Zhendong ANG

38 College Avenue East, 138601, Singapore
angzhendong@gmail.com zhendong.ang@u.nus.edu

EDUCATION

2022.08 - present **National University of Singapore, Singapore**
Ph.D. in Computer Science
Adviser: Prof. Umang Mathur

2019.09 - 2022.07 **École Polytechnique Fédérale de Lausanne, Switzerland**
M.Sc. in Computer Science

2015.09 - 2019.06 **Zhejiang University, P. R. China**
B.Sc. in Computer Science

INTERNSHIP

2021.07 - 2022.01 **Oracle Labs, Zürich**
- Implement Intel Memory Protection Key (MPK) protection for MultiLingual Engine (MLE)

PUBLICATION

POPL 2024 Zhendong Ang, Umang Mathur. "Predictive Monitoring against Pattern Regular Languages." Proceedings of the ACM on Programming Languages (POPL), 2024.

PROJECTS

2022.02 - 2022.07 **Macro Annotations for Scala 3 (EPFL LAMP – Programming Methods Laboratory)**
- Designed patterns and APIs for macro annotations in Scala 3.
- Implemented macro annotations expansion.

2021.03 - 2021.07 **ScalaPy Related Projects (EPFL LAMP – Programming Methods Laboratory)**
- Created Numpy interface in Scala using ScalaPy and explored pattern of type facades.
- Migrated ScalaPy to Scala 3: refactored the code and used macros in Scala 3.
- Supported exposing custom Scala types to Python.

2020.09 - 2021.01 **Extending GADTs support in Scala 3 (EPFL LAMP – Programming Methods Laboratory)**
- Explored how subtype, class type parameters, and GADTs work in Dotty.
- Added GADTs constraint to class type parameters.
- This new feature has been merged into Scala 3.

2019.01 - 2019.06 **Compiling DSL into Java (Zhejiang University)**
- Worked with Alibaba and take part in designing DSL using in e-commerce development.
- Designed and implementing compilation DSL codes into runnable Java codes.

2016.09 - 2018.06 **Computer Systems Interest Group (Zhejiang University Computer System Architecture Laboratory)**
- Accomplished a simple computer system based on an FPGA board.
- Implemented CPU, data and address bus, memory and some peripherals accomplished in Verilog HDL.
- Peripherals included VGA screen and ps2 keyboard and coded a simple game in MIPS instructions.

LANGUAGE

Chinese Native
English Fluent