



Jose Humberto Blanchet Mancilla

Professor of Management Science and Engineering

Bio

BIO

Jose Blanchet holds a Ph.D. in Management Science and Engineering from Stanford University. Prior to joining MSandE he was a faculty member of Columbia and Harvard University. Jose is a recipient of the 2009 Best Publication Award given by the INFORMS Applied Probability Society and