Pu (Luke) Yi

Stanford University, US

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Education

Stanford University **Sep. 2022 – Present**

PhD in Computer Science *Stanford, CA, US*

Peking University **Sep. 2018 – June 2022**

Bachelor of Science in Computer Science (Turing Class) *Beijing, China*

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

Publications

1. Anjiang Wei, Akash Levy, **Pu (Luke) Yi**, Robert M Radway, Priyanka Raina, Subhasish Mitra, and Sara Achour
PBA: Percentile-Based Level Allocation for Multiple-Bits-Per-Cell RRAM
42nd IEEE/ACM International Conference on Computer Aided Design
(ICCAD 2023), pages 1-9, San Francisco, CA, USC, October 2023

2. **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

3. Anjiang Wei, **Pu Yi**, Zhengxi Li, Tao Xie, Darko Marinov, and Wing Lam
Preempting Flaky Tests via Non-Idempotent-Outcome Tests
44th International Conference on Software Engineering
(ICSE 2022), pages 1730-1742, Pittsburgh, PA, USA, May 2022

4. 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

5. **Pu Yi**, Hao Wang, Tao Xie, Darko Marinov, and Wing Lam
A Theoretical Analysis of Random Regression Test Prioritization
28th International Conference on Tools and Algorithms for the Construction and Analysis of Systems
(TACAS 2022), pages 217-235, Munich, Germany, April 2022

6. Wenxi Wang, **Pu Yi**, Sarfraz Khurshid, and Darko Marinov
Initial Results on Counting Test Orders for Order-Dependent Flaky Tests using Alloy
33rd IFIP International Conference on Testing Software and Systems
(ICTSS 2021), pages 123-130 (short paper), Virtual Conference, November 2021

7. **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)

8. 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

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 Java PathFinder project - wrote two extensions PolDet and Bit-Flip injection engine that were merged to the master branch (the Bit-Flip injection engine was an accepted Google Summer of Code (GSoC) project)
  2019 Second Prize in Programming Contest at Peking University
  2017 Second Prize in National Olympiad in Informatics, China