

# Henry Lam

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| CONTACT<br>INFORMATION | Department of Industrial Engineering and Operations Research<br>Columbia University<br>500 W. 120th St.<br>New York, NY 10027<br><i>E-mail:</i> <a href="mailto:henry.lam@columbia.edu">henry.lam@columbia.edu</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| RESEARCH AREAS         | Data-driven decision-making, uncertainty quantification, Monte Carlo computation, optimization under uncertainty, rare-event and risk analysis                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| EMPLOYMENT             | <p><b>Columbia University</b>, New York City, New York<br/>Department of Industrial Engineering and Operations Research<br/>Associate Professor July 2017 –</p> <p><b>University of Michigan</b>, Ann Arbor, Michigan<br/>Department of Industrial and Operations Engineering<br/>Assistant Professor January 2015 – June 2017</p> <p><b>Boston University</b>, Boston, Massachusetts<br/>Department of Mathematics and Statistics<br/>Assistant Professor January 2011 – December 2014</p>                                                                                                                                                                                                                                                                                                                                                               |
| EDUCATION              | <p><b>Harvard University</b>, Cambridge, Massachusetts<br/>Ph.D. Statistics January 2011<br/>A.M. Statistics June 2006<br/>Overall GPA: 4.0/4.0</p> <p><b>The University of Hong Kong</b>, Hong Kong<br/>B.S. Actuarial Science (First Class Honors) June 2005<br/>Overall GPA: 3.9/4.0</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| AWARDS                 | <p>Dean's Team Science Award at Mount Sinai (for the collaborative project "Towards Transformative Data-Driven Decision Platforms for Healthcare Crisis Response: From Prediction Models to AI-Digital-Twinning Integration"), 2026</p> <p>Best Theoretical Paper, Winter Simulation Conference, 2023</p> <p>INFORMS Outstanding Simulation Publication Award, 2022</p> <p>JPMorgan Chase Faculty Research Award, 2020</p> <p>Finalist, Best Theoretical Paper, Winter Simulation Conference, 2020</p> <p>Best Theoretical Paper, Winter Simulation Conference, 2018</p> <p>NSF Faculty Early Career Development (CAREER) Award, 2017</p> <p>INFORMS Junior Faculty Interest Group (JFIG) Paper Competition, Second Prize, 2016</p> <p>Adobe Faculty Research Award, 2016</p> <p>Finalist, Best Theoretical Paper, Winter Simulation Conference, 2016</p> |

NSA Young Investigator Award, 2013

INFORMS Junior Faculty Interest Group (JFIG) Paper Competition, Finalist, 2012

INFORMS George Nicholson Student Paper Competition Honorable Mention Prize, 2010

Harvard Statistics Department Post-Qualifying Talk Award, 2008

Hong Kong Croucher Foundation Scholarship, 2008–2009

Harvard GSAS Fellowship, 2005–2006

Hong Kong Chiu Chow Chamber of Commerce Scholarship, 2004, 2005

University of Hong Kong Worldwide Student Exchange Scholarship, 2004

Provost Honors, 2004

Dean’s Honors, 2002, 2003, 2005

Various travel awards

AWARDS WON BY  
SUPERVISED  
STUDENTS

Columbia Business School Deming Doctoral Fellowship (Tianyu Wang), 2025

Honorable Mention, Dupacova-Prekopa Best Student Paper Prize in Stochastic Programming (Tianyu Wang), 2025

Finalist, INFORMS George Nicholson Student Paper Competition (Haofeng Zhang), 2023

Finalist, Dupacova-Prekopa Best Student Paper Prize in Stochastic Programming (Fengpei Li), 2023

Amazon CAIT Doctoral Fellowship (Haoxian Chen), 2023

Winter Simulation Conference PhD Colloquium INFORMS I-SIM Award (Yuanlu Bai), 2022

New England Statistics Symposium Best Student Paper Award (Haofeng Zhang), 2022

Winter Simulation Conference PhD Colloquium INFORMS I-SIM Award (Shengyi He), 2021

Finalist, INFORMS Doing Good with Good OR Competition (Enrique Lelo de Larrea and Elioth Sanabria), 2021

Finalist, INFORMS Undergraduate Operations Research Prize (Junhui Zhang), 2021

Cheung-Kong Innovation Doctoral Fellowship (Haofeng Zhang), 2021

FUNDING

National Security Agency (NSA) Young Investigator Grant H98230-13-1-0301. Title: “Design of Robust Methodologies for Efficient Simulation and Sensitivity Analysis for Stochastic Systems”. Amount: \$39,983. Duration: September 2013–June 2014. Role: PI.

National Science Foundation (NSF) CMMI-1400391/1542020. Title: “A Sensitivity Approach to Assessing Model Uncertainty for Stochastic Systems”. Amount: \$224,947. Duration: July 2014–June 2018. Role: PI.

National Science Foundation (NSF) CMMI-1436247/1523453. Title: “Collaborative Research: Modeling and Analyzing Extreme Risks in Insurance and Finance”. Amount: \$350,000. Duration: September 2014–August 2017. Role: PI (Lead-PI: Jose Blanchet, PI: Qihe Tang).

MCubed. Title: “Data-driven Methods in Simulation Modeling and Optimization for Large-scale Dynamic Systems”. Amount: \$60,000. Duration: November 2015–October 2017. Role: co-PI (PI: Hyun-Soo Ahn, co-PI: Eunshin Byon).

UM Mobility Transformation Center (MTC). Title: “Development of Evaluation Approaches and the Certificate System for Automated Vehicles Based on the Accelerated Evaluation”. Amount: \$200,000. Duration: May 2016–December 2017. Role: PI (co-PI: David LeBlanc).

Adobe Faculty Research Award 2016. Title: “Scalable Dynamic Optimization in Online Marketing Campaigns”. Amount: \$50,000. Role: PI.

National Science Foundation (NSF) CMMI-1653339/1834710. Title: “CAREER: Optimization-based Quantification of Statistical Uncertainty in Stochastic and Simulation Analysis”. Amount: \$500,000. Duration: May 2017–April 2023. Role: PI.

National Science Foundation (NSF) IIS-1849280. Title: “Collaborative Research: Unsupervised Rare Event Learning - With Applications on Autonomous Vehicles”. Amount: \$225,967. Duration: Feb 2019–Jan 2023. Role: PI (Lead-PI: Ding Zhao).

Google and Tides Foundation. Title: “EMS Resource Deployment Modeling” (with New York City Fire Department). Amount: \$700,000. Duration: Jan 2020–Dec 2022. Role: co-PI (PI: Andrew Smyth).

JPMorgan Chase Faculty Research Award. Title: “Calibrating Large-Scale Simulation Models via Distributionally Robust Optimization”. Amount: \$150,000. Duration: May 2020–Aug 2022. Role: PI.

Columbia Urban Technology Pilot Award. Title: “Optimizing Emergency Response during a Pandemic in Urban Environments”. Amount: \$85,000. Duration: Sep 2020–Sep 2021. Role: co-PI (PI: Andrew Smyth, co-PI: Jay Sethuraman).

InnoHK Award. Title: “Laboratory for AI-Powered Financial Technologies”. Amount: \$4,300,400. Duration: Jun 2021–May 2026. Role: co-PI (PI: David Yao, co-PIs: Ming Yuan, Xunyu Zhou, Garud Iyengar, Upmanu Lall).

Columbia Urban Technology Pilot Award. Title: “Enhancing Efficiency and Equity in Ambulance Dispatch Operations through Machine Learning Based Optimization”. Amount: \$85,000. Duration: Jan 2022–Jan 2023. Role: co-PI (PI: Andrew Smyth, co-PI: Jay Sethuraman).

Australian Research Council Discovery Project Award. Title: “Quantitative Analysis of Systemic Risk in Insurance”. Amount: \$66,100 (in-kind). Duration: Jan 2022–Dec 2024. Role: Partner Investigator (PI: Qihe Tang, co-PIs: Han Li, Katja Ignatieva).

Columbia SEAS Innovation Hub Research Funding. Title: “Structure-Driven Efficiency Enhancement for Computational Modeling”. Amount: \$240,000. Duration: Mar 2023–Feb 2025. Role: co-PI (PI: Ton Dieker).

New York City Town & Gown. Title: “Enhancing DOC Logistics via Integrated Optimization and Data Analytics”. Amount: \$200,000. Duration: Aug 2024–Jul 2025. Role: PI (co-PIs: Jay Sethuraman, Andrew Smyth).

New York City Town & Gown. Title: “Citywide Soils Model Interpolation Methodology”. Amount: \$100,000. Duration: Aug 2024–Jul 2025. Role: co-PI (PI: George Deodatis, co-PIs: Ioannis Kougioumtzoglou, Hoe Ling, Benjamin Bostick).

Columbia-Dream Sports AI Innovation Center Research Award. Title: “User Behavior Modeling via AI-Optimization Integration”. Amount: \$122,502. Duration: Jan 2025–Dec 2025. Role: co-PI (PI: Vineet Goyal).

NYC Pandemic Response Institute Award. Title: “Towards Transformative Data-Driven Decision Platforms for Healthcare Crisis Response: From Prediction Models to AI-Digital-Twinning Integration”. Amount: \$90,000. Duration: Dec 2024–Dec 2025. Role: PI (co-PIs: Donald Apakama, Charles Branas, Sarah McCuskee, Girish Nadkarni, Rachael Piltch-Loeb, Jay Sethuraman, Akhil Vaid, Alexis Zebrowski).

Columbia-Dream Sports AI Innovation Center Research Award. Title: “Calibrating and Dissecting System-Level Simulators for User Policy Optimization”. Amount: \$124,339. Duration: Sep 2025–Aug 2026. Role: PI.

National Science Foundation (NSF) CNS-2531559. Title: “SCC-LSR: Integrating Probabilistic Digital Twinning and Dynamic Optimization to Enhance EMS Operations”. Amount: \$1,966,790. Duration: Nov 2025–Oct 2030. Role: co-PI (PI: Audrey Olivier, co-PI: Andrew Smyth).

New York City Town & Gown. Title: “DOC Logistics Optimization”. Amount: \$160,000. Duration: Feb 2026–Jan 2027. Role: PI (co-PIs: Jay Sethuraman, Andrew Smyth).

New York City Town & Gown. Title: “FDNY Logistics Optimization”. Amount: \$249,766. Duration: Feb 2026–Jan 2027. Role: co-PI (PI: Andrew Smyth, co-PI: Audrey Olivier).

