# 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. Cyrille Artho, Pavel Parízek, Daohan Qu, Varadraj Galgali, and **Pu (Luke) Yi**
   JPF: From 2003 to 2023
   *30th International Conference on Tools and Algorithms for the Construction and Analysis of Systems*
   (TACAS 2024), pages 3-22, Luxembourg City, Luxembourg, April 2024

2. 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

3. **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
   *44th International Conference on Software Engineering*
   (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
   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

7. 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

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

## 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