

Yunbei Xu

CONTACT INFORMATION	E1 8-16, 3 Engineering Drive 2 Singapore 117578	Email: yunbei@nus.edu.sg Web: https://yunbeixu.github.io
RESEARCH INTERESTS	Statistical Learning Theory, Online Learning, Stochastic Processes, Optimization, Statistical Physics.	
EMPLOYMENT	National University of Singapore Presidential Young Professor Department of Industrial Systems Engineering and Management	Singapore 2024 - Present
	Massachusetts Institute of Technology Postdoctoral Associate Advisor: Alexander Rakhlin	Cambridge, MA, USA 2023 - 2024
EDUCATION	Columbia University Ph.D. in Decision, Risk, and Operations Advisor: Assaf Zeevi	New York, NY, USA 2018 - 2023
	Peking University B.S. in Mathematics	Beijing, China 2014 - 2018
AWARDS AND HONORS	INFORMS George Nicholson Student Paper Competition, First Place Applied Probability Society Best Student Paper Award, Finalist ICML Outstanding Paper Award (6/6538 submissions) Applied Probability Society Best Student Paper Award, Finalist Putnam Competition Honorable Mentions (ranked top 1%) National Scholarship (highest honor for undergraduates in China)	2023 2023 2023 2021 2016 2015
RESEACH	Beyond Assouad, Fano, and Le Cam: Toward Unified Lower Bounds for Statistical Estimation and Interactive Decision Making (with Fan Chen, Dylan Foster, Yanjun Han, Jian Qian and Alexander Rakhlin) <ul style="list-style-type: none">Under review in <i>Conference on Neural Information Processing Systems (NeurIPS)</i>, 2024 Statistical Properties of Robust Satisficing (with Zhiyi Li and Ruohan Zhan) <ul style="list-style-type: none">Published in <i>International Conference on Machine Learning (ICML)</i>, 2024 Bayesian Design Principles for Frequentist Sequential Learning (with Assaf Zeevi) [Link] <ul style="list-style-type: none">Conference version published in <i>International Conference on Machine Learning (ICML)</i>, 2023Journal version under review in <i>Journal of the ACM</i>ICML Outstanding Paper Award, 2023INFORMS George Nicholson Student Paper Competition, First Place, 2023Applied Probability Society Best Student Paper Award, Finalist, 2023 Towards Optimal Problem Dependent Generalization Error Bounds in Statistical Learning Theory (with Assaf Zeevi) [Link] <ul style="list-style-type: none">Published in <i>Mathematics of Operations Research</i>, 2024Applied Probability Society Best Student Paper Award, Finalist, 2021 Towards Problem-dependent Optimal Learning Rates (with Assaf Zeevi) [Link]	

- Published in *Conference on Neural Information Processing Systems (NeurIPS), 2020*
- Selected as **Spotlight** (top 2.9% of submissions)

Upper Counterfactual Confidence Bounds: a New Optimism Principle for Contextual Bandits (with Assaf Zeevi) [[Link](#)]

- Under review in *Journal of Machine Learning Research*

Acceleration of Primal-Dual Methods by Preconditioning and Simple Subproblem Procedures (with Yanli Liu and Wotao Yin) [[Link](#)]

- Published in *Journal of Scientific Computing, 2021*

TEACHING
EXPERIENCE

Teaching Assistant, Managerial Statistics (Fall 2021 & Fall 2022)

- Enrollment: 142 (primarily EMBA students from Columbia Business School)

Instructor, Real Analysis Math Camp (Summer 2021)

- Enrollment: 6 (primarily first-year doctoral students)

Teaching Assistant, Statistical Physics, Markets and Algorithms (Fall 2019)

- Enrollment: 17 (primarily doctoral students from Columbia University)

INVITED TALK

“Bayesian Design Principles for Frequentist Sequential Learning”

- Highlights beyond EC, New Haven, CT July 2024
- Tsinghua University, Institute for Interdisciplinary Information Sciences Jan 2024
- Harvard University, School of Engineering and Applied Sciences Nov 2023
- INFORMS Annual Meeting, Phoenix, AZ Oct 2023
- Microsoft Research, NYC Lab and New England Lab Sept 2023
- ICML Oral Presentation, Honolulu, Hawaii July 2023
- Massachusetts Institute of Technology, Laboratory for Information & Decision Systems Apr 2023
- University of Toronto, Rotman School of Business Feb 2023
- National University of Singapore, Industrial Systems Engineering & Management Jan 2023
- CUHK-Shenzhen, School of Data Science Jan 2023
- HKUST, Industrial Engineering & Decision Analytics Dec 2022
- CUHK, Business School Dec 2022
- New York University, Stern School of Business Dec 2022
- INFORMS Annual Meeting, Indianapolis, IN Oct 2022

“Towards Optimal Problem Dependent Generalization Error Bounds in Statistical Learning Theory”

- INFORMS Annual Meeting, Anaheim, CA Oct 2021
- Cornell ORIE Young Researcher Workshop, Ithaca, NY Oct 2021
- INFORMS Annual Meeting, Seattle, WA Oct 2019

“A New Optimism Principle for Contextual Bandits”

- INFORMS Annual Meeting, Online Oct 2020