#### EDITORIAL APPOINTMENTS

Co-Area Editor, Stochastic Models, *Mathematics of Operations Research*, 2026–

Area Editor, Stochastic Models and Data Science, *Operations Research Letters*, 2022–

Associate Editor, *Management Science*, 2024–

Associate Editor, *Operations Research*, 2015–

Associate Editor, *Manufacturing and Service Operations Management*, 2021–

Associate Editor, *Queueing Systems*, 2022–

Editorial Board, *Stochastic Models*, 2019–

Area Chair, *Advances in Neural Information Processing Systems (NeurIPS)*, 2026

Guest Co-Editor, *NeurIPS MLxOR 2025 Special Issue, Stochastic Systems*, 2026

Associate Editor, *INFORMS Journal on Computing*, 2016–2025

Editorial Board, *Journal of Applied Probability / Advances in Applied Probability*, 2020–2025

Associate Editor, *Operations Research Letters*, 2021

\* Supervised student co-author

- Arief, M., Bai, Y.\*, Ding, W., He, S.\*, Huang, Z., **Lam, H.** and Zhao, D., Certifiable deep importance sampling for rare-event simulation of black-box systems, *to appear in Operations Research*, 2026.
- Lam, H.** and Wang, Z.\*, Resampling stochastic gradient descent cheaply for efficient uncertainty quantification, *to appear in Journal of Machine Learning Research*, 2026.
- Pasche, O. C., **Lam, H.**, Engelke, S., Extreme conformal prediction: Reliable intervals for high-impact events, *Extremes*, Articles in Advance, 1–27, 2026.
- Bai, Y.\*, Balch, T., Chen, H.\*, Dervovic, D., **Lam, H.** and Vyetrenko, S., Calibrating over-parametrized simulation models: A framework via eligibility set, *ACM Transactions on Modeling and Computer Simulation*, **36**(1), 1–50, 2026.
- Lam, H.**, On the impossibility of statistically improving empirical optimization: A second-order stochastic dominance perspective, *Management Science*, Articles in Advance, 2025.
- He, S.\* and **Lam, H.**, Higher-order expansion and Bartlett correctability of distributionally robust optimization, *Mathematics of Operations Research*, Articles in Advance, 1–47, 2025.
- Bai, Y.\* and **Lam, H.**, Uncertainty quantification and confidence intervals for naive rare-event estimators, *Journal of Applied Probability*, **62**(1), 84–110, 2025.
- Lam, H.** and Zhang, J.\*, Distributionally constrained black-box stochastic gradient estimation and optimization, *Operations Research*, **73**(5), 2680–2694, 2025.  
[Finalist, INFORMS Undergraduate Operations Research Prize 2021]
- Blanchet J., **Lam, H.**, Liu, Y. and Wang, R., Convolution bounds on quantile aggregation, *Operations Research*, **73**(5), 2761–2781, 2025.
- He, S.\* and **Lam, H.**, Higher-order coverage errors of batching methods via Edgeworth expansions on  $t$ -statistics, *Annals of Statistics*, **52**(4), 1360–1383, 2024.
- Bai, Y.\*, Huang, Z., **Lam, H.** and Zhao, D., Over-conservativeness of variance-based efficiency criteria and probabilistic efficiency in rare-event simulation, *Management Science*, **70**(10), 6852–6873, 2024.
- He, S.\*, Jiang, G., **Lam, H.** and Fu, M. C., Adaptive importance sampling for efficient stochastic root finding and quantile estimation, *Operations Research*, **72**(6), 2612–2630, 2024.
- Zhu, Y., Dong, J. and **Lam, H.**, Uncertainty quantification and exploration for reinforcement learning, *Operations Research*, **72**(4), 1689–1709, 2024.
- Li, H., **Lam, H.** and Peng, Y., Efficient learning for clustering and optimizing context-dependent designs, *Operations Research*, **72**(2), 617–638, 2024.
- Song, E., **Lam, H.** and Barton, R., A shrinkage approach to improve direct bootstrap resampling under input uncertainty, *INFORMS Journal on Computing*, **36**(4), 1023–1039, 2024.  
[Featured article in INFORMS Journal on Computing]
- Li, F., Ihnatiuk, V., Chen, Y., Lin, J., Kinnear, R. J., Schneider, A. Nevmyvaka, Y. and **Lam, H.**, Do price trajectory data increase the efficiency of market impact estimation?, *Quantitative Finance*, **24**(5), 545–568, 2024.

- Li, Y., Chan, C. K., Yau, C. Y., Ng, W. L. and **Lam, H.**, Burn-in selection in simulating time series, *Journal of Computational Statistics & Data Analysis*, **192**(107886), 1–10, 2024.
- Lam, H.** and Zhang, H.\*, Doubly robust Stein-kernelized Monte Carlo estimator: Simultaneous bias-variance reduction and supercanonical convergence, *Journal of Machine Learning Research*, **24**(85), 1–58, 2023.  
[Best Student Paper Award, New England Statistics Symposium 2022]
- Huang, Z., **Lam, H.** and Zhang, H.\*, Conditional coverage estimation for high-quality prediction intervals, *Journal of Systems Science and Systems Engineering, invited paper in Special Issue on Simulation and AI*, 1–31, 2023.
- Lam, H.**, Zhang, X.\* and Zhang, X.\*, Enhanced balancing of bias-variance tradeoff in stochastic estimation: A minimax perspective, *Operations Research*, **71**(6), 2352–2373, 2022.
- Dean, A., Meisami, A.\*, **Lam, H.**, Van Oyen, M., Stromblad, C., and Kastango, N., Quantile regression forests for individualized surgery scheduling, *Health Care Management Science*, **25**, 682–709, 2022.
- Bai, Y.\*, Huang, Z.\*, **Lam, H.** and Zhao, D., Rare-event simulation for neural network and random forest predictors, *ACM Transactions on Modeling and Computer Simulation*, **32**(3), 1–33, 2022.
- Lam, H.** and Li, F.\*, General feasibility bounds for sample average approximation via Vapnik-Chervonenkis dimension, *SIAM Journal on Optimization*, **32**(2), 1471–1497, 2022.  
[Finalist, Dupacova-Prekopa Best Student Paper Prize in Stochastic Programming 2023]
- Lam, H.** and Qian, H.\*, Subsampling to enhance efficiency in input uncertainty quantification, *Operations Research*, **70**(3), 1891–1913, 2022.
- Peng, Y., Xiao, L., Heidergott, B., Hong, J. L. and **Lam, H.**, A new likelihood ratio method for training artificial neural networks, *INFORMS Journal on Computing*, **34**(1), 638–655, 2022.
- Bai, Y.\*, Huang, Z.\* and **Lam, H.**, Model calibration via distributionally robust optimization: On the NASA Langley Uncertainty Quantification Challenge, *Mechanical Systems and Signal Processing, Special Issue on the NASA Challenge*, **164**, 108211, 1–19, 2022.
- Lam, H.**, Li, H.\* and Zhang, X.\*, Minimax efficient finite-difference stochastic gradient estimators using black-box function evaluations, *Operations Research Letters*, **49**(1), 40–47, 2021.  
[Spotlight paper in Operations Research Letters]
- Hong, J. L., Huang, Z.\* and **Lam, H.**, Learning-based robust optimization: Procedures and statistical guarantees, *Management Science*, **67**(6), 3447–3467, 2021.
- Lam, H.** and Li, F.\*, Parametric scenario optimization under limited data: A distributionally robust optimization view, *ACM Transactions on Modeling and Computer Simulation*, **30**(4), 21:1–41, 2020.
- Peng, Y., Fu, M. C., Heidergott, B. and **Lam, H.**, Maximum likelihood estimation by Monte Carlo simulation: Towards data-driven stochastic modeling, *Operations Research*, **68**(6), 1896–1912, 2020.

- Pan, Q., Byon, E., Ko, Y. M. and **Lam, H.**, Adaptive importance sampling for extreme quantile estimation with stochastic black box computer models, *Naval Research Logistics*, **67**(7), 524–547, 2020.
- Goeva, A.\*, **Lam, H.**, Qian, H.\* and Zhang, B., Optimization-based calibration of simulation input models, *Operations Research*, **67**(5), 1362–1382, 2019.
- Lam, H.**, Recovering best statistical guarantees via the empirical divergence-based distributionally robust optimization, *Operations Research*, **67**(4), 1090–1105, 2019.  
[**Second Prize, INFORMS JFIG Paper Competition 2016**]
- Ghosh, S. and **Lam, H.**, Robust analysis in stochastic simulation: Computation and performance guarantees, *Operations Research*, **67**(1), 232–249, 2019.  
[**INFORMS Outstanding Simulation Publication Award 2022**]
- Blanchet, J., **Lam, H.**, Tang, Q. and Yuan, Z., Robust actuarial risk analysis, *North American Actuarial Journal*, **23**(1), 33–63, 2019.
- Heidergott, B., Berkhout, J., **Lam, H.** and Peng, Y., From data to stochastic modeling and decision making: What can we do better?, *Asia-Pacific Journal of Operational Research, Special Issue on Simulation Analytics*, 36(6), 2019.
- Zhang, M., **Lam, H.** and Lin, L., Robust and parallel Bayesian model selection, *Journal of Computational Statistics and Data Analysis*, **127**, 229–247, 2018.
- Huang, Z.\*, Zhao, D.\*, **Lam, H.**, and LeBlanc, D. J., Accelerated evaluation of automated vehicles using piecewise mixture models, *IEEE Transactions on Intelligent Transportation Systems*, **19**(9), 2845–2855, 2018.
- Lam, H.**, Sensitivity to serial dependency of input processes: A robust approach, *Management Science*, **64**(3), 1311–1327, 2018.
- Zhao, D.\*, Huang, X., Peng, H., **Lam, H.**, and LeBlanc, D. J., Accelerated evaluation of automated vehicles in car-following maneuvers, *IEEE Transactions on Intelligent Transportation Systems*, **19**(3), 733–744, 2018.
- Choe, Y., **Lam, H.** and Byon, E., Uncertainty quantification of stochastic simulation for black-box computer experiments, *Methodology and Computing in Applied Probability*, **20**(4), 1155–1172, 2018.  
[**Selected for the Natrella Invited Section in the American Statistical Association (ASA) Quality & Productivity Research Conference 2015**]
- Lam, H.**, and Mottet, C.\*, Tail analysis without parametric models: A worst-case perspective, *Operations Research*, **65**(6), 1696–1711, 2017.
- Lam, H.** and Zhou, E., The empirical likelihood approach to quantifying uncertainty in sample average approximation, *Operations Research Letters*, **45**(4), 301–307, 2017.
- Zhao, D.\*, **Lam, H.**, Peng, H., Bao, S., LeBlanc, D. J., Nobukawa, K. and Pan, C. S., Accelerated evaluation of automated vehicles safety in lane change scenarios based on importance sampling techniques, *IEEE Transactions on Intelligent Transportation Systems*, **18**(3), 595–607, 2017.  
[**UMTRI Transportation Safety Research Symposium Best Poster Award Second Place 2015**]
- Lam, H.**, Robust sensitivity analysis for stochastic systems, *Mathematics of Operations Research*, **41**(4), 1248–1275, 2016.  
[**INFORMS JFIG Paper Competition Finalist 2012**]

