

Henry Lam

CONTACT INFORMATION	Department of Industrial Engineering and Operations Research Columbia University 500 W. 120th St. New York, NY 10027 <i>E-mail:</i> henry.lam@columbia.edu
EMPLOYMENT	<p>Columbia University, New York City, New York Department of Industrial Engineering and Operations Research Associate Professor July 2017 –</p> <p>University of Michigan, Ann Arbor, Michigan Department of Industrial and Operations Engineering Assistant Professor January 2015 – June 2017</p> <p>Boston University, Boston, Massachusetts Department of Mathematics and Statistics Assistant Professor January 2011 – December 2014</p>
EDUCATION	<p>Harvard University, Cambridge, Massachusetts Ph.D. Statistics January 2011 A.M. Statistics June 2006 Overall GPA: 4.0/4.0</p> <p>The University of Hong Kong, Hong Kong B.S. Actuarial Science (First Class Honors) June 2005 Overall GPA: 3.9/4.0</p>
AWARDS	Best Theoretical Paper, Winter Simulation Conference, 2018 NSF Faculty Early Career Development (CAREER) Award, 2017 INFORMS Junior Faculty Interest Group (JFIG) Paper Competition, Second Prize, 2016 Adobe Digital Marketing Research Award, 2016 Finalist, Best Theoretical Paper, Winter Simulation Conference, 2016 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

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: \$89,750. 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 Digital Marketing 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 2022. 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 2022. Role: PI (Lead-PI: Ding Zhao).

PUBLISHED OR
ACCEPTED
ARTICLES

* Supervised student co-author

Goeva, A.*, **Lam, H.**, Qian, H.* and Zhang, B., Optimization-based calibration of simulation input models, *forthcoming in Operations Research*, 2019.

Lam, H., Recovering best statistical guarantees via the empirical divergence-based distributionally robust optimization, *forthcoming in Operations Research*, 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.

Blanchet, J., **Lam, H.**, Tang, Q. and Yuan, Z., Robust actuarial risk analysis, *North American Actuarial Journal*, **23**(1), 33–63, 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.
- Lam, H.**, and Mottet, C.*, Tail analysis without parametric models: A worst-case perspective, *Operations Research*, **65**(6), 1696–1711, 2017.
- Choe, Y., **Lam, H.** and Byon, E., Uncertainty quantification of stochastic simulation for black-box computer experiments, *Methodology and Computing in Applied Probability*, 1–18, 2017.
[Selected for the Natrella Invited Section in the American Statistical Association (ASA) Quality & Productivity Research Conference 2015]
- 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 G. Nicholson Student Paper Competition Honorable Mention Prize 2010]
- Bai, Q.*, **Lam, H.** and Sclaroff, S., A Bayesian framework for online classifier ensemble, *Journal of Machine Learning Research, W & CP (ICML)*, **32**, 1584–1592, 2014.
- 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.
- Chiang, M., **Lam, H.**, Liu, Z., and Poor, V., Why Steiner-tree type algorithms work for community detection, *Journal of Machine Learning Research, W & CP (AISTATS)*, **31**, 187–195, 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.

REFEREED
CONFERENCE
PUBLICATIONS

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.

- 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.
- 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.
- SURVEY ARTICLES
- 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.
- OTHER PUBLICATIONS
- 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.
- ARTICLES UNDER REVISION
- Hong, J. L., Huang, Z.* and **Lam, H.**, Learning-based robust optimization: Procedures and statistical guarantees, *under revision in Management Science*.
- Plumlee, M. and **Lam, H.**, An uncertainty quantification method for inexact simulation models, *under revision in Operations Research*.

