

Chentian Wu

cwu100@illinois.edu | wuct.site | github.com/wuc9521

Education

University of Illinois Urbana-Champaign <i>Ph.D. Student in Electrical and Computer Engineering</i> Programming languages, logic, and applied cryptography.	Aug. 2026 – Present Champaign, IL, USA
University of Wisconsin–Madison <i>B.Sc. in Mathematics (Honors) and Computer Science (Honors)</i> GPA: 3.982/4.0 Selected Courses: Theory of Computation, Theory and Design of PLs, Program Synthesis and Verification, Principles of PLs, System Verification, PLs for Quantum Computing, General Topology, Algebraic Topology, Real Analysis I & II, Modern Algebra I & II, Modern Number Theory, Combinatorics.	Jan. 2024 – Dec. 2025 Madison, WI, USA
Nanjing University <i>B.Eng. in Computer Software Engineering (transferred out)</i> GPA: 4.36/5.0 Selected Courses: Compilers, Mathematical Logic, Software Testing.	Sep. 2021 – Dec. 2023 Nanjing, China

Publications

Efficient Meta-synthesis for Finite-Aspect Checkable Languages <i>Chentian Wu, Xiaokang Qiu</i> Conditionally accepted at Principles of Programming Languages (POPL) 2027.
IMPROMPT: A Language Framework for Prompt Programming <i>Chentian Wu, Shengyuan Yang, Adithya Murali</i> Preprint, 2026. DOI: 10.48550/arXiv.2607.22683
Free Constructions and Monadicity <i>Chentian Wu</i> , supervisors: <i>Marco Paviotti and Uri Andrews</i> Honors bachelor's thesis, UW–Madison, 2025. URL: https://digital.library.wisc.edu/1793/97808 Awarded R. Creighton Buck Prize (Excellence in Undergraduate Research).
LLM for Test Script Generation and Migration: Challenges, Capabilities, and Opportunities <i>Shengcheng Yu, Chunrong Fang, Yuchen Ling, Chentian Wu, Zhenyu Chen</i> Software Quality, Reliability, and Security (QRS) 2023. DOI: 10.1109/QRS60937.2023.00029

Additional Writings

Constructible Regular n-gons [.pdf]	MATH 542, 2025
What is Homotopical about Homotopy Type Theory? [.pdf]	MATH 552, 2025
Elliptic Curve Cryptography on Edwards Curves [.pdf]	MATH 567, 2025

Additional Research Experience

Zero-Knowledge Model Counting. <i>Research Assistant</i> Advised by Prof. Ning Luo	Sep. 2026 – Present UIUC
Lean*. <i>Research Assistant</i> Advised by Prof. Madhusudan Parthasarathy	Sep. 2026 – Present UIUC
Zero-Knowledge OCaml. <i>Research Assistant</i> Advised by Prof. Ning Luo and Dr. Yuyang Sang	Jun. 2025 – Present UW–Madison

Work Experience

Alibaba Cloud. <i>Intern</i> Supervised by Dr. Zhilong Zheng and Dr. Ennan Zhai Profiling LLM training and inference systems.	May 2026 – Present Hangzhou, China
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Additional Experience

Midwest PL Summit. <i>Participant</i> , U of Iowa	Nov. 2026
Oregon PL Summer School. <i>Participant</i> , U of Oregon Types, Logic, and Formal Methods Awarded OPLSS 2025 Fellowship	Jun. 2025 – Jul. 2025
Directed Reading Program. <i>Participant</i> , UW–Madison Mentored by Yiqing Wang Studied Chapters 1–4 of Model Theory	Sep. 2024 – Dec. 2024

Teaching Experience

UIUC CS 477: Formal Software Development Methods. <i>Teaching Assistant</i>	S27
UW–Madison MATH 551: Elementary Topology. <i>Course Assistant</i> MATH 521: Analysis I. <i>Grader</i> CS 538: Theory and Design of Programming Languages. <i>Peer Mentor</i> Math Learning Center. <i>Proof Table Tutor</i> CS Learning Center. <i>Tutor</i>	F25 + S25 F25 S25 F24 F24

Presentations

PL/FM/SE Seminar , UIUC Learning Logics: From Theory to Practice [slides]	Oct. 7, 2026
Graduate Quantum PL Seminar , UW–Madison Quantitative Robustness Analysis of Quantum Programs [slides] Linear Dependent Type Theory for Quantum Programming Languages [slides]	Nov. 10, 2025 Oct. 8, 2025
madPL Seminar , UW–Madison What is Monadic about Algebraic Effects? [slides]	Oct. 7, 2025
Directed Reading Program , UW–Madison Ramsey Theory Meets Infinity: A Proof of the Erdős–Rado Theorem [slides]	Dec. 4, 2024

Honors & Awards

UW–Madison R. Creighton Buck Prize Fund Scholarship Awarded to undergraduates completing the strongest senior research project.	May 2025
OPLSS Student Fellowship	May 2025
UW–Madison Dean's List	Dec. 2025, 2024
UW–Madison Summer Internship Scholarship	May 2024
CitiCup Financial Competition, Third Prize	Apr. 2024
National College Students' Mathematical Competition, First Prize of Jiangsu Province	Mar. 2023
Nanjing University Renmin Scholarship, First Prize Top 10% based on academic performance.	Oct. 2022

Skills

- Programming Languages: Rust, Haskell, Rocq, TypeScript, Java, C/C++, Python, SQL.
- Tools & Frameworks: Iris, SMT, SYGUS, LLVM, ANTLR4.
- Languages: English (Fluent), Chinese (Native).