Curriculum Vitae

Personal Information

Full Name:	Seongmin Lee
Full Curriculum Vitae:	https://nimgnoeseel.github.io/resources/cv/cv.pdf
Google Scholar:	https://scholar.google.com/citations?user=-YSnc6kAAAAJ&hl=en
Personal Website:	https://nimgnoeseel.github.io

Research Interests

My research interest lies in dynamic program analysis, especially using statistical methods on dynamic information from execution to reason about a program's semantic properties, which is incapable or limited in scalability for static analysis. The goal of my research is to bring program analysis closer to real-world circumstances regarding the scale and complexity of software within the presence of non-experimental or missing data in the analysis.

Education and Employment

Max Planck Institute for Security and Privacy — Germany

Postdoctoral Researcher, Software Security Research group (Group head: Dr. Marcel Böhme) Sep. 2022 – Present

Korea Advanced Institue of Science and Technology — Republic of Korea

Doctor of Philosophy, School of Computing (Advisor: Dr. Shin Yoo) Sep. 2016 – Aug. 2022

Bachelor of Science, School of Computing Feb. 2012 – Aug. 2016

Bachelor of Science, Department of Mathematical Sciences

Selected Publications

Journal Articles

- Seongmin Lee, David Binkley, Robert Feldt, Nicolas Gold, and Shin Yoo. Observation-based approximate dependency modeling and its use for program slicing. *Journal of Systems and Software*, page 110988, 2021
- Seongmin Lee, David Binkley, Nicolas Gold, Syed Islam, Jens Krinke, and Shin Yoo. Evaluating lexical approximation of program dependence. *Journal of Systems and Software*, 160:110459, 2020

Conference/Technical Reports

- *Danushka Liyanage, *Seongmin Lee, Chakkrit Tantithamthavorn, and Marcel Böhme. Extrapolating coverage rate in greybox fuzzing. In *Proceedings of the 2024 International Conference on Software Engineering*, 2024 (**Co-first authors with equal contribution*)
- Seongmin Lee and Marcel Böhme. Statistical reachability analysis. In *Proceedings of the 31st ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering*, ESEC/FSE 2023, pages 326–337, New York, NY, USA, 2023. Association for Computing Machinery
- S. Lee, S. Hong, J. Yi, T. Kim, C. Kim, and S. Yoo. Classifying false positive static checker alarms in continuous integration using convolutional neural networks. In *2019 12th IEEE Conference on Software Testing, Validation and Verification (ICST)*, pages 391–401, 2019
- Seongmin Lee, Dave Binkley, Robert Feldt, Nicolas Gold, and Shin Yoo. Causal program dependence analysis and causal fault localization. Technical Report CS-TR-2021-423, Korea Advanced Institute of Science and Technology, 291 Daehak-ro, Yuseong-gu, Daejeon, Korea 34141, January 2021

Academic Services

- Program committee: ASE'23 / (Artifact Evaluation Track) ECOOP'24, USENIX'24, ICSE'24, ISSTA'23, ICSME'22,21
- Reviewer: TOSEM'22, JSS'21, JSS'20 / (External) FSE'24, ICSE'23, ISSTA'23

Awards and honors

- **PhD Dissertation Award**, School of Computing, KAIST, 2022
  - *Title of Dissertation: Statistical Program Dependence Approximation*
- **2021 Naver Ph.D. Fellowship Award**: Awarded by NAVER Corp. to Ph.D. candidates who have published an outstanding research paper or have excellent publication performance, 2021