

WEI QIANG

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INTERESTS

My research interests lie in programming languages, formal methods, and computer systems. I build verification and synthesis frameworks that make software more reliable.

EDUCATION

Columbia University *Sep 2024 - Now*
PhD Student in Computer Science
Advised by Professor Ronghui Gu

Columbia University GPA: 4.0 *Sep 2022 - Dec 2023*
Master of Science, Computer Science
Advised by Professor Ronghui Gu

University of Washington (Seattle) GPA: 3.87 *Sep 2018 - June 2022*
Bachelor of Science, Computer Science
Bachelor of Arts, Mathematics

PUBLICATION

QSymb: Synthesis of Compact and Expressive Quantum-Circuit Optimizations *2026*
OOPSLA 2026
[Wei Qiang](#) and Ronghui Gu. **OOPSLA 2026**.

Spoq2: Highly Automated Verification of Security Properties for Unmodified System Software *Mar 2026*
ASPLOS 2026
Ganxiang Yang*, [Wei Qiang](#)*, Yi Rong*, Xuheng Li, Fanqi Yu, Jason Nieh, and Ronghui Gu.
ASPLOS 2026. (Acceptance rate: 10.6%, * indicates equal contribution)
Best Paper Honorable Mention (16 out of 152 accepted papers)

Spoq: Scaling Machine-Checkable Systems Verification in Coq *Jul 2023*
OSDI 2023
Xupeng Li, Xuheng Li, [Wei Qiang](#), Ronghui Gu, and Jason Nieh. **OSDI 2023**.

PROFESSIONAL EXPERIENCE

Columbia University *Sep 2023 - Now*
Research Assistant
Advisor: Professor Ronghui Gu
Topic: Computer Systems; Formal methods; scaling automated verification on software systems

- Designed **QSymb**, a novel and state-of-the-art quantum optimizations framework that automatically synthesizes expressive symbolic optimizations for quantum circuits; accepted at OOPSLA 2026.
- Designed **Spoq2**, a highly automated verification framework for proving security properties of unmodified system software; accepted at ASPLOS 2026.
- Designed **Spoq**, a verification framework that scales machine-checkable system verifications on Coq; accepted at OSDI 2023.

Wyze Inc, Seattle *Jun 2022 - Aug 2022*
Software Engineer Intern

- Built and designed RESTful APIs for Wyze Home Services; implemented web application that uses these APIs to query and manage user data.

TEACHING

COMS 4995: Parallel Functional Programming *Sep 2023 - Dec 2023*
Teaching Assistant at Columbia University

COMS 6998 007: Types, Languages, Compilers *Jan 2023 - May 2023*
Teaching Assistant at Columbia University

CSE 341: Programming languages
Teaching Assistant at University of Washington

Sep 2021 - Dec 2021

CSE 413: Programming languages and implementation
Teaching Assistant at University of Washington

Apr 2021 - Jun 2021

PROFESSIONAL SERVICE

PLDI 2026 Artifact Evaluation Committee Member
PLDI 2025 Artifact Evaluation Committee Member
ASPLOS 2025 Artifact Evaluation Committee Member

HONORS

Annual Dean's list at University of Washington, *2018 - 2020*
Winter 2021 Dean's List
Spring 2021 Dean's List