Pu (Luke) Yi

Stanford University, US ✓ lukeyi@stanford.edu

Education

Stanford University

PhD in Computer Science

Peking University

Bachelor of Science in Computer Science (Turing Class)

- 2021 Award for Excellent Research
- 2021 Huirong Li Scholarship
- 2020 John Hopcroft Scholarship

Publications

- Cyrille Artho, Pavel Parízek, Daohan Qu, Varadraj Galgali, and Pu (Luke) Yi <u>JPF: From 2003 to 2023</u> 30th International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS 2024), pages 3-22, Luxembourg City, Luxembourg, April 2024
- Anjiang Wei, Akash Levy, **Pu (Luke) Yi**, Robert M Radway, Priyanka Raina, Subhasish Mitra, and Sara Achour <u>PBA: Percentile-Based Level Allocation for Multiple-Bits-Per-Cell RRAM</u> <u>42nd IEEE/ACM International Conference on Computer Aided Design</u> (ICCAD 2023), pages 1-9, San Francisco, CA, USC, October 2023
- Pu (Luke) Yi and Sara Achour Hardware-Aware Static Optimization of Hyperdimensional Computations 38th ACM SIGPLAN International Conference on Object-Oriented Programming, Systems, Languages, and Applications (OOPSLA 2023), pages 1-30, Cascais, Portugal, October 2023
- 4. Anjiang Wei, **Pu Yi**, Zhengxi Li, Tao Xie, Darko Marinov, and Wing Lam Preempting Flaky Tests via Non-Idempotent-Outcome Tests <u>44th International Conference on Software Engineering</u> (ICSE 2022), pages 1730-1742, Pittsburgh, PA, USA, May 2022
- 5. Yikai Zhao, Yubo Zhang, Pu Yi, Tong Yang, Bin Cui, and Uhlig Steve The Stair Sketch: Bringing more Clarity to Memorize Recent Events 38th IEEE International Conference on Data Engineering (ICDE 2022), pages 123-130, Virtual Conference, May 2022
- 6. Pu Yi, Hao Wang, Tao Xie, Darko Marinov, and Wing Lam <u>A Theoretical Analysis of Random Regression Test Prioritization</u> 28th International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS 2022), pages 217-235, Munich, Germany, April 2022
- Wenxi Wang, Pu Yi, Sarfraz Khurshid, and Darko Marinov <u>Initial Results on Counting Test Orders for Order-Dependent Flaky Tests using Alloy</u> <u>33rd IFIP International Conference on Testing Software and Systems</u> (ICTSS 2021), pages 123-130 (short paper), Virtual Conference, November 2021
- 8. Pu Yi, Anjiang Wei, Wing Lam, Tao Xie, and Darko Marinov
 Finding Polluter Tests Using Java PathFinder
 ACM SIGSOFT Software Engineering Notes 46, 2021
 (SEN 2021), 46(3), pages 37-41, July 2021
 (Extended paper of abstract presented at Java PathFinder Online Day (JPF 2020), Virtual Workshop, November 2020)
- 9. Anjiang Wei, Pu Yi, Tao Xie, Darko Marinov, and Wing Lam Probabilistic and Systematic Coverage of Consecutive Test-Method Pairs for Detecting Order-Dependent Flaky Tests 27th International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS 2021), pages 270-287, Virtual Conference, March 2021

Sep. 2022 – Present Stanford, CA, US

Sep. 2018 – June 2022 Beijing, China

Presentations

- Hardware-Aware Static Optimization of Hyperdimensional Computations, Online Speakers' Corner on Vector Symbolic Architectures and Hyperdimensional Computing (VSAONLINE)
- A Theoretical Analysis of Random Regression Test Prioritization, 28th International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS 2022)
- Systematic Bit-Flip Fault Injection and Exploration using Java PathFinder, Java PathFinder Online Day (JPF 2021)
- Finding Polluter Tests Using Java PathFinder, Java PathFinder Online Day (JPF 2020)

Service

- Student Volunteer, ASE 2021, ASE 2020
- Co-reviewer, ICSE SEIP 2022, ASE 2021, ISSTA 2021

Skills

• Extensive programming experience

C, C++, Java, Python, Bash, JavaScript

Contributor of the <u>Java PathFinder</u> project - wrote two extensions <u>PolDet</u> and <u>Bit-Flip</u> injection engine that were merged to the master branch (the Bit-Flip injection engine was an accepted Google Summer of Code (<u>GSoC</u>) project) Contributor of the <u>gem5</u> architecture simulator project - fixed a bug in the 3-level cache simulation 2019 Second Prize in Programming Contest at Peking University 2017 Second Prize in National Olympiad in Informatics, China