- Blanchet, J., Chen, X., and **Lam, H.**, Two-parameter sample path large deviations for infinite server queues, *Stochastic Systems*, **4**(1), 206–249, 2014.
- Blanchet, J., and **Lam, H.**, Rare-event simulation for many-server queues, *Mathematics of Operations Research*, **39**(4), 1142–1178, 2014.  
[INFORMS George Nicholson Student Paper Competition Honorable Mention Prize 2010]
- Brinton, C., Chiang, M., Jain, S., **Lam, H.**, Liu, Z., and Wong, F., Learning about social learning in MOOCS: from statistical analysis to generative model, *IEEE Transactions on Learning Technologies*, **7**(4), 346–359, 2014.
- Blanchet, J., and **Lam, H.**, Uniform large deviations for heavy-tailed queues under heavy traffic, *Bulletin of the Mexican Mathematical Society, Bol. Soc. Mat. Mexicana*, **19**(3), Special Issue for the International Year of Statistics, 2013.
- Blanchet, J., and **Lam, H.**, A heavy traffic approach to modeling large life insurance portfolio, *Insurance Mathematics and Economics*, **53**(1), 237–251, 2013.
- Blanchet, J., **Lam, H.**, and Zwart, B., Efficient rare-event simulation for perpetuities, *Stochastic Processes and Their Applications*, **122**(10), 3361–3392, 2012.
- Yuen, W., Du, N., Shvartsman, D., Arany, P., **Lam, H.**, and Mooney, D., Statistical platform to discern spatial and temporal coordination of endothelial sprouting, *Integrated Biology*, **4**(3), 292–300. 2012.
- Lam, H.**, Blanchet, J., Bazant, M. Z., and Burch, D., Corrections to the Central Limit Theorem for heavy-tailed probability densities, *Journal of Theoretical Probability*, **24**(4), 895–927, 2011.
- Blanchet, J., Glynn, P., and **Lam, H.**, Rare-event simulation for a slotted time  $M/G/s$  model, *Queueing Systems: Theory and Applications*, **63**, 33–57, 2009.

#### ARTICLES UNDER REVIEW

- Iyengar, G., **Lam, H.** and Wang, T.\*, Optimizer’s Information Criterion: Dissecting and correcting bias in data-driven optimization, *under minor revision in Management Science*.  
[Honorable Mention, Dupacova-Prekopa Best Student Paper Prize in Stochastic Programming 2025]
- Lam, H.**, Liu, Z.\* and Zhang, X.\*, Orthounimodal distributionally robust optimization: Representation, computation and multivariate extreme event applications, *under revision in Mathematics of Operations Research*.
- Lam, H.** and Qian, H.\*, Combating conservativeness in data-driven optimization under uncertainty: A solution path approach, *under revision in Management Science*.
- Dolan, E., Johnson, N., Kepler, T., **Lam, H.**, Lelo de Larrea, E.\*, Long, D.\*, Mohammadi, S., Olivier, A., Quayyum, A., Sanabria, E.\*, Sethuraman, J., Smyth, A. and Thomson, K., Hospital load balancing: A data-driven approach to optimize ambulance transports during the COVID-19 pandemic in New York City.  
[Finalist, INFORMS Doing Good with Good OR Competition 2021]
- Lam, H.** and Zhang, H.\*, Prediction intervals for simulation metamodeling, *under revision in ACM Transactions on Modeling and Computer Simulation*.
- Elmachtoub, A., **Lam, H.**, Zhang, H.\* and Zhao, Y., Estimate-then-optimize versus integrated-estimation-optimization versus sample average approximation: A stochastic dominance perspective, *under revision in Operations Research*.  
[Finalist, INFORMS George Nicholson Student Paper Competition 2023]

- Bai, Y.\*, **Lam, H.** and Zhang, Z.\*, A distributionally robust optimization framework for extreme event estimation, *under revision in Journal of the American Statistical Association*.
- Apley, D. W., **Lam, H.** and Liu, Z.\*, A note on estimating the variance and covariance of conditional expectations, *under revision in Operations Research (Technical Note)*.
- Liu, X., **Lam, H.** and Peng, Y., Training deep Q-network via Monte Carlo tree search for adaptive bitrate control in video delivery, *under review in Journal of System Science and System Engineering*.
- Huang, Z., **Lam, H.** and Liu, Z.\*, Propagation of input tail uncertainty in rare-event estimation: A light versus heavy tail dichotomy, *under revision in Mathematics of Operations Research*.
- Chen, M.\*, **Lam, H.** and Liu, Z.\*, Quantifying distributional input uncertainty via inflated Kolmogorov-Smirnov confidence band, *under revision in Operations Research*.
- Iyengar, G., **Lam, H.** and Wang, T.\*, Hedging complexity in generalization via a parametric distributionally robust optimization framework, *under revision in Management Science*.
- Lam, H.**, A cheap bootstrap method for fast inference, *under revision in Operations Research*.
- Lam, H.**, Singham, D. and Liu, Z.\*, Shape-constrained distributional optimization via importance-weighted sample average approximation, *under revision in Operations Research*.
- Chen, H.\* and **Lam, H.**, Pseudo-Bayesian optimization, *under revision in Operations Research*.
- Li, F., Chen, H.\*, Lin, J., Gupta, A., Tan, X., Xu, G., Nevmyvaka, Y., Capponi, A. and **Lam, H.**, Prediction-enhanced Monte Carlo: A machine learning view on control variate, *under revision in Management Science*.
- Liu, J., Wang, T.\*, **Lam, H.**, Namkoong, H., Blanchet, J., DRO: A Python library for distributionally robust optimization in machine learning, *under revision in Journal of Machine Learning Research*.
- Lam, H.** and Qian, H.\*, Bounding optimality gap in stochastic optimization via bagging: Statistical efficiency and stability, *under review in Mathematics of Operations Research*.
- Aolaritei, L., Van Parys, B., **Lam, H.**, and Jordan, M.I., Stochastic optimization with optimal importance sampling, *under review in Mathematics of Operations Research*.
- Li, F., Chen, H.\*, Lin, J., Capponi, A. and **Lam, H.**, Prediction-enhanced Monte Carlo with application to volatility derivatives, *under revision in Risk Journals*.
- Huang, Z., **Lam, H.** and Zhang, H.\*, Evaluating and enhancing distributional fidelity of conditional generative models via aggregated maximum mean discrepancy, *under review in INFORMS Journal on Data Science*.
- Lakhnichi, M.\* and **Lam, H.**, Running predictthenoptimize under contextual chance constraints, *under review in Proceedings of the Winter Simulation Conference (WSC)*.
- Jamal, M.\*, **Lam, H.** and Wang, Z.\*, Control variate for variance of conditional expectation and input uncertainty applications, *under review in Proceedings of the Winter Simulation Conference (WSC)*.

- Long, D.\*, Wang, T.\*, **Lam, H.**, Sethuraman, J., Kosikova, A., Smyth, A., Ghorbanian, J., Olivier, A., Adams, M., Dadlani, M., Kepler, T., Thomson, K. and Turkcan, A., A hybrid simulation-machine learning approach to improve EMS responses in New York City, *under review in Proceedings of the Winter Simulation Conference (WSC)*.
- Qian, H., Ying, D., **Lam, H.** and Yin, W., Subsampled ensemble can improve generalization tail exponentially, *Advances in Neural Information Processing Systems (NeurIPS)*, 2025.
- Lan, H.\*, Liao, L., Elmachtoub, A., Kroer, C., **Lam, H.**, Zhang, H.\*, The bias-variance tradeoff in data-driven optimization: A local misspecification perspective, *Advances in Neural Information Processing Systems (NeurIPS)*, 2025.
- Roy Chowdbury, A.\* and **Lam, H.**, Efficient uncertainty quantification of bagging via the cheap bootstrap, *Proceedings of the Winter Simulation Conference (WSC)*, 2025.
- Lam, H.** and Wang, Z.\*, Control variates beyond mean: Variance reduction for nonlinear statistical quantities, *Proceedings of the Winter Simulation Conference (WSC)*, 2025.
- Elmachtoub, A., **Lam, H.**, Lan, H.\* and Zhang, H.\*, Dissecting the impact of model misspecification in data-driven optimization, *International Conference on Artificial Intelligence and Statistics (AISTATS)*, 2025.
- Chen, H.\*, Zhao, H., **Lam, H.**, Yao, D. and Tang, W., MallowsPO: Fine-tune your LLM with preference dispersions, *International Conference on Learning Representations (ICLR)*, 2025.
- Iyengar, G., **Lam, H.** and Wang, T.\*, Is cross-validation the gold standard to estimate out-of-sample model performance?, *Advances in Neural Information Processing Systems (NeurIPS)*, 2024.
- Christianen, M., **Lam, H.**, Vlasίου, M. and Zwart, B., Importance sampling of rare events for distribution networks with stochastic loads, *Proceedings of the Winter Simulation Conference (WSC)*, 2024.
- Lam, H.** and Yan, Y.\*, Data-driven solutions and uncertainty quantification for multistage stochastic optimization, *Proceedings of the Winter Simulation Conference (WSC)*, 2024.
- Cen, Z., Liu, Z., Wang, Z.\*, Yao, Y., **Lam, H.** and Zhao, D., Learning from sparse offline datasets via conservative density estimation, *International Conference on Learning Representations (ICLR)*, 2024.
- Huang, Z., **Lam, H.** and Zhang, H.\*, Efficient uncertainty quantification and reduction for over-parameterized neural networks, *Advances in Neural Information Processing Systems (NeurIPS)*, 2023.
- Huang, Z., **Lam, H.**, Meisami, A. and Zhang, H.\*, Optimal regret is achievable with constant approximate inference error: An enhanced Bayesian upper confidence bound framework, *Advances in Neural Information Processing Systems (NeurIPS)*, 2023.
- Bai, Y.\*, Dieker, A. B. and **Lam, H.**, Curse of dimensionality in rare-event simulation, *Proceedings of the Winter Simulation Conference (WSC)*, 2023.  
[Best Theoretical Paper, Winter Simulation Conference 2023]
- Lam, H.** and Wang, Z.\*, Resampling stochastic gradient descent cheaply, *Proceedings of the Winter Simulation Conference (WSC)*, 2023.

