

Minghao Chen

minghao.c@umich.edu | (734) 510-0059 | 636A, 520 W 120 St, New York, NY, 10025

RESEARCH INTERESTS

- **Methodology:** Stochastic Programming, Network Control and Optimization, Reinforcement Learning
- **Application:** Smart Cities, Logistics, Transportation, Robotics

EDUCATION

Ph.D. in Engineering Mechanics (Expected May 2026), Columbia University, New York, NY

- Advisor: Prof. Andrew Smyth and Prof. Max Li (UM)
- Core Courses: *Bayesian Statistics, Probabilistic Machine Learning, Reinforcement Learning, Computational Statistics, High Dimensional Probability with Application, Math of Deep Learning, Convex Optimization*

M.S.E. in Industrial and Operations Engineering, University of Michigan (UM), Ann Arbor, MI

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Exchange Student in the UM-SJTU Joint Institute, Shanghai Jiao Tong University (SJTU), Shanghai, CN

- Advisor: Prof. Yanfeng Shen

B.E. in Civil Engineering, Southwest Jiaotong University (SWJTU), Chengdu, CN

- Advisor: Prof. Wenbo Yang

PUBLICATIONS

- **Chen, M.**, Smyth A., Giometto, M., & Li, M. Drone Delivery Routing with Stochastic Urban Winds. *26th IEEE International Conference on Intelligent Transportation Systems (ITSC 2023)*.
- **Chen, M.**, & Shen, Y. (2021). Multi-Bolt Loosening Monitoring Using an Integrated Vibro-Acoustic Modulation Technique. *ASME International Mechanical Engineering Congress and Exposition*.
- Liu, C., **Chen, M.**, et al. (2019). Network Design of Underground Logistics Channel Based on Simulated Annealing. *Journal of Highway and Transportation Research and Development*, 36(06), 151-158. doi:10.3969/j.issn.1002-0268.2019.06.019.

PRESENTATIONS

- [Robust Drone Routing with Gust Urban Winds](#). *INFORMS Annual Meeting*, October 2023, Phoenix, AZ.
- [Drone Delivery Routing with Stochastic Urban Winds](#). *26th IEEE International Conference on Intelligent Transportation Systems*, September 2023, Bilbao, Spain.
- [Multi-bolt loosening monitoring using an integrated vibro-acoustic modulation technique](#). *2021 ASME International Mechanical Engineering Congress & Exposition*, November 2021, virtual.
- [An experiment study of dynamic response of shield tunnel under long-term loads induced by trains](#). *The 5th China Civil Engineering Society Tunnel and Underground Engineering Branch (CCES-TUWB) Construction Management and Technology Youth Conference*, October 2019, Ermei, China.
- [Analysis of urban flood-waterlogging and design of road drainage system based on low-impact development](#). *ASCE Mid-Pacific Conference Water Research Paper Competition*, April 2018, Sacramento, CA.

ACADEMIC SERVICE

- **Reviewer** of the *IEEE International Conference on Intelligent Transportation Systems (ITSC)*
- **Host** of *Columbia University CEEM Departmental Graduate Seminar*

TEACHING SERVICE

University of Michigan

Teaching Assistant of CEE 514 Prestress Concrete Design (FA 2021), **Grader** of CEE 511 Structural Dynamics (WN 2022)

SCHOLARSHIPS AND AWARDS

Calatrava Family Fellowship	2022
SWJTU Innovation Scholarship	2016
The ASCE MIDPAC 2018 Steel Bridge Competition First Prize in Display	2018
The ASCE MIDPAC 2018 Water Research Paper Competition Third Place	2018

The Mathematical Contest in Modeling | Meritorious Winner
China Undergraduate Mathematical Contest in Modeling | First Prize

2017
Sep 2016

PUBLIC SERVICE

American Society of Civil Engineers UM Student Chapter - <i>SE Branch Representative</i>	<i>May 2021 – May 2022</i>
UM CEE Graduate Student Advisory Council	<i>Sep 2020 – May 2021</i>
SJTU International Program Office - <i>Student Assistant</i>	<i>Oct 2020 – Aug 2021</i>
SJTU History Museum - <i>Volunteer</i>	<i>Oct 2020 – Aug 2021</i>
SWJTU Mathematical Modeling Association - <i>Honorable Member</i>	<i>Sep 2017 – July 2019</i>
Chi Epsilon American Honor Society of Civil Engineers - <i>Global Community Relationship</i>	<i>May 2018 – May 2019</i>
Pengjiawan Charity Bridge Reconstruction Engineering - <i>Assistant Engineer</i>	<i>Aug 2017 – Dec 2017</i>