Liyi Li

Education

University of Illinois at Urbana-Champaign — Champaign, IL
Degree: PHD, Computer Science
Graduation Date: Fall 2020
Programming Language in Compiler Verification

University of Illinois at Urbana-Champaign — Champaign, IL
Degree: Master of Science, Computer Science
Graduation Date: Spring 2014

University of Illinois at Urbana-Champaign — Champaign, IL
Degree: Bachelor of Science, Computer Science
Graduation Date: Spring 2012

Case Western Reserve University — Cleveland, OH
Degree: Bachelor of Science, Computer Science
Spring 2009 – Spring 2010

Work Experience

Iowa State CS Department — Ames, IA
Assistant Professor — August 2023 – Present

UMD CS Department — College Park, MD
Victor Basili Postdoc — November 2020 – August 2023

Teaching

- Instructor: Quantum Information and Complexity, Com S 434x, ISU, Fall ’23
- Instructor: Programming Language Technologies and Paradigms, CMSC 433, UMD, Fall ’22
- Instructor: Programming Language Technologies and Paradigms, CMSC 433, UMD, Spring ’22

Service

- SPIN 2022: PC Member
- OOPSLA 2023: Extended Review and Artifact Evaluation Committee Member
- PLDI 2023: External Reviewer.
- PeerJ Computer Science Journal Reviewer

Award

- Choose Ohio First Scholarship 2010 spring
- The Carolyn J. and John A. Massie ’66 Prize 2010
- UIUC University Honor 2012 (Bronze Tablet)
- 2019 Spring Outstanding Teaching Assistant Award
- 2020 UMD Victor Basili Postdoc

Journal Publication

- Yuxiang Peng, Kesha Hietala, Runzhou Tao, **Liyi Li**, Robert Rand, Michael Hicks, Xiaodi Wu, A Formally Certified End-to-End Implementation of Shor's Factorization Algorithm, PNAS journal, 2023
- Kesha Hietala, Robert Rand, **Liyi Li**, Shih-Han Hung, Xiaodi Wu, Michael Hicks, A Verified Optimizer for Quantum Circuits, TOPLAS journal, 2023

Conference Publication

- Finn Voichick, **Liyi Li**, Robert Rand, Michael Hicks, Qunity: A Unified Language for Quantum and Classical Computing, POPL 2023
- **Liyi Li**, Yiyun Liu, Deena Postol, Leonidas Lampropoulos, David Van Horn, Michael Hicks, A Formal Model of Checked C, CSF 2022
- **Liyi Li**, Finn Voichick, Kesha Hietala, Yuxiang Peng, Xiaodi Wu, Michael Hicks, Verified Compilation of Quantum Oracles, OOPSLA 2022
- Kesha Hietala, Robert Rand, Shih-Han Hung, **Liyi Li**, Michael Hicks, Proving Quantum Programs Correct, ITP 2021
- **Liyi Li**, Elsa L. Gunter, https://dl.acm.org/doi/abs/10.1007/978-3-030-85315-0_10, ICTAC 2021
- **Liyi Li**, Elsa L. Gunter, Per-Location Simulation, NFM 2020
- **Liyi Li**, Elsa L. Gunter, K-LLVM: A Relatively Complete Semantics of LLVM IR, ECOOP 2020
- **Liyi Li**, Elsa L. Gunter, IsaK-Static: A Complete Static Semantics of K, FACS 2018
- **Liyi Li**, Elsa L. Gunter, William Mansky. Symbolic Analysis Tools for CSP, ICTAC 2014

Workshop Publication

- Kesha Hietala, **Liyi Li**, Akshaj Gaur, Aaron Green, Robert Rand, Xiaodi Wu, Michael Hicks, Expanding the VOQC Toolkit, PLanQC 2021
- **Liyi Li**, Elsa L. Gunter, A method to translate order-sorted algebras to many-sorted algebras, WPTE 2017