- He, S.\* and **Lam, H.**, Optimal batching under computation budget, *Proceedings of the Winter Simulation Conference (WSC)*, 2023.
- Chen, Y., Li, F., Schneider, A., Nevmyvaka, Y., Amarasingham, A. and **Lam, H.**, Short-term temporal dependency detection under heterogeneous event dynamic with Hawkes processes, *Conference on Uncertainty in Artificial Intelligence (UAI)*, 2023.
- Lam, H.** and Liu, Z.\*, Bootstrap in high dimension with low computation, *International Conference on Machine Learning (ICML)*, 2023.
- Iyengar, G., **Lam, H.** and Wang, T.\*, Hedging against complexity: Distributionally robust optimization with parametric approximation, *International Conference on Artificial Intelligence and Statistics (AISTATS)*, 2023.
- Xu, M., Huang, P., Niu, Y., Kumar, V., Qiu, J., Fang, C., Lee, K.-H., Qi, X., **Lam, H.**, Li, B. and Zhao D., Group distributionally robust reinforcement learning with hierarchical latent variables, *International Conference on Artificial Intelligence and Statistics (AISTATS)*, 2023.
- Zeng, Y.\* and **Lam, H.**, Generalization bounds with minimal dependency on hypothesis class via distributionally robust optimization, *Advances in Neural Information Processing Systems (NeurIPS)*, 2022.
- Bai, Y.\*, **Lam, H.**, Vyetrenko, S. and Balch, T., Efficient calibration of multi-agent simulation models from output series with Bayesian optimization, *Proceedings of the ACM International Conference on AI in Finance (ICAIF)*, 2022.
- Arief, M., Cen, Z., Liu, Z.\*, Huang, Z., Li, B., **Lam, H.** and Zhao, D., Certifiable evaluation for autonomous vehicle perception systems using deep importance sampling, *Proceedings of the IEEE Intelligent Transportation Systems Conference (ITSC)*, 2022.
- Bai, Y.\*, **Lam, H.** and Engelke, S., Rare-event simulation without variance reduction: An extreme value theory approach, *Proceedings of the Winter Simulation Conference (WSC)*, 2022.  
[WSC PhD Colloquium INFORMS I-SIM Award 2022]
- He, S.\* and **Lam, H.**, Batching on biased estimators, *Proceedings of the Winter Simulation Conference (WSC)*, 2022.
- Lam, H.**, Cheap bootstrap for input uncertainty quantification, *Proceedings of the Winter Simulation Conference (WSC)*, 2022.
- Chen, M.\*, Liu, Z.\* and **Lam, H.**, Distributional input uncertainty, *Proceedings of the Winter Simulation Conference (WSC)*, 2022.
- Bai, Y.\*, He, S.\*, **Lam, H.**, Jiang, G. and Fu, M., Importance sampling for rare-event gradient estimation, *Proceedings of the Winter Simulation Conference (WSC)*, 2022.
- Xu, M., Huang, P., Li, F.\*, Zhu, J., Qi, X., Oguchi, K., Huang, Z., **Lam, H.** and Zhao, D., Scalable safety-critical policy evaluation with accelerated rare event sampling, *Proceedings of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2022.
- He, S.\* and **Lam, H.**, Higher-order coverage error analysis for batching and sectioning, *Proceedings of the Winter Simulation Conference (WSC)*, 2021.  
[WSC PhD Colloquium INFORMS I-SIM Award 2021]
- Lelo de Larrea, E.\*, Dolan, E. M., Johnson, N. E., Kepler, T. R., **Lam, H.**, Mohammadi, S., Olivier, A., Quayyum, A., Sanabria, E.\*, Sethuraman, J., Smyth, A. W., Thomson, K. S., Simulating New York City hospital load balancing during COVID-19, *Proceedings of the Winter Simulation Conference (WSC)*, 2021.

- Lam, H.** and Zhang, H.\*, Neural predictive intervals for simulation metamodeling, *Proceedings of the Winter Simulation Conference (WSC)*, 2021.
- Sanabria, E.\*, **Lam, H.**, Lelo de Larrea, E.\*, Sethuraman, J., Dolan, E. M., Johnson, N. E., Kepler, T. R., Mohammadi, S., Olivier, A., Quayyum, A., Smyth, A. W., Thomson, K.S., Short-term adaptive emergency call volume prediction, *Proceedings of the Winter Simulation Conference (WSC)*, 2021.
- Arief, M., Huang, Z.\*, Kumar, G. K. S., Bai, Y.\*, He, S.\*, Ding, W., **Lam, H.** and Zhao, D., Deep Probabilistic Accelerated Evaluation: A robust certifiable rare-event simulation methodology for black-box safety-critical systems, *International Conference on Artificial Intelligence and Statistics (AISTATS)*, 2021.
- Chen, H.\*, Huang, Z., **Lam, H.**, Qian, H.\* and Zhang, H.\*, Learning prediction intervals for regression: Generalization and calibration, *International Conference on Artificial Intelligence and Statistics (AISTATS)*, 2021.
- Bai, Y.\*, Huang, Z.\* and **Lam, H.**, A distributionally robust optimization approach to the NASA Langley Uncertainty Quantification Challenge, *Proceedings of the European Safety and Reliability Conference and the Probabilistic Safety Assessment and Management Conference*, 2020.
- Li, H.\* and **Lam, H.**, Optimally tuning finite-difference estimators, *Proceedings of the Winter Simulation Conference (WSC)*, 2020.
- Li, H.\*, **Lam, H.**, Liang, Z. and Peng, Y., Context-dependent ranking and selection under a Bayesian framework, *Proceedings of the Winter Simulation Conference (WSC)*, 2020.  
**[Finalist, Best Theoretical Paper, Winter Simulation Conference 2020]**
- Bai, Y.\* and **Lam, H.**, On the error of naive Monte Carlo rare-event estimators, *Proceedings of the Winter Simulation Conference (WSC)*, 2020.
- Bai, Y.\* and **Lam, H.**, Calibrating input parameters via eligibility sets, *Proceedings of the Winter Simulation Conference (WSC)*, 2020.
- Singham, D. and **Lam, H.**, Sample average approximation with functional decisions under shape constraints, *Proceedings of the Winter Simulation Conference (WSC)*, 2020.
- Lam, H.** and Zhang, J.\*, Distributionally constrained stochastic gradient estimators using noisy function evaluations, *Proceedings of the Winter Simulation Conference (WSC)*, 2020.
- Chen, H.\*, **Lam, H.**, Li, F.\* and Meisami, A., Constrained reinforcement learning via policy splitting, *Asian Conference on Machine Learning (ACML)*, PMLR, 2020.
- Lam, H.**, Li, F.\* and Prusty, S.\*, Robust importance weighting for covariate shift, *International Conference on Artificial Intelligence and Statistics (AISTATS)*, 2020.
- Huang, Z.\*, Arief, M., **Lam, H.** and Zhao, D., Evaluation uncertainty in data-driven self-driving testing, *IEEE Intelligent Transportation Systems Conference (ITSC)*, 2019.
- Huang, Z.\* and **Lam, H.**, On the impacts of tail model uncertainty in rare-event estimation, *Proceedings of the Winter Simulation Conference (WSC)*, 2019.
- Lam, H.** and Zhang, H.\*, On the stability of kernelized control functionals on partial and biased stochastic inputs, *Proceedings of the Winter Simulation Conference (WSC)*, 2019.

- Lam, H.** and Zhang, X.\*, Minimax efficient finite-difference gradient estimation, *Proceedings of the Winter Simulation Conference (WSC)*, 2019.
- Lam, H.** and Qian, H.\*, Random perturbation and bagging to quantify input uncertainty, *Proceedings of the Winter Simulation Conference (WSC)*, 2019.
- Lam, H.** and Qian, H.\*, Validating optimization with uncertain constraints, *Proceedings of the Winter Simulation Conference (WSC)*, 2019.
- Luo, Q., Huang, Z.\* and **Lam, H.**, Dynamic congestion pricing for ridesourcing traffic: A simulation optimization approach, *Proceedings of the Winter Simulation Conference (WSC)*, 2019.  
[WSC PhD Colloquium INFORMS I-SIM Award 2019]
- Huang, Z.\*, Arief, M., **Lam, H.** and Zhao, D., Synthesis of different autonomous vehicles test approaches, *IEEE International Conference on Intelligent Transportation Systems (ITSC)*, 2018.
- Meisami, A.\*, **Lam, H.**, Dong, C. and Pani, A., Sequential learning under probabilistic constraints, *Conference on Uncertainty in Artificial Intelligence (UAI)*, 2018.
- Glynn, P. W. and **Lam, H.**, Constructing simulation output intervals under input uncertainty via data sectioning, *Proceedings of the Winter Simulation Conference (WSC)*, 2018.
- Lam, H.** and Qian, H.\*, Subsampling variance for input uncertainty quantification, *Proceedings of the Winter Simulation Conference (WSC)*, 2018.
- Lam, H.** and Li, F.\*, Sampling uncertain constraints under parametric distributions, *Proceedings of the Winter Simulation Conference (WSC)*, 2018.  
[Best Theoretical Paper, Winter Simulation Conference 2018]
- Lam, H.** and Qian, H.\*, Assessing solution quality in stochastic optimization via bootstrap aggregating, *Proceedings of the Winter Simulation Conference (WSC)*, 2018.
- Duplay, T.\*, **Lam, H.** and Zhang, X.\*, Achieving optimal bias-variance tradeoff in on-line derivative estimation, *Proceedings of the Winter Simulation Conference (WSC)*, 2018.
- Huang, Z.\*, **Lam, H.** and Zhao, D., Designing importance samplers to simulate machine learning predictors via optimization, *Proceedings of the Winter Simulation Conference (WSC)*, 2018.
- Huang, Z.\*, **Lam, H.** and Zhao, D., Rare-event simulation without structural information: A learning-based approach, *Proceedings of the Winter Simulation Conference (WSC)*, 2018.
- Lam, H.**, Jiang, G. and Fu, M., On efficiencies of stochastic optimization procedures under importance sampling, *Proceedings of the Winter Simulation Conference (WSC)*, 2018.
- Barton, R., **Lam, H.** and Song, E., Revisiting direct bootstrap resampling for input model uncertainty, *Proceedings of the Winter Simulation Conference (WSC)*, 2018.
- Pan, Q., Byon, E. and **Lam, H.**, Variance reduction method for extreme quantile estimation, *Institute of Industrial and Systems Engineers (IISE) Annual Conference*, 2018.

