Yanze Li

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RESEARCH INTERESTS

My area of interest are **Programming Language** and **Static Analysis**. I develop static analysis tools that can scale to large codebase and various code changes with an emphasis on concurrency-related bugs (race detection, deadlock detection, etc.). Recently, I'm switching my focus to something more "formal", such as verification, type system, etc., and I'm actively looking for PhD openings in these areas. My goal is to improve programming productivity and software reliability from a PL perspective.

EDUCATION

M.S.   Computer Science, Texas A&M University, 2020
          Advisor: Jeff Huang
          Thesis: Efficient and Scalable Whole Program Race Detection for Java and Android Programs
          GPA: 4.0/4.0

B.Eng.   Electrical Engineering, Huazhong University of Science and Technology, 2017
          GPA: 3.67/4.0   Major GPA: 3.81/4.0

PUBLICATIONS

SC 20'   *"OMPRacer: A Scalable and Precise Static Race Detector for OpenMP Programs"*
          Bradley Swain, **Yanze Li**, Peiming Liu, Ignacio Laguna, Giorgis Georgakoudis, Jeff Huang

ICSE 19' (Demo Track) *"SWORD: A Scalable Whole Program Race Detector for Java"*
          Yanze Li, Bozhen Liu, Jeff Huang

PROJECTS

LLVMRace An LLVM-based race detection framework, found several previously unkown bugs in Linux kernel, memcached, and GraphBLAS.

OMPRacer An LLVM-based race detector for OpenMP programs, using the SMT sovler and value-flow analysis to reason about interprocedure array accesses.
              Found several previously unknown bug in ECP proxy applications and covid-sim (the simulation program for COVID-19).

Crappie   An incremental race detection engine that scales to distributed systems and Android apps and has been implemented as a Intellij IDEA plugin.

SWORD   A whole program race detector for Java (source code/bytecode) and has been implemented as a Eclipse plugin.

HONOR AND AWARDS

2019   ACM SIGSOFT CAPS Award

2017   Excellent Graduated Student at HUST

2015   Scientific Research Innovation Scholarship

2014   3rd Place, China University Cloud Computing Innovation Competition

SERVICE

Sub-Reviewer

2020   OOPSLA

2019   PLDI, ICSE, FSE, OOPSLA

2018   TSE