CURRICULUM VITAE

SHENGBO WANG

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EDUCATION

Stanford University — Management Science and Engineering (Ph.D. Candidate) 2020-2025
- Co-advised by Prof. Peter Glynn and Jose Blanchet.
- Pursuing a Ph.D. in Operations Research with concentration in Applied Probability.

Cornell University — College of Engineering (Bachelor of Science) 2017-2020
- Summa cum laude.
- Major: Operations Research (honor program).
- Minor: Applied Mathematics.

HONORS AND AWARDS

- Merrill Presidential Scholar (top 1%). Cornell University, 2020
- Byron W. Saunders Award. Cornell ORIE, 2020

CONFERENCE PAPERS

An Efficient High-dimensional Gradient Estimator for Stochastic Differential Equations
- Shengbo Wang, Jose Blanchet, Peter Glynn.
- *Neural Information Processing Systems (NeurIPS) 2024.*

Optimal Sample Complexity for Average Reward Markov Decision Processes
- Shengbo Wang, Jose Blanchet, Peter Glynn.
- *International Conference on Learning Representations (ICLR) 2024.*

A Finite Sample Complexity Bound for Distributionally Robust Q-learning
- Shengbo Wang, Nian Si, Jose Blanchet, Zhengyuan Zhou.
- *Artificial Intelligence and Statistics Conference (AISTATS) 2023.*

PREPRINTS

Statistical Learning of Distributionally Robust Stochastic Control in Continuous State Spaces
- Shengbo Wang, Nian Si, Jose Blanchet, Zhengyuan Zhou.
- Submitted.
- arXiv:2406.11281

On the Foundation of Distributionally Robust Reinforcement Learning
- Shengbo Wang, Nian Si, Jose Blanchet, Zhengyuan Zhou.
- Under revision for *Operations Research*.
- arXiv:2311.09018.

Sample Complexity of Variance-reduced Distributionally Robust Q-learning
- Shengbo Wang, Nian Si, Jose Blanchet, Zhengyuan Zhou.
- Under revision for *Journal of Machine Learning Research*.
- arXiv:2305.18420.

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Optimal Sample Complexity of Reinforcement Learning for Mixing Discounted Markov Decision Processes
- Shengbo Wang, Jose Blanchet, Peter Glynn.
- Submitted to *Operations Research*.
- arXiv:2302.07477.

Tractable Robust Markov Decision Processes
- Julien Grand-Clément, Nian Si, Shengbo Wang.
- Working Paper.

Exact Exponential Tail Asymptotics of Markov Chain Additive Functionals Stopped at a Hitting Time
- Shengbo Wang, Jose Blanchet, Peter Glynn.
- Working Paper.

PRESENTATIONS

On the Foundation of Distributionally Robust Reinforcement Learning
Presented at CISS 2024, Berkeley and Stanford Seminars.

Reinforcement Learning for Mixing Systems
Presented at INFORMS 2023.

Distributionally Robust Q-learning: Formulations, Algorithms, and Sample Complexities
Presented at SIAMOP 2023.

A Finite Sample Complexity Bound for the Distributionally Robust Q-learning
Presented at INFORMS 2022. Poster presentation at AISTATS 2023.

Distributionally Robust Q-learning: Algorithm Designs and Sample Complexities
Presented at Stanford OR Seminar.

TEACHING

Course Assistant at Stanford
- MS&E 220: Probabilistic Analysis
- MS&E 221: Stochastic Modeling
- MS&E 321: Stochastic Systems
- MS&E 324/CME 308/MATH 228: Stochastic Methods in Engineering

Course Assistant and Tutoring at Cornell
- ORIE 3510/5510: Introduction to Engineering Stochastic Processes I (Course Assistant)
- SYSEN 5200: Systems Analysis Behavior and Optimization (Tutor)

PROFESSIONAL SERVICES

- Journal reviewer for *Mathematics of Operations Research*, *Management Science*, and *Operations Research*.
- Conference reviewer for *Artificial Intelligence and Statistics (AISTATS)* and *International Conference on Learning Representations (ICLR).*

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PROFESSIONAL REFERENCES

Prof. Peter Glynn — Thomas Ford Professor of Engineering
- Department of Management Science and Engineering, Stanford University
- Email: glynn@stanford.edu

Prof. Jose Blanchet — Professor of Management Science and Engineering
- Department of Management Science and Engineering, Stanford University
- Email: jose.blanchet@stanford.edu

Prof. Zhengyuan Zhou — Associate Professor of Technology, Operations, and Statistics
- Leonard N. Stern School of Business, New York University
- Email: zz26@stern.nyu.edu

Prof. Nian Si — Assistant Professor
- Department of Industrial Engineering and Decision Analytics, HKUST
- Email: niansi@ust.hk