- Huang, Z.\*, Guo, Y., Zhao, D.\* and **Lam, H.**, A versatile approach for the evaluation and testing of automated vehicles based on kernel methods, *American Control Conference (ACC)*, 2018.
- Meisami, A.\*, **Lam, H.**, and Van Oyen, M., Uncertainty quantification on simulation analysis driven by random forests, *Proceedings of the Winter Simulation Conference (WSC)*, 2017.
- Huang, Z.\*, **Lam, H.**, and Zhao, D.\*, Sequential experimentation to evaluate automated vehicles, *Proceedings of the Winter Simulation Conference (WSC)*, 2017.
- Blanchet, J., He, F., and **Lam, H.**, Computing worst-case expectations given marginals via simulation, *Proceedings of the Winter Simulation Conference (WSC)*, 2017.
- Lam, H.**, Plumlee, M., and Zhang, X.\*, Improving prediction from stochastic simulation via model discrepancy learning, *Proceedings of the Winter Simulation Conference (WSC)*, 2017.
- Huang, Z.\*, Zhao, D.\*, and **Lam, H.**, Towards affordable on-track testing for autonomous vehicle - A kriging-based statistical approach, *Proceedings of the IEEE International Conference on Intelligent Transportation Systems (ITSC)*, 2017.
- Huang, Z.\*, **Lam, H.**, and Zhao, D.\*, An accelerated testing approach for automated vehicles with background traffic described by joint distributions, *Proceedings of the IEEE International Conference on Intelligent Transportation Systems (ITSC)*, 2017.
- Huang, Z.\*, Zhao, D.\*, **Lam, H.**, LeBlanc, D. J., and Peng H., Evaluation of automated vehicles in the frontal cut-in scenario - An enhanced approach using piecewise mixture model, *Proceedings of the IEEE International Conference on Robotics and Automation (ICRA)*, 2017.
- Lam, H.** and Qian, H.\*, The empirical likelihood approach to simulation input uncertainty, *Proceedings of the Winter Simulation Conference (WSC)*, 2016.
- Hong, J. L., Huang, Z.\* and **Lam, H.**, Approximating data-driven joint chance-constrained programs via uncertainty set construction, *Proceedings of the Winter Simulation Conference (WSC)*, 2016.  
**[Finalist, Best Theoretical Paper, Winter Simulation Conference 2016]**
- Plumlee, M. and **Lam, H.**, Learning stochastic model discrepancy, *Proceedings of the Winter Simulation Conference (WSC)*, 2016.
- Lam, H.** and Zhou, E., Quantifying uncertainty in sample average approximation, *Proceedings of the Winter Simulation Conference (WSC)*, 2015.
- Ghosh, S. and **Lam, H.**, Mirror descent stochastic approximation for computing worst-case stochastic input models, *Proceedings of the Winter Simulation Conference (WSC)*, 2015.
- Hong, J. L. and **Lam, H.**, A statistical perspective on linear programs with uncertain parameters, *Proceedings of the Winter Simulation Conference (WSC)*, 2015.
- Lam, H.** and Mottet, C.\*, Simulating tail events with unspecified tail models, *Proceedings of the Winter Simulation Conference (WSC)*, 2015.
- Zhao, D.\*, Peng, H., **Lam, H.**, Bao, S., Nobukawa, K., LeBlanc, D. J. and Pan, C. S., Accelerated evaluation of automated vehicles in lane change scenarios, *Proceedings of the ASME Dynamic Systems and Control Conference*, 2015.

- Bai, Q.\*, **Lam, H.** and Sclaroff, S., A Bayesian framework for online classifier ensemble, *International Conference on Machine Learning (ICML), JMLR, W & CP*, **32**, 1584–1592, 2014.
- Goeva, A.\*, **Lam, H.** and Zhang, B., Reconstructing input model via simulation optimization, *Proceedings of the Winter Simulation Conference (WSC)*, 2014.
- Blanchet, J., Dolan, C. and **Lam, H.**, Robust rare-event performance analysis with natural non-convex constraints, *Proceedings of the Winter Simulation Conference (WSC)*, 2014.
- Chiang, M., **Lam, H.**, Liu, Z., and Poor, V., Why Steiner-tree type algorithms work for community detection, *International Conference on Artificial Intelligence and Statistics (AISTATS), JMLR, W & CP*, **31**, 187-195, 2013.
- Lam, H.** and Ghosh, S., Iterative method for robust estimation under bivariate uncertainty, *Proceedings of the Winter Simulation Conference (WSC)*, 2013.
- Lam, H.**, Efficient importance sampling under partial information, *Proceedings of the Winter Simulation Conference (WSC)*, 41–53, 2012.
- Chung, K. M., **Lam, H.**, Liu, Z., and Mitzenmacher, M., Chernoff-Hoeffding bounds for finite Markov chains: generalized and simplified, *Proceedings of the Symposium on Theoretical Aspects of Computer Science (STACS)*, 2012.
- Lam, H.**, Liu, Z., Mitzenmacher, M., Sun, X., and Wang, Y., Information dissemination via random walks in  $d$ -dimensional space, *Proceedings of the ACM-SIAM Symposium on Discrete Algorithms (SODA)*, 1612–1622, 2012.
- Lam, H.**, Exact asymptotics for infinite-server queues, *ACM Proceedings of the 6th International Conference on Queueing Theory and Network Applications*, 101–106, 2011.
- Blanchet, J. and **Lam, H.**, Importance sampling for actuarial cost analysis under a heavy traffic model, *Proceedings of the Winter Simulation Conference (WSC)*, 3817–3828, 2011.
- Bai, Y. L., Huang, Z. Y., **Lam, H.**, and Zhao, D., Black-box rare-event simulation for safety testing of AI agents: An overview. *Journal of the Operations Research Society of China*, 1–25, 2025.
- Lam, H.**, Statistical uncertainty quantification for expensive black-box models: Methodologies and input uncertainty applications, *Invited Tutorial, Winter Simulation Conference (WSC)*, 2023.
- Barton, R., **Lam, H.** and Song, E., Input uncertainty in stochastic simulation, Chapter 17, *The Palgrave Handbook of Operations Research*, 2022.
- Lam, H.**, Advanced tutorial: Input uncertainty and robust analysis in stochastic simulation, *Invited Tutorial, Winter Simulation Conference (WSC)*, 2016.
- Blanchet, J. and **Lam, H.**, State-dependent importance sampling for rare-event simulation: Recent advances, *Surveys in Operations Research and Management Science*, **17**(1), 38-59, 2012.
- Blanchet, J., and **Lam, H.**, Rare-event simulation techniques, *Advanced Tutorial, Proceedings of the Winter Simulation Conference (WSC)*, 2011.

PERSPECTIVE  
ARTICLES

Wiberg, H., Dai, T., **Lam, H.** and Kulkarni, R., Synergizing Artificial Intelligence and Operations Research: Perspectives from INFORMS Fellows on the next frontier, *INFORMS Journal on Data Science*, 1–10, 2025.

Wasserkrug, S., Cheriyan, V., Dai, T., Jaramillo, J.R., Koenig, S., Krishnan, R., Kulkarni, R., **Lam, H.**, Oswald, F., Serra, T. and Squillante, M.S., Susarla, A., Van Hentenryck, P. and Wiberg, H., A prominent role for INFORMS in the age of AI: Bringing together AI and OR/MS for better organizational and societal decision-making, *ORMS Today*, 2025.

OTHER  
PUBLICATIONS

Liu, J., Wang, T.\*, **Lam, H.**, Namkoong, H., Blanchet, J., DRO: A Python library for distributionally robust optimization in machine learning, *NeurIPS Workshop on Optimization for Machine Learning*, 2025.

Wang, T.\* and **Lam, H.**, Achieving first-order statistical improvements in data-driven optimization, *NeurIPS Workshop on Optimization for Machine Learning*, 2025.

Zhang, H., Chen, H.\*, Zhan, D., Zhao, H., **Lam, H.**, Tang, W., Yao, D. and Zheng, Z., SOCRATES: Simulation optimization with correlated replicas and adaptive trajectory evaluations, *NeurIPS Workshop on ML x OR: Mathematical Foundation and Operational integration of Machine Learning in Decision-Making under Uncertainty*, 2025.

Meesena, W.\* and **Lam, H.**, Safe Start: Configuring optimization algorithms for decision-making under extreme risks, *NeurIPS Workshop on ML x OR: Mathematical Foundation and Operational integration of Machine Learning in Decision-Making under Uncertainty*, 2025.

Lakhnichi, M.\* and **Lam, H.**, Fast Variability Approximation: Speeding up divergence-based distributionally robust optimization via directed perturbation, *NeurIPS Workshop on ML x OR: Mathematical Foundation and Operational integration of Machine Learning in Decision-Making under Uncertainty*, 2025.

Cen, Z., Liu, Z., Wang, Z.\*, Yao, Y., **Lam, H.** and Zhao, D., Learning from sparse offline datasets via conservative density estimation, *ICML Workshop on New Frontiers in Learning, Control, and Dynamical Systems*, 2023.

**Lam, H.** and Zhang, H.\*, Prediction intervals for simulation metamodeling, *ICML Workshop on Distribution-Free Uncertainty Quantification*, 2022.

Xu, M., Huang, P., Kumar, V., Qiu, J., Chao, F., Lee, K., Qi, X., **Lam, H.**, Li, B. and Zhao, D., Group distributionally robust reinforcement learning, *Fresh Perspectives on the Future of Autonomous Driving workshop, ICRA*, 2022.

Bai, Y., **Lam, H.** and Vyetrenko, S., Efficient calibration of multi-agent market simulators from time series with Bayesian optimization, *NeurIPS Workshop on Optimization for Machine Learning*, 2021.

