

TUONG LE

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EDUCATION

Princeton University	<i>2025 - present</i>
Ph.D. in Mathematics. Advisor: June E Huh	
University of Michigan, Ann Arbor	<i>2021 - 2025</i>
Major: Honors Mathematics, Computer Science	GPA: 3.99/4.00

PUBLICATIONS

3. *Quantum bumpless pipe dreams*, Forum of Mathematics, Sigma 13:e28 (2025). With S. Ouyang, J. Restivo, L. Tao, A. Zhang. [Link](#)
2. *Improved online reachability preservers*, ACM - SIAM Symposium on Discrete Algorithms (SODA) (2025) With G. Bodwin. [Link](#)
1. *On symmetric pattern avoidance sets*, [arXiv:2601.07195](#). Part of the Duluth REU 2024.

EXPERIENCE

Duluth REU , Univeristy of Minnesota Duluth	<i>Jun - Aug 2024</i>
<ul style="list-style-type: none">Conducted research in algebraic combinatorics, in particular, symmetrically avoided sets of permutations.	
Independent research , University of Michigan, Ann Arbor	<i>Jan - Apr 2024</i>
<ul style="list-style-type: none">Polynomially improved upper bounds on size of path systems avoiding certain subsystems called “4-bridges” and variants under the supervision of Dr. Greg Bodwin.	
Lab of Geometry at Michigan (LoG(M)) , Univeristy of Michigan	<i>Aug - Dec 2023</i>
<ul style="list-style-type: none">Formulated and proved the quantum bumpless pipe dream formula for quantum double Schubert polynomials, which generalize the bumpless pipe dream formula for double Schubert polynomials.	
Polymath Jr.	<i>Jun - Aug 2022</i>

HONORS, AWARDS AND SCHOLARSHIPS

Stephen Smale Award in Mathematical Sciences	<i>2025</i>
Wirt & Mary Cornwell Prize	<i>2024</i>
Awarded to only one student in the Department of Mathematics at the University of Michigan per year “who, during the previous four years, shall have demonstrated the greatest intellectual curiosity and given the most promise of original study and creative work in Mathematics.”	
World Finals , International Collegiate Programming Contest (ICPC)	<i>2024</i>
Evelyn O. Bychinsky Awards	<i>2023</i>
84th Putnam Competition , Rank 52	<i>2023</i>
University of Michigan Undergraduate Mathematics Competition , Top 2	<i>2022, 2023, 2024</i>
IMO TST Finalist (Top 48) , Vietnam Mathematical Olympiad	<i>2020, 2021</i>

TALKS

3. *Quantum bumpless pipe dreams*, Univeristy of Michigan Combinatorics Seminar *Nov 2024*
2. *On symmetric pattern avoidance sets*, Joint Mathematics Meeting *Jan 2025*

1. *Improved online reachability preservers*, ACM - SIAM Symposium on Discrete Algorithms (SODA) 2025 *Jan 2025*

POSTERS

1. *Quantum bumpless pipe dreams*, FPSAC 2025. *Aug 2025*

GRADING AND TEACHING

Course Assistant, MATH 296 (Honors Math II) *Jan - Apr 2024*

Grader, MATH 566 (Algebraic and Enumerative Combinatorics) *Jan - Apr 2024*

Course Assistant, MATH 295 (Honors Math I) *Aug - Dec 2023*

Grader, MATH 668 (Combinatorial Matrix Theory) *Aug - Dec 2023*

Tutor, Math Learning Center *Aug 2022 - Apr 2023*