

Xingyu Wang

CONTACT INFORMATION	Roetersstraat 11 1018 WB Amsterdam, NL Webpage: https://joshwang0322.github.io	+31 6 16566325 x.wang4@uva.nl
RESEARCH INTERESTS	<ul style="list-style-type: none">• Rare Event Analysis, Large Deviations and Metastability, Heavy Tails• Machine Learning Theory• Stochastic Simulation	
EMPLOYMENT	University of Amsterdam, Amsterdam School of Economics <ul style="list-style-type: none">• Postdoc Researcher, Quantitative Economics <i>Hosts: Roger J.A. Laeven, Bert Zwart</i>	Amsterdam, NL 2024 -
EDUCATION	Northwestern University, McCormick School of Engineering <ul style="list-style-type: none">• Ph.D. in Industrial Engineering and Management Sciences <i>Advisor: Chang-Han Rhee</i>• M.S. in Analytics Peking University <ul style="list-style-type: none">• B.S. in Psychology and Applied Mathematics	Evanston, IL, US 2018 - 2024 2016 - 2017 Beijing, China 2011 - 2016
WORKING PAPERS	Large Deviations and Metastability Analysis for Heavy-Tailed Dynamical Systems [pdf] Xingyu Wang, Chang-Han Rhee; arXiv:2307.03479 <i>Second Place, George Nicholson Student Paper Competition, 2023</i>	
	Strongly Efficient Rare-Event Simulation for Regularly Varying Lévy Processes with Infinite Activities [pdf] Xingyu Wang, Chang-Han Rhee; arXiv:2309.13820	
SELECTED PUBLICATIONS	Importance Sampling Strategy for Heavy-Tailed Systems with Catastrophe Principle [pdf] Xingyu Wang, Chang-Han Rhee Proceedings of Winter Simulation Conference (WSC), 2023	
	Eliminating Sharp Minima from SGD with Truncated Heavy-Tailed Noises [pdf] Xingyu Wang, Sewoong Oh, Chang-Han Rhee Proceedings of International Conference on Learning Representations (ICLR), 2022 <i>Nemhauser Prize for Best Student Paper, 2022</i>	
	Efficient Rare-Event Simulation for Multiple Jump Events in Regularly Varying Lévy Processes with Infinite Activities [pdf] Xingyu Wang, Chang-Han Rhee Proceedings of Winter Simulation Conference (WSC), 2020	

Competitive Multi-Agent Inverse Reinforcement Learning with Sub-Optimal Demonstrations [\[pdf\]](#)

Xingyu Wang, Diego Klabjan

Proceedings of International Conference on Machine Learning (ICML), 2018

HONORS AND AWARDS

- **Second Place, George Nicholson Student Paper Competition**, INFORMS 2023
- **Terminal Year Fellowship**, Northwestern University 2023
- **Nemhauser Prize for Best Student Paper**, Department of Industrial Engineering and Management Sciences, Northwestern University 2022
- **Benjamin A. Sachs Graduate Fellowship**, Northwestern University 2022
- **Arthur P. Hurter Award for Academic Excellence among First Year Graduate Students**, Department of Industrial Engineering and Management Sciences, Northwestern University 2019
- **Lee Wai Wang Scholarship**, Department of Psychology, Peking University 2015
- **National Scholarship for Undergraduates**, Department of Psychology, Peking University 2013

INVITED PRESENTATIONS

Sharp Characterization and Control of Global Dynamics of SGDs with Heavy Tails

- INI Satellite Programme on Heavy Tails in Machine Learning, London, UK Apr, 2024
- SNAPP Seminar, Lightning Talk Session, Virtual [\[slides\]](#) [\[video\]](#) Dec, 2023

Importance Sampling Strategy for Heavy-Tailed Systems with Catastrophe Principle

- INFORMS Annual Meeting, Seattle, WA Scheduled for Oct, 2024
- Winter Simulation Conference (Advanced Tutorial), San Antonio, TX Dec, 2023

Large Deviation and Metastability Analysis for Heavy-Tailed Dynamical Systems

- Neurips 2023, Heavy Tails in ML Workshop (Poster), New Orleans, LA Dec, 2023
- INFORMS Annual Meeting, Phoenix, AZ Oct, 2023
- Cornell ORIE Young Researchers Workshop, Ithaca, NY Oct, 2023

Eliminating Sharp Minima from SGD with Truncated Heavy-Tailed Noises [\[slides\]](#)

- INFORMS Annual Meeting, Phoenix, AZ Oct, 2023
- Applied Probability Society 2023 Conference, Nancy, France Jun, 2023
- INFORMS Annual Meeting, Indianapolis, IN Oct, 2022
- International Conference on Learning Representations (2022), Virtual Apr, 2022
- DeepMath (2021), Virtual Nov, 2021

Efficient Rare-Event Simulation for Multiple Jump Events in Regularly Varying Lévy Processes with Infinite Activities [\[slides\]](#)

- Winter Simulation Conference, Virtual Dec, 2020
- INFORMS Annual Meeting, Virtual Nov, 2020

TEACHING
EXPERIENCE

Instructor

- IEMS Bootcamp (Probability) for PhD Students 2022 Fall, 2023 Fall

Teaching Assistant

- IEMS 317 Discrete Event Systems Simulation 2022 Winter; 2021 Winter
- IEMS 315 Stochastic Models 2021 Spring, Fall; 2020 Spring, Fall

Course Grader

- OPNS 450 Decision Models & Prescriptive Analytics 2022 Winter
- IEMS 435 Stochastic Simulation 2020 Winter

SERVICES

- Referee: *Management Science*, *INFORMS Journal on Computing*, *Winter Simulation Conference (WSC)*
- Volunteer: *NU MORE-REACH panel (2024)*
- Webmaster: *Stochastic Networks, Applied Probability, and Performance (SNAPP) seminar (2023 - 2024)*
- Mentor: *1st-year mentorship program at NU INFORMS Student Chapter (2020, 2021)*

INDUSTRIAL
EXPERIENCE

Graduate Student Analytics Consultant, Chicago Park District

Chicago, IL
Oct 2016 - May 2017

Data Analyst Intern, 17zuoye (aka Homework Together, K12 education platform) Beijing, China
Aug - Dec 2015