Xu, M., Huang, P., Li, F.\*, Zhu, J., Qi, X., Huang, Z.\*, **Lam, H.** and Zhao, D., Accelerated policy evaluation with adaptive importance sampling, *ICLR Workshop on Security and Safety in Machine Learning Systems*, 2021.

Zhao, D.\*, Peng, H., **Lam, H.**, LeBlanc, D. J., Accelerated evaluation of automated vehicles, *5th ASME Symposium on Verification and Validation in Computational Modeling and Simulation*, 2016.

**Lam, H.** and Zhang, B., Machine teaching via simulation optimization, *NIPS Workshop on Machine Learning from and for Adaptive User Technologies: From Active Learning and Experimentation to Optimization and Personalization*, 2015.

**Lam, H.**, *Efficient Monte-Carlo Methods and Asymptotic Analysis for Stochastic Systems*, Ph.D. Dissertation, Harvard University, 2011.

#### PREPRINTS

**Lam, H.** and Qian, H.\*, Optimization-based quantification of simulation input uncertainty via empirical likelihood, <https://arxiv.org/abs/1707.05917>.

**Lam, H.**, Wang, K., Wu Y. and Zhang, Y., Adaptive data fusion for multi-task non-smooth optimization, <https://arxiv.org/abs/2210.12334>.

Zeng, Y.\*, Liu, J., **Lam, H.** and Namkoong, H., LLM embeddings improve test-time adaptation to tabular  $Y|X$ -shifts, <https://arxiv.org/abs/2410.07395>.

Huang, Z., **Lam, H.** and Zhang, H.\*, Bayesian bandit algorithms with approximate inference in stochastic linear bandits, <https://arxiv.org/abs/2406.14071>.

Liu, Z.\*, Van Parys, B. and **Lam, H.**, Smoothed  $f$ -divergence distributionally robust optimization, <https://arxiv.org/abs/2306.14041>.

He, S.\* and **Lam, H.**, Statistically optimal uncertainty quantification for expensive black-box models, <https://arxiv.org/abs/2408.05887>.

#### SERVICES

*Services to professional organizations:*

INFORMS Simulation Society Recruiting and Retention Committee, 2016–2018.

INFORMS Applied Probability Society Council Member 2017–2019.

INFORMS Simulation Society Council Member 2019–2021.

New England Statistical Society Council Member 2021–.

Search Committee for *Stochastic Systems* Editor-in-Chief, 2022.

INFORMS Simulation Society Secretary 2022–2024.

INFORMS Applied Probability Society Vice-Chair and Chair-Elect 2022–2024.

INFORMS Presidential AI Roadmap Ad Hoc Committee Member 2024.

INFORMS Applied Probability Society Chair 2024–.

*Prize committees:*

INFORMS Junior Faculty Interest Group (JFIG) Best Paper Prize Judge 2019, 2020, 2022.

Winter Simulation Conference Best Theoretical Paper Prize Committee 2019.

INFORMS Applied Probability Society (APS) Best Student Paper Prize Judge 2020, 2021.

INFORMS George Nicholson Best Student Paper Competition Judge 2021, 2022.

INFORMS Applied Probability Society (APS) Best Student Paper Competition Co-Chair 2024.

INFORMS Outstanding Simulation Publication Award Committee, 2023–2025 (chair in 2024).

*Conference organization:*

Organizing Committee, New England Statistics Symposium 2012, 2022, 2024.

Session Chair, Applied Probability Society Conference 2013, 2017, 2019.

Session Chair, INFORMS Annual Meeting 2013–2017.

Program Committee, Winter Simulation Conference (Analysis Methodology Track) 2015, 2016, 2018, 2020, 2021, 2022.

Program Committee, Winter Simulation Conference (Simulation Optimization Track) 2016, 2017, 2018, 2020, 2021.

Program Committee, Winter Simulation Conference (Model Uncertainty and Robust Simulation Track) 2020, 2021.

Co-Chair, INFORMS Annual Meeting Applied Probability Cluster 2018.

Track Co-Chair, Winter Simulation Conference (Uncertainty Quantification and Robust Simulation) 2019.

Organizing Committee, I-SIM Workshop 2021.

Workshop & Tutorial Advisory Committee, ACM International Conference on AI in Finance, 2021.

Program Committee, ACM International Conference on AI in Finance, 2021.

Track Co-Chair, Winter Simulation Conference (Advanced Tutorial) 2023.

Proceedings Editor, Winter Simulation Conference 2023.

Lead Proceedings Editor, Winter Simulation Conference 2024.

Organizing Committee, I-SIM Workshop 2024.

Co-organizer, NeurIPS Workshop on ML x OR: Mathematical Foundations and Operational Integration of Machine Learning for Uncertainty-Aware Decision-Making, 2025.

*Grant proposal review:*

National Science Foundation (NSF) Peer Review Panel, 2015, 2020.

National Science Foundation (NSF) Ad Hoc Reviewer, 2017.

Department of Energy (DOE) Ad Hoc Reviewer, 2019.

Office of Naval Research (ONR) Ad Hoc Reviewer, 2020, 2022.

Natural Sciences and Engineering Research Council of Canada (NSERC), External Reviewer, 2016.

Research Grants Council of Hong Kong, External Reviewer, 2019, 2020, 2022, 2023.

Dutch Research Council, External Reviewer, 2023.

Swiss National Science Foundation, External Reviewer, 2026.

French National Funding Agency, External Reviewer, 2026.

*Journal refereeing:*

Referee for: *American Control Conference, ACM Transactions on Modeling and Computer Simulation, Annals of Applied Probability, Annals of Operations Research, Annals of Statistics, Applied Mathematics Letters, Applied Stochastic Models in Business and Industry, Bernoulli, Biometrics, Biometrika, Communications in Mathematical Sciences, Computational Management Science, Entropy, Electronic Journal of Statistics, European Journal of Operations Research, Extremes, IEEE Transactions on Automatic Control, International Conference on Learning Representations, INFORMS Journal on Computing, Journal of Applied Probability, Journal of Applied Statistics, Journal of Simulation, Journal of Theoretical Probability, Mathematical Programming, Management Science, Mathematics of Operations Research, Naval Research Logistics, Neural Information Processing Systems, North American Actuarial Journal, Operations Research, Performance Evaluation, PLOS, Proceedings of the Royal Society A, Queueing Systems, SIAM Journal on Control and Optimization, SIAM Journal on Mathematics of Data Science, SIAM Review, Simulation Modelling Practice and Theory, Statistica Sinica, Stochastic Models, Stochastic Processes and Their Applications, Stochastic Systems.*

*University and department services:*

Co-Organizer, BU Probability and Statistics Seminar Series, 2011–2012, 2012–2013, 2013–2014.

Graduate Admission Committee, BU Statistics Program, 2011–2012.

Organizing Committee, BU Center for Information & Systems Engineering Seminar Series, Fall 2014.

Faculty adviser, UM Tauber Institute Team Project “Simulation of Material Handling Operations for Labor Requirements Calculation”, 2015. (student team won Best Presentation Award Third Place)

Graduate Program Committee, UM IOE Department, 2015–2016.

Graduate Admission and Financial Aids Committee, UM IOE Department, 2015–2016.

Wilson Prize Committee, UM IOE Department, 2015–2016.

Organizer, UM IOE Seminar Series, Winter 2017.

Co-Organizer, Applied Probability and Risk Seminar Series, Columbia University, 2017–2021.

Actuarial Science Academic Committee, Department of Statistics, Columbia University, 2018–2020.

Graduate Admission Committee, Columbia IEOR, 2018–2021.

Ph.D. Admission Chair, Columbia IEOR, 2020–2023.

Faculty Search Committee, Columbia IEOR, 2021–2023.

PhD Program Director, Columbia IEOR, 2023–.

Faculty Search Committee Chair, Columbia IEOR, 2025–2026.

INVITED  
TALKS

*Tutorial:*

Western Swiss Doctoral School in Statistics and Probability, Switzerland, 9/2021.

Invited tutorial on emerging topics, I-SIM Workshop, 6/2021 (virtual).

APS invited tutorial lecture, INFORMS Annual Meeting, 11/2020 (virtual).

Peking University Summer School on Applied Mathematics, 7/2019.

Invited tutorial, Winter Simulation Conference (WSC) 12/2016.

*Panel discussant:*

NYC Preparedness & Recovery Institute Forum, New York, NY, 5/2026 (upcoming).

Banff Workshop on Contextual Stochastic Optimization, Banff, Canada, 2/2026.

INFORMS Applied Probability Society Conference, Atlanta, GA, 6/2025.

INFORMS Annual Meeting, Applied Probability Society Cluster, 10/2024.

*Department seminars:*

Department of Industrial and Systems Engineering, North Carolina State University, Raleigh, NC, 11/2025.

Edwardson School of Industrial Engineering, Purdue University, West Lafayette, IN, 10/2025.

INFORMS New York Metro Chapter, 10/2025.

Department of Systems Engineering and Engineering Management, Chinese University of Hong Kong, 7/2025.

School of Risk and Actuarial Studies, University of New South Wales, Sydney, Australia, 8/2023.

Department of Systems Engineering and Engineering Management, Chinese University of Hong Kong, 12/2022.

Department of Mathematical Informatics, University of Tokyo, Japan, 5/2022.

Applied Probability Seminar, Columbia University, NY, 12/2021.

School of Operations Research and Information Engineering, Cornell University, NY, 11/2021.

Decision, Operations & Information Technologies Seminar, University of Maryland Robert H. Smith School of Business, MD, 3/2021 (virtual talk).

Computational Mathematics Seminar, University of Waterloo, Canada, 2/2020.

Center for Information and Systems Engineering, Boston University, MA, 11/2019.

Applied Mathematics Colloquium, Columbia University, NY, 9/2019.

School of Risk and Actuarial Studies, University of New South Wales, Sydney, Australia, 7/2019.

Operations Research and Industrial Engineering Seminar, Department of Mechanical Engineering, University of Texas at Austin, TX, 3/2019.

Department of Industrial Engineering and Management, Oklahoma State University, Stillwater, OK, 11/2018.

Department of Industrial and Systems Engineering, University of Minnesota, Twin Cities, MN, 10/2018.

Department of Industrial and Systems Engineering, Lehigh University, Bethlehem, PA 5/2018.

Department of Mathematics and Statistics, Boston University, Boston, MA 4/2018.

IBM Research AI, Yorktown Heights, NY, 4/2018.