- Lam, H.** and Qian, H.*, Optimization-based quantification of simulation input uncertainty via empirical likelihood, *under revision in Management Science*.
- Mottet, C.* and **Lam, H.**, On optimization over tail distributions, *under revision in INFORMS Journal on Computing*.
- Peng, Y., Fu, M. C., Heidegott, B. and **Lam, H.**, Maximum likelihood estimation by Monte Carlo simulation: Towards data-driven stochastic modeling, *under revision in Operations Research*.
- Lam, H.** and Qian, H.*, Subsampling to enhance efficiency in input uncertainty quantification, *under revision in Operations Research*.
- Lam, H.** and Qian, H.*, Bounding optimality gap in stochastic optimization via bagging: Statistical efficiency and stability, *under review in Operations Research*.
- Lam, H.**, Zhang, X.* and Zhang, X.*, Enhanced balancing of bias-variance tradeoff in stochastic estimation: A minimax perspective, *under review in Operations Research*.
- Lam, H.** and Li, F.*, Parametric scenario optimization under limited data: A distributionally robust optimization view, *under review in ACM Transactions on Modeling and Computer Simulation*.
- Luo, Q., Huang, Z.* and **Lam, H.**, Dynamic congestion pricing for ridesourcing traffic: A simulation optimization approach, *under review in Winter Simulation Conference*.
- Lam, H.** and Qian, H.*, Validating optimization with uncertain constraints, *under review in Winter Simulation Conference*.
- Lam, H.** and Qian, H.*, Random perturbation and bagging to quantify input uncertainty, *under review in Winter Simulation Conference*.
- Lam, H.** and Zhang, X.*, Minimax efficient finite-difference gradient estimation, *under review in Winter Simulation Conference*.
- Lam, H.** and Zhang, H.*, On the stability of kernelized control functionals on partial and biased stochastic inputs, *under review in Winter Simulation Conference*.
- MANUSCRIPTS IN SUBMISSION **Lam, H.**, Nonparametric bounds for parametric sensitivities in simulation analysis, *preprint*.
- Meisami, A.*, **Lam, H.**, Van Oyen, M., Stromblad, C., and Kastango, N., Individualized learning for surgery appointment scheduling, *preprint*.
- Pan, Q., Byon, E. and **Lam, H.**, Adaptive importance sampling for extreme quantile estimation with stochastic black-box computer models, *preprint*.
- Peng, Y., Li, X., Heidegott, H., Hong, J. L. and **Lam, H.**, Stochastic gradient estimation for artificial neural networks, *preprint*.
- Blanchet, J., Kang, Y. and **Lam, H.**, An empirical likelihood approach to quantify uncertainty of stochastic programs, *in preparation*.
- Lam, H.** and Zhang, X.*, Robust multivariate extreme event analysis, *in preparation*.
- Lam, H.** and Qian, H.*, Optimal statistical balancing of feasibility-optimality tradeoff for optimization under uncertainty, *in preparation*.
- Abbasi-Yadkori, Y., Dong, C., **Lam, H.**, Li, F.*, Meisami, A.*, and Pani, A., Stochastically constrained reinforcement learning via policy splitting, *in preparation*.

Bai, Y.*, **Lam, H.** and Zhang, X.*, Extreme event analysis via distributionally robust optimization, *in preparation*.

Bai, Y.*, Huang, Z.* and **Lam, H.**, Importance sampling for black-box predictive models, *in preparation*.

SERVICES

Editorial:

Associate Editor, *Operations Research*, 2015–

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

Editorial Board, *Stochastic Models*, 2019–

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*, *Communications in Mathematical Sciences*, *Computational Management Science*, *Entropy*, *Electronic Journal of Statistics*, *European Journal of Operations Research*, *Extremes*, *IEEE Transactions on Automatic Control*, *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*, *Operations Research*, *Performance Evaluation*, *PLOS*, *Queueing Systems*, *SIAM Journal on Control and Optimization*, *Simulation Modelling Practice and Theory*, *Statistica Sinica*, *Stochastic Models*, *Stochastic Processes and Their Applications*, *Stochastic Systems*.

Services to professional organizations:

Organizing Committee, New England Statistics Symposium 2012.

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.

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

INFORMS Simulation Society Recruiting and Retention Committee, 2016–.

INFORMS Applied Probability Society Council Member 2017–.

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

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

Grant proposal review:

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

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

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

Research Grants Council of Hong Kong, External Reviewer, 2019.

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, 2017–2018, 2018–2019.

Actuarial Science Academic Committee, Department of Statistics, Columbia University, 2018–2019.

Graduate Admission Committee, Columbia IEOR, 2018, 2019.

INVITED
TALKS

Department seminars:

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, The Chinese University of Hong Kong, Hong Kong, 12/2011.

Invited talks in specialized workshops:

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 (upcoming).

International Workshop on Rare Event Simulation, Stockholm, Sweden, 8/2018 (one-hour talk).

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 (one-hour talk).

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, Issac Newton Institute, University of Cambridge, U.K., 6/2010.

Invited talks in major conferences:

INFORMS Annual Meeting, Seattle, WA, 10/2019 (upcoming).
International Conference on Continuous Optimization, Berlin, Germany, 8/2019 (upcoming).
International Conference on Monte Carlo Methods and Applications, Sydney, Australia, 7/2019 (upcoming).
Applied Probability Society Conference, Brisbane, Australia, 7/2019 (upcoming).
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:

Ph.D. 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 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 4100/4101: Probability, Statistics and Simulation Fall 2017, 2018

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), 2015–

Huajie (Jason) Qian (Columbia IEOR), 2015–

Xinyu Zhang (Columbia IEOR), 2016–

Goutam Kumar (Columbia IEOR), co-advise with Vineet Goyal, 2017–

Fengpei Li (Columbia IEOR), 2018–

Yuanlu Bai (first-year IEOR)

Haofeng Zhang (first-year IEOR)

Siddharth Prusty (first-year IEOR)

PhD Students to whom significant guidance was provided:

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 (expected)
 Wei You (Columbia IEOR), on Thesis Committee 5/2019 (expected)

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. Position after graduation: Ph.D. student in economics at Columbia University.

Yanzhe Jin (B.S. IOE, UM).

Shangzhou (Shawn) Xia (B.S. IEOR, Columbia).

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)

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