

Xingyu Wang

CONTACT INFORMATION	2145 Sheridan Road Evanston, IL 60208 Webpage: https://joshwang0322.github.io	(224) 307-0602 xingyuwang2017@u.northwestern.edu
RESEARCH INTERESTS	<ul style="list-style-type: none">• Rare Event Analysis, Large Deviations and Metastability, Heavy Tails• Machine Learning Theory• Stochastic Simulation	
EDUCATION	Northwestern University, McCormick School of Engineering • Ph.D. in Industrial Engineering and Management Sciences , <i>GPA: 4.0/4.0</i> <i>Advisor: Chang-Han Rhee</i> • M.S. in Analytics , <i>GPA: 3.98/4.00</i> Peking University • B.S. in Psychology (<i>GPA: 3.8/4.0</i>) and Applied Mathematics (<i>GPA: 3.94/4.00</i>)	Evanston, IL 2018 - Present 2016 - 2017 Beijing, China 2011 - 2016
WORKING PAPERS	Large Deviations and Metastability Analysis for Heavy-Tailed Dynamical Systems , [pdf] Xingyu Wang, Chang-Han Rhee To be submitted to <i>Probability Theory and Related Fields</i> , arXiv:2307.03479 <i>Finalist for George Nicholson Student Paper Competition</i> , 2023 Strongly Efficient Rare-Event Simulation for Multiple Jump Events in Regularly Varying Lévy Processes with Infinite Activities [pdf] Xingyu Wang, Chang-Han Rhee To be submitted to <i>Mathematics of Operation Research</i> , 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</i> , 2022 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	<ul style="list-style-type: none"> • Finalist for 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 of Undergraduates, Department of Psychology, Peking University 2013
INVITED PRESENTATIONS	Large Deviation and Metastability Analysis for Heavy-Tailed Dynamical Systems <ul style="list-style-type: none"> • INFORMS Annual Meeting, Phoenix, AZ Scheduled for Oct, 2023 • Cornell ORIE Young Researchers Workshop, Ithaca, NY Scheduled for Oct, 2023
	Importance Sampling Strategy for Heavy-Tailed Systems with Catastrophe Principle <ul style="list-style-type: none"> • Winter Simulation Conference (Advanced Tutorial), San Antonio, TX Scheduled for Dec, 2023
	Eliminating Sharp Minima from SGD with Truncated Heavy-Tailed Noises [slides] <ul style="list-style-type: none"> • INFORMS Annual Meeting, Phoenix, AZ Scheduled for 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] <ul style="list-style-type: none"> • Winter Simulation Conference, Virtual Dec, 2020 • INFORMS Annual Meeting, Virtual Nov, 2020
TEACHING EXPERIENCE	Instructor <ul style="list-style-type: none"> • IEMS Bootcamp (Probability) for PhD Students 2022 Fall, 2023 Fall
	Teaching Assistant <ul style="list-style-type: none"> • IEMS 317 Discrete Event Systems Simulation 2022 Winter; 2021 Winter • IEMS 315 Stochastic Models 2021 Spring, Fall; 2020 Spring, Fall
	Course Grader <ul style="list-style-type: none"> • OPNS 450 Decision models & Prescriptive Analytics 2022 Winter • IEMS 435 Stochastic Simulation 2020 Winter
PROFESSIONAL SERVICES	<ul style="list-style-type: none"> • Reviewer, <i>INFORMS Journal on Computing</i>, <i>Winter Simulation Conference (WSC)</i> • Webmaster, Stochastic Networks, Applied Probability, and Performance (SNAPP) seminar (2023) • Mentor, 1st-year mentorship program (2020,2021), NU INFORMS Student Chapter

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

REFERENCES

Anton Braverman, Assistant Professor of Operations, Kellogg School of Management, Northwestern University, anton.braverman@kellogg.northwestern.edu

Barry Nelson, Walter P. Murphy Professor Emeritus of Industrial Engineering and Management Sciences, Northwestern University, nelsonb@northwestern.edu

Sewoong Oh, Professor, Allen School of Computer Science & Engineering, University of Washington, sewoong@cs.washington.edu

Chang-Han Rhee, Assistant Professor, Industrial Engineering and Management Sciences, Northwestern University, chang-han.rhee@northwestern.edu