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

Columbia University   **New York, US**
Ph.D. in Engineering Mechanics   *Expected May 2026*
- Advisor: Prof. Andrew Smyth and Prof. Max Li
- Core Courses: *Bayesian Statistics, Probabilistic Machine Learning, Reinforcement Learning, Computational Statistics, High Dimensional Probability with Application, Math of Deep Learning, Convex Optimization*

University of Michigan (UM)   **Ann Arbor, US**
M.S.E. in Industrial and Operations Engineering   *May 2022*
M.S.E. in Intelligent System Engineering   *May 2022*

Shanghai Jiao Tong University (SJTU)   **Shanghai, CN**
Exchange Student in the UM-SJTU Joint Institute   *Sep 2020 - June 2021*
- Advisor: Prof. Yanfeng Shen

Southwest Jiaotong University (SWJTU)   **Chengdu, CN**
B.E. in Civil Engineering   *June 2019*

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 Merit Scholarship	*2015-2017*
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	*2017*
China Undergraduate Mathematical Contest in Modeling	First Prize	*Sep 2016*

PUBLIC SERVICE

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