher Award BK21 FOUR Intelligence Computing, Seoul National University.	03/2023
National 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