

# Peiming Liu (刘沛鸣)

## Personal Data

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## Education

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since 09/2016	Ph.D. student in Computer Science Texas A&M University Research Interests: Program Analysis, Programming Language <i>Expected Graduation: Spring 2022</i>
09/2012 – 06-2016	Bachelor in Computer Science Huazhong University of Science and Technology <i>National Merit Scholarship</i>

## Work Experience

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06/2021 - 09/2021	Graduate Research Intern@ <b>Intel Lab</b> . Worked on compiler-based/hardware-based security.
09/2019 - 06/2021	Software Engineer@ <b>Coderrect Inc</b> . One of the core technical members in the start-up company. Worked on a static race detection tool that has found real races in <i>linux kernel</i> , <i>redis</i> , <i>memcached</i> , etc
06/2015–08/2015	Mobile Game Developer Intern@ <b>Tencent</b> . Worked on a popular mobile game with 10 million+ users in China.

## Projects

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### ASER-PTA

A *context-sensitive*, *field-sensitive* pointer analysis framework based on LLVM, capable of analyzing programs of millions of lines of code. Adopted and used by the Coderrect Scanner (<https://coderrect.com/>) as the core pointer analysis engine, which find real races in *linux kernel*, *memcached*, *covid-sim*, *redis*, etc.

### XRust (<https://github.com/parasol-aser/XRust>)

An enhanced Rust compiler that mitigates the security threat of unsafe Rust by ensuring the integrity of data flow from unsafe Rust code to safe Rust code.

## Publications

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Bozhen Liu, **Peiming Liu (co-first author)**, Yanze Li, Chia-Che Tsai, Dilma Da Silva, Jeff Huang  
When Threads Meet Events: Efficient and Precise Static Race Detection with Origins  
*Symposium on Programming Language Design & Implementation (PLDI' 21)*

Bradley Swain, Yanze Li, **Peiming Liu**, Ignacio Laguna, Giorgis Georgakoudis, Jeff Huang  
OMPRacer: A Scalable and Precise StaticRace Detector for OpenMP Programs  
*The International Conference for High Performance Computing, Networking, Storage, and Analysis (SC' 20)*

**Peiming Liu**, Gang Zhao, Jeff Huang  
Securing UnSafe Rust Programs with XRust.  
*International Conference on Software Engineering (ICSE'20)*

Ali Akbari, **Peiming Liu**, Bobak J. Mortazavi, Roozbeh Jafari  
Tagging Wearable Accelerometers in Camera Frames through Information Translation between Vision Sensors and Accelerometers  
*International Conference on Cyber-Physical Systems (ICCPs' 19)*