

Vincent X. Wang

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EDUCATION

University of Chicago

B.S. in Mathematics

Chicago, IL

Expected June 2027

- Transferred from Rice University (Aug 2023 – May 2025), GPA: 4.0/4.0

EXPERIENCE

SMALL REU: Tropical geometry and chip-firing games

June 2025 – Current

Williams College, Department of Mathematics

- Conducted original theoretical research in algebraic combinatorics
- Created performant [Julia library for analysis of chip-firing graphs](#) and ran multi-threaded computations

Algorithms in differential privacy

January 2025 – June 2025

Rice University, Department of Computer Science

- Developed several new differentially private algorithms in learning theory with prediction
- Settled an open question of 7 years by discovering the first private nearly-linear time hypothesis selection algorithm

Discontinuous Galerkin methods for wave equations ([Github](#))

Apr 2024 – Dec 2024

Rice University, Department of Computational Applied Mathematics and Operations Research

- Formulated new matrix algorithms for Bernstein basis operators in high-fidelity PDE simulations, resulting in over 100x speedups at high orders over state-of-the-art
- Awarded Outstanding Presentation in Computational Applied Mathematics and Operations Research at Gulf Coast Undergraduate Research Symposium

PUBLICATIONS (AUTHORS IN ALPHABETICAL ORDER)

1. D. Leitz, R. Morrison, S. Newman-Taylor, V. X. Wang. *The d -gonal Locus of the Moduli Spaces of Tropical Plane Curves*. In preparation.
2. C. Chen, T. Gabrielsen, R. Morrison, N. Pasman, M. Reeve, V. X. Wang. *Graph Gonality Under Uniform Subdivision*. In preparation.
3. M. Aliakbarpour, Z. Shi, R. Stevens, V. X. Wang. *Nearly-Linear Time Private Hypothesis Selection with the Optimal Approximation Factor*. To appear in the 39th Conference on Neural Information Processing Systems, **NeurIPS 2025**, [arXiv](#).

AWARDS/HONORS

- Putnam **Top 517** (Score: 28) Dec 2023
- **Silver Medal** at US Physics Olympiad (2x Qualifier) May 2022
- 3x AIME Qualifier 2021-2023
- USA Coding Olympiad Silver Contestant Jan 2020
- Lam Research Core Values Scholarship May 2023

PROJECTS

[nostalgia.rs](#)

Nintendo NES emulator in Rust from scratch (can play Donkey Kong + more!)

[rchess](#)

Rust-based chess library and engine

SKILLS AND INTERESTS

Academic positions: Teaching assistant for Honors Multivariable Calculus and Algorithmic Thinking, Academic fellow for Multivariable Calculus and Real Analysis

Coding languages: Julia, Rust, Python, Java, C/C++, Javascript

Interests: Electronic music production, classical (piano) composition, topology/geometry, Teamfight Tactics, matcha latte making