Department of Industrial and Manufacturing Engineering, Penn State University, University Park, PA 3/2018.

RIKEN Center for Advanced Intelligence Project, Tokyo, Japan 11/2017.

Operations Management Seminar, University of Southern California, Los Angeles, CA 11/2017.

Applied Probability and Risk Seminar, Columbia University, New York, NY, 9/2017.

Department of Computer Science, College of William and Mary, Williamsburg, VA, 4/2017.

Department of Statistical Sciences and Operations Research, Virginia Commonwealth University, Richmond, VA, 3/2017.

Department of Decision Sciences and Managerial Economics, Chinese University of Hong Kong, Hong Kong, 12/2016.

Applied Probability and Risk Seminar, Columbia University, 11/2016.

School of Business, University of Hong Kong, Hong Kong, 8/2016.

Department of Management Science, City University of Hong Kong, Hong Kong, 8/2016.

Department of Mathematics and Statistics, University of Massachusetts, Amherst, MA, 4/2016.

Department of Industrial Engineering and Management Sciences, Northwestern University, IL, 3/2016.

H. Milton Stewart School of Industrial and Systems Engineering, Georgia Institute of Technology, GA, 9/2015.

Operations Research Team Seminar, General Motors Global R & D, Warren, MI, 5/2015.

Department of Statistics, Purdue University, IN, 2/2015.

IBM Research, Yorktown Heights, NY, 5/2014.

Department of Risk Management and Insurance, Georgia State University, GA, 12/2013.

Machine Learning Seminar, Department of Electrical and Computer Engineering, Boston University, MA, 10/2013.

Department of Statistics and Actuarial Science, The University of Hong Kong, Hong Kong, 12/2012.

Department of Mathematics, Penn State University, PA, 11/2012.

IBM Research, Yorktown Heights, NY, 8/2012.

Department of Statistics, Chinese University of Hong Kong, Hong Kong, 12/2011.

*Invited talks in specialized workshops:*

Symposium on Statistics and Risk Management, Department of Statistics and Data Science, Chinese University of Hong Kong, 12/2025.

MCQMC Workshop, University of Waterloo, Canada, 8/2024 (plenary).

RIKEN Center for Advanced Intelligence Project Seminar, Tokyo, Japan, 7/2024.

I-SIM Workshop, Hong Kong University of Science and Technology, Hong Kong, 6/2024.

University of Melbourne, Workshop on Uncertainty in Decision-Making: Game-Theoretic and Machine Learning Approaches, Melbourne, Australia, 12/2022.

University of New South Wales Workshop on Risk and Actuarial Frontiers, Sydney, Australia, 12/2022.

Stochastic Network Conference, Cornell University, Ithaca, NY, 6/2022.

Stochastic Networks, Applied Probability, and Performance (SNAPP) Seminar, 2/2022 (virtual).

I-SIM Workshop, 6/2021 (virtual).

International Workshop on Rare Event Simulation, 5/2021 (virtual).

Workshop on Mathematical Optimization of Systems Impacted by Rare, High-Impact Random Events, The Institute for Computational and Experimental Research in Mathematics (ICERM), Brown University, Providence, RI, 6/2019.

International Workshop on Rare Event Simulation, Stockholm, Sweden, 8/2018 (plenary).

BIRS-CMO Workshop on Self-Similarity, Long-Range Dependence and Extremes, Oaxaca, Mexico, 6/2018.

Quantitative Risk Management & Financial Analytics Workshop, University of Ottawa, Ottawa, ON, Canada, 5/2018 (plenary).

American Mathematical Society Northeast Sectional Meeting, Special Session on Optimization under Uncertainty, Boston, MA, 4/2018.

BIRS Workshop on Distributionally Robust Optimization, The Banff Centre, Canada, 3/2018.

International Conference of the ERCIM WG on Computational and Methodological Statistics, University of London, U.K., 12/2017.

INFORMS Simulation Society Research Workshop, University of Durham, Durham, U.K., 7/2017 (one-hour talk).

International Conference on Extreme Value Analysis, Delft University of Technology, Delft, The Netherlands, 6/2017.

Mostly OM Workshop, Tsinghua University, 5/2016 (one-hour talk).

American Mathematical Society Fall Southeastern Sectional Meeting, Special Session on Recent Advances in Stochastic Processes and Stochastic Computation, Raleigh, NC, 11/2016.

Workshop on Uncertainty Quantification for Multiscale Stochastic Systems and Applications, Institute for Pure and Applied Mathematics, University of California, Los Angeles, CA, 1/2016 (one-hour talk).

Workshop on Robust Optimization in Applied Probability, EURANDOM, the Netherlands, 11/2015.

ISIM Workshop: At the Interface of Simulation and Optimization, Purdue University, IN, 7/2015.

BIRS Workshop on Applied Probability Frontiers: Computational and Modeling Challenges, The Banff Centre, Canada, 5/2015 (one-hour talk).

BU/Keio Workshop on Probability and Statistics, Boston, MA, 9/2013 (one-hour talk).

Workshop on Computational Methods in Applied Sciences, Department of Statistics, Columbia University, NY, 12/2012.

SAMSI Rare-Event Simulation Workshop, Research Triangle Park, NC, 3/2012 (one-hour talk).

Stochastic Networks Conference, Isaac Newton Institute, University of Cambridge, U.K., 6/2010.

*Invited talks in major conferences:*

Applied Probability Society Conference, Atlanta, GA, 6/2025.

Conference on Extreme Value Analysis, Chapel Hill, NC, 6/2025.

Winter Simulation Conference, Orlando, FL, 12/2024.

INFORMS Annual Meeting, Seattle, WA, 10/2024.

Joint Statistical Meetings, Toronto, Canada, 8/2023.

International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics), 12/2022 (virtual).

Joint Statistical Meetings, 8/2021 (virtual).

SIAM Conference on Optimization, 7/2021 (virtual).

SIAM Conference on Computational Science and Engineering, 3/2021 (virtual).

Winter Simulation Conference, National Harbor, MD, 12/2019.

INFORMS Annual Meeting, Seattle, WA, 10/2019.

International Conference on Continuous Optimization, Berlin, Germany, 8/2019.

International Conference on Monte Carlo Methods and Applications, Sydney, Australia, 7/2019.

Applied Probability Society Conference, Brisbane, Australia, 7/2019.

Winter Simulation Conference, Gothenburg, Sweden, 12/2018.

INFORMS Annual Meeting, Phoenix, AZ, 11/2018.

International Symposium on Mathematical Programming, Bordeaux, France, 7/2018.

Winter Simulation Conference, Las Vegas, NV, 12/2017.

INFORMS Annual Meeting, Houston, TX, 10/2017.

Winter Simulation Conference, Washington D.C., 12/2016.

INFORMS Annual Meeting, Nashville, TN, 11/2016.

International Conference on Continuous Optimization, Tokyo, Japan, 8/2016.

International Workshop on Applied Probability, Toronto, Canada, 6/2016.

INFORMS International Conference, Waikoloa, HI, 6/2016.

INFORMS Optimization Society Conference, Princeton, NJ, 3/2016.

Winter Simulation Conference, Huntington Beach, CA, 12/2015.

INFORMS Annual Meeting, Philadelphia, PA, 11/2015.

The Annual International Conference of the German Operations Research Society, Vienna, Austria, 9/2015.

International Symposium on Mathematical Programming, Pittsburgh, PA, 7/2015.

INFORMS Computing Society Conference, Richmond, VA, 1/2015.

Winter Simulation Conference, Savannah, GA, 12/2014.

INFORMS Annual Meeting, San Francisco, CA, 11/2014.

New England Statistics Symposium, Harvard School of Public Health, MA, 4/2014.

SIAM Conference on Uncertainty Quantification, Atlanta, GA, 3/2014.

Winter Simulation Conference, Washington D.C., 12/2013.

INFORMS Annual Meeting, Minneapolis, MN, 10/2013.

Applied Probability Society Conference, San Jose, Costa Rica, 7/2013.

New England Statistics Symposium, University of Connecticut, CT, 4/2013.

Winter Simulation Conference, Berlin, Germany, 12/2012.

INFORMS Annual Meeting, Phoenix, AZ, 10/2012.  
 Winter Simulation Conference, Phoenix, AZ, 12/2011.  
 INFORMS Annual Meeting, Charlotte, NC, 10/2011.  
 INFORMS Annual Meeting, Austin, TX, 10/2010.  
 INFORMS Annual Meeting, San Diego, CA, 10/2009.  
 Applied Probability Society Conference, Ithaca, NY, 7/2009.  
 INFORMS Annual Meeting, Washington D.C., 10/2008.

*Others:*

Research Seminar, Columbia Science Research Fellows Program, NY, 4/2026 (invited talk).  
 Lightning Talk, NYC Preparedness & Recovery Institute Forum, New York, NY, 5/2025 (invited short talk).  
 Data Spark Presentation, NYC Preparedness & Recovery Institute Forum, New York, NY, 12/2024 (invited short talk).  
 Student Seminar, Department of Statistics, Columbia University, NY, 2/2022 (invited talk).  
 Student Seminar, Department of Statistics, Columbia University, NY, 10/2013 (invited talk).  
 Second Cambridge Area Economics and Computation Day, MIT, Cambridge, MA, 5/2013 (contributed talk with selection).  
 Winter Simulation Conference, Austin, TX, 12/2009 (invited talk in the Ph.D. Colloquium).  
 Northeast Probability Seminar, New York, NY, 11/2009 (contributed short talk).  
 Department of Mathematics, University of Wisconsin, Madison, WI, 6/2009 (contributed talk).  
 DRO Student Seminar, Columbia Business School, New York, NY, 10/2008 (invited talk).

