

# LILY WANG

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## EDUCATION

- PhD Candidate in Computer Science and Engineering** Sept 2022 - Present  
University of Michigan, *Ann Arbor, MI*  
Advisor: Greg Bodwin
- Master of Science in Engineering** Sept 2020 - Dec 2021  
University of Michigan, *Ann Arbor, MI*  
Advisors: Viswanath Nagarajan & Euiwoong Lee  
Industrial & Operations Engineering
- Bachelor of Mathematics** Sept 2015 - Apr 2020  
University of Waterloo, *Waterloo, ON*  
Major in Combinatorics & Optimization and Pure Mathematics

## PUBLICATIONS AND PREPRINTS

**Improved Shortest Path Restoration Lemmas for Multiple Edge Failures:  
Trade-offs Between Fault-tolerance and Subpaths**

with Greg Bodwin.

*Preprint.*

<https://arxiv.org/abs/2309.07964>

**On Some Variants of Euclidean K-Supplier**

with Euiwoong Lee and Viswanath Nagarajan.

*Operation Research Letters, March 2022.*

<https://arxiv.org/abs/2112.01700>

**Online Generalized Network Design Under (Dis)Economies of Scale**

with Viswanath Nagarajan.

*Proceedings of the 32nd ACM-SIAM Symposium on Discrete Algorithms (SODA), 2021*

*Also in Mathematics of Operations Research.*

<https://arxiv.org/abs/2007.07721>

## AWARDS AND SCHOLARSHIPS

- |   |             |
|---|-------------|
| UMichigan Graduate Fellowship                 | 2022 - 2023 |
| Dwight F. Benton Fellowship                   | 2020 - 2021 |
| Scholarship of Excellence (EPFL)              | 2019        |
| NSERC Award for Undergraduate Research        | 2019        |
| NSERC Award for Undergraduate Research        | 2018        |
| 207th Place (Score of 40), Putnam Competition | 2017        |
| Combinatorics & Optimization Research Award   | 2017        |
| Rene Descartes National Scholarship           | 2015 - 2019 |

President's Scholarship of Distinction

2015 - 2016

## PRESENTATIONS

*Online Generalized Network Design Under (Dis)Economies of Scale*, SODA2021. 2021  
*Which Sets of Strings are Pseudospherical?* GD19 (Poster). 2019  
*Obstructions to Psuedocircular Arrangements*. CUMC. 2019  
*The Combinatorics of Nearest and Furthest Smaller Values*. CanaDAM. 2019

## TEACHING ASSISTANTSHIPS

Tutoring, MATH135 - Introduction to Algebra Winter 2020  
Grader, CO239 - Introduction to Combinatorics Fall 2018  
Grader, MATH114 - Linear Algebra for Science Fall 2017  
Grader, MATH146 - Linear Algebra I for Honours Math (Advanced) Winter 2017  
Grader, MATH147 - Calculus I for Honours Math (Advanced) Fall 2016

## SERVICE

Treasurer, UMichigan CSE Graduate Student Org. 2023 - 2024  
Graduate Student Research Mentor, MathILy-EST 2023  
Co-chair, UWaterloo CUMC Committee 2017 - 2019  
VP Finance, Pure Math, Applied Math, and C&O Club 2016 - 2019