Shiwei Weng

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EDUCATION	Ph.D. Student in Computer Science	Baltimore, MD, USA
	Johns Hopkins University	Aug 2018 – Present
	• Advisor: Scott Smith	
	M.S.E in Computer Science	Baltimore, MD, USA
	Johns Hopkins University	Aug 2016 – Dec 2017
	B.Eng. in Software Engineering	Shanghai, China
	Fudan University	Sep 2008 – Jul 2013
	• Cumulative GPA: 3.48 / 4.00	
	B.S. in Computer Science	Dublin, Ireland
	University College Dublin	Sep 2009 – Sep 2013
	• Double Degree of Fudan-UCD program.	

INTERESTS Functional Programming, Symbolic Execution, Program Analysis, Model Checking

WORK EXPERIENCE

Microsoft Research Lab, Redmond
Research Intern — Jun 2021 – Aug 2021
- Mentor: Sulekha Kulkarni
- Worked on Checked C, a Clang-forked extension of C with buffer/memory/casting safety
- Designed and implemented a dataflow analysis to gather pre/post-conditions at statements
- Designed and implemented a SMT-based prover to reduce false-positive compiler warnings

Startup Interns & Freelance — Jul 2013 – Sep 2015
- Software engineer in Miaogu Network, Inc. Ohana Global, Inc. Keniu Information, Inc.

PUBLICATIONS

Higher-order demand-driven symbolic evaluation, ICFP 2020
- Together with Zachary Palmer, Theodore Park, and Scott Smith
- A symbolic backwards execution and a derived test generation algorithm
- Worked on the implementation, designed and conducted the artifact evaluation

RESEARCH PROJECTS

Symbolic Execution and Model Checking in Functional languages
- Continuing of the proof-of-concept work in the ICFP 2020 paper
- Lead the optimization and new features development
- Lead the model checking approach

PROFESSIONAL EXPERIENCE

Research Assistant
The Programming Languages Laboratory at JHU — Jun 2017 – Present

Teaching Assistant
Principles of Programming Languages, Spring 18(head)/19(head)/20/21
Functional Programming in Software Engineering, Fall 20/21

System Administrator
The Programming Languages Laboratory at JHU — Feb 2019 – Present
- Maintain lab servers for web and DevOps
- Help to organize lab events

ACADEMIC EVENTS
volunteered in SPLASH 2017, SPLASH 2018, ICFP 2020, OCaml 2020
attended PLISS 2017, PLMW@SPLASH 2017

SKILLS
Familiar with OCaml, Clang/LLVM
Experience in C++, C, Python, JavaScript, Java, Linux operations

HONORS & AWARDS

National Scholarship, Ministry of Education of the People's Republic of China — Nov 2010

1st Prize, The 13th National Olympiad in Informatics in Provinces(NOIP) — Dec 2007
China Computer Federation