TEACHING  
EXPERIENCE

**Columbia University**, New York

|                                                                                              |                                   |
|----------------------------------------------------------------------------------------------|-----------------------------------|
| Instructor, IEOR 6711: Stochastics I                                                         | Fall 2019–2021, 2023–2024         |
| Instructor, IEOR 4100/4101: Probability, Statistics and Simulation                           | Fall 2017–2022, Fall 2025         |
| Instructor, IEOR 4102: Stochastic Modeling for Management Science and Engineering            | Spring 2019                       |
| Instructor, IEOR 8100: Statistical Methods for Simulation and Optimization under Uncertainty | Spring 2019                       |
| Instructor, IEOR 3404: Simulation Modeling and Analysis                                      | Spring 2018                       |
| Instructor, IEOR 4404: Simulation                                                            | Fall 2024, Spring 2025, Fall 2025 |
| Instructor, IEOR 3106: Stochastic Systems and Applications                                   | Fall 2024                         |

**University of Michigan**, Ann Arbor, Michigan

|                                                   |                   |
|---------------------------------------------------|-------------------|
| Instructor, IOE 574: Advanced Simulation Analysis | Winter 2016, 2017 |
| Instructor, IOE 474: Simulation Analysis          | Fall 2015, 2016   |

**Boston University**, Boston, Massachusetts

|                                                                 |                   |
|-----------------------------------------------------------------|-------------------|
| Instructor, MA 570: Stochastic Methods in Operations Research   | Spring 2014       |
| Instructor, MA 115: Statistics I                                | Fall 2014         |
| Instructor, MA 569: Optimization Methods in Operations Research | Fall 2011–2013    |
| Instructor, MA 116: Statistics II                               | Spring 2012, 2013 |
| Instructor, MA 881: Graduate Seminar in Applied Probability     | Fall 2011         |

**Harvard University**, Cambridge, Massachusetts

|                                                                 |             |
|-----------------------------------------------------------------|-------------|
| Teaching Fellow, STAT 139/239: Linear Models                    | Fall 2007   |
| Teaching Fellow, STAT 171: Stochastic Processes                 | Spring 2007 |
| Teaching Fellow, STAT 104: Introduction to Quantitative Methods | Fall 2006   |

STUDENT  
MENTORING

*PhD students with primary advising role:*

Alexandrina Goeva (BU Math & Stat), co-advised with Eric Kolaczyk, graduated in 4/2017. First position: Post-doc, Broad Institute of MIT and Harvard.

Clementine Mottet (BU Math & Stat), graduated in 12/2017. First position: TripAdvisor.

Amirhossein Meisami (UM IOE), co-advised with Mark Van Oyen, graduated in 4/2018. First position: Adobe.

Zhiyuan Huang (UM IOE), graduated in 4/2020. First position: Post-doc, Carnegie Mellon University.

Huajie (Jason) Qian (Columbia IEOR), graduated in 5/2020. First position: Alibaba.

Kumar Goutam (Columbia IEOR), co-advised with Vineet Goyal, graduated in 7/2020. First position: Amazon.

Fengpei Li (Columbia IEOR), co-advised with Jose Blanchet, graduated in 3/2021. First position: Morgan Stanley.

Xinyu Zhang (Columbia IEOR), graduated in 12/2021. First position: Goldman Sachs.

Elioth Sanabria (Columbia IEOR), co-advised with David Yao, graduated in 7/2022. First position: FDNY.

Yuanlu Bai (Columbia IEOR), graduated in 3/2023. First position: Tiktok.

Zhenyuan Liu (Columbia IEOR), graduated in 4/2024. First position: SIG.

Shengyi He (Columbia IEOR), graduated in 4/2024. First position: Citadel Securities.

Haofeng Zhang (Columbia IEOR), co-advised with Adam Elmachtaub, graduated in 9/2024. First position: Morgan Stanley.

Yibo Zeng (Columbia IEOR), co-advised with Hongseok Namkoong, graduated in 10/2024. First position: Meta.

Haoxian Chen (Columbia IEOR), co-advised with Wenpin Tang, graduated in 4/2025.  
First position: Amazon.

Tianyu Wang (Columbia IEOR), co-advised with Garud Iyengar, graduated in 3/2026.  
First position: Post-doc, Harvard Business School.

Zitong Wang (Columbia IEOR), co-advised with Ton Dieker, graduated in 4/2026.

Yunhao Yan (Columbia IEOR), co-advised with Ton Dieker, graduated in 4/2026.  
First position: Post-doc, Columbia IEOR.

Arindam Roy Chowdhury (Columbia IEOR), 2023–

Haixiang Lan (Columbia IEOR), co-advise with Adam Elmachtaub, 2024–

Mohamed Lakhnichi (Columbia IEOR), 2024–

Mohammed Jamal (Columbia IEOR), 2024–

Wasin Meesena (Columbia IEOR), co-advise with Omar Besbes, 2024–

Derek Long (Columbia IEOR), 2025–

*PhD Students to whom significant guidance was provided:*

Enrique Lelo de Larrea (Columbia IEOR), graduated in 7/2021.

Ding Zhao (UM Mechanical Engineering), graduated in 3/2016.

Qinxun (Jerry) Bai (BU Computer Science), graduated in 10/2016.

*On thesis defense committee:*

Yixi Shi (Columbia IEOR), External Reader 2/2012

Dan Ren (BU Math & Stat), on Thesis Committee 4/2013

John Zhang (Columbia IEOR), External Reader 8/2013

Wes Viles (BU Math & Stat), on Thesis Committee 9/2013

Chong Liu (BU Math & Stat), Thesis Committee Chair 1/2014

Wuyang Dai (BU ECE), on Thesis Committee 11/2014

Jing Qian (BU ECE), on Thesis Committee 8/2014

Ali Sanjari (BU Math & Stat), on Thesis Committee 11/2015

Zhihao Chen (UM IOE), on Thesis Committee 2/2016

Helin Zhu (Gatech ISyE), External Reader 7/2016

Selin Merdan (UM IOE), on Thesis Committee 3/2018

Yanan Pei (Columbia IEOR), on Thesis Committee 7/2018

Fei He (Columbia IEOR), on Thesis Committee 9/2018

Ni Ma (Columbia IEOR), on Thesis Committee 12/2018

Zhipeng Liu (Columbia IEOR), on Thesis Committee 2/2019

Xiaopei Zhang (Columbia IEOR), on Thesis Committee 4/2019  
 Qiyun Pan (UM IOE), on Thesis Committee 5/2019  
 Wei You (Columbia IEOR), on Thesis Committee 5/2019  
 Ryan McNellis (Columbia IEOR), on Thesis Committee 12/2019  
 Chaoxu Zhou (Columbia IEOR), on Thesis Committee 1/2020  
 Lin Chen (Columbia IEOR), on Thesis Committee 3/2020  
 Enrique Lelo de Larrea (Columbia IEOR), on Thesis Committee 7/2021  
 Jinsheng Chen (Columbia IEOR), on Thesis Committee 5/2022  
 Mansur Arief (CMU Mechanical Engineering), on Thesis Committee 4/2023  
 Ilias Mavromatis (Columbia CEEM), on Thesis Committee 3/2024  
 Shangzhou Xia (Columbia DRO), on Thesis Committee 5/2024  
 Mark Christianen (Eindhoven University of Technology), on Thesis Committee 6/2024  
 Chao Qin (Columbia DRO), on Thesis Committee 8/2024  
 Yilie Huang (Columbia IEOR), on Thesis Committee 12/2024  
 Sevin Mohammadi (Columbia CEEM), on Thesis Committee 12/2024  
 Luofeng Liao (Columbia IEOR), on Thesis Committee 3/2025  
 Xiaopeng Li (Columbia IEOR), on Thesis Committee 4/2025  
 Ethan Che (Columbia DRO), on Thesis Committee 5/2025  
 Man Yiu Tsang (Lehigh University), on Thesis Committee 5/2025  
 Ayeong Lee (Columbia DRO), on Thesis Proposal Committee 5/2025  
 Olivier Pasche (University of Geneva), on Thesis Committee 2/2026  
 Zhepeng Cen (CMU), on Thesis Committee 4/2026

*On UM IOE preliminary exam committee:*

Weidong Chen, Yuanyuan Gao, Hao Yuan, Donald Richardson, Armando Bernal,  
 Qiyun Pan

*Undergraduate students:*

Nicolas Kim (B.A. Mathematics, BU), Honors thesis advising 2013. Position after graduation: Ph.D. student in statistics at Carnegie Mellon University.  
 Guy Aridor (B.A. Economics, Mathematics and Computer Science, BU), UROP, joint with Rafik B. Hariri Institute for Computing Summer Research Award 2013.  
 Yanzhe Jin (B.S. IOE, UM). Position after graduation: Goldman Sachs.  
 Shangzhou (Shawn) Xia (B.S. IEOR, Columbia). Position after graduation: Ph.D. student in Decision, Risk and Operations, Columbia Business School.

Junhui Zhang (B.S. Applied Math, Columbia). Position after graduation: Ph.D. student in Operations Research, MIT.

Alex Paskov (B.S. Applied Math, Columbia). Position after graduation: Ph.D. student in Operations Research, MIT.

*Masters students:*

Ziwei Cao (UM Stat), Liwei Wang (Columbia Stat), Linyun He (Columbia Stat), Zexing Xu (Columbia Stat), Ivan Lin (Columbia OR), Thibault Duplay (Columbia OR), Yuanyuan Lei (Columbia Stat), Chenghuai Li (Columbia FE), Keliang Wang (Columbia OR), Nattapon Wongrattanawichit (Columbia OR), Yusong Wang (Columbia FE), Xinyu Li (Columbia FE), Linjun Huang (Columbia Stat), Haoxian Chen (Columbia FE), Zonglin Lyu (Columbia OR), Ruofei Ma (Columbia OR), Alice Chen (Columbia FE), Wenqian Xing (Columbia OR), Hengzhi Zhang (Columbia OR).

*Visiting students:*

Xuhui Zhang (Undergraduate student, University of Science and Technology of China).

Brice Flamencourt (Undergraduate student, Ecole Nationale des Ponts et Chaussees, France).

Haidong Li (PhD student, Peking University, China).

Guanyu Jin (PhD student, University of Amsterdam, Netherlands).

Olivier Pasche (PhD student, University of Geneva, Switzerland).

|                                |                                                                                                            |                    |
|--------------------------------|------------------------------------------------------------------------------------------------------------|--------------------|
| INDUSTRY<br>EXPERIENCE         | Citigroup Global Markets and Banking, Hong Kong<br>Summer Quantitative Analyst, Equity Derivatives Trading | July – August 2009 |
|                                | Lehman Brothers, Hong Kong<br>Summer Senior Associate, Equity Derivatives Sales                            | June – August 2008 |
|                                | Hewitt Associate LLC, Hong Kong<br>Summer Consultant                                                       | June – July 2005   |
|                                | Standard Chartered Bank, Hong Kong<br>Quantitative Analyst                                                 | Summer 2001 – 2003 |
| PROFESSIONAL<br>QUALIFICATIONS | Passed Society of Actuaries Exam P, FM, MFE, MLC and C.                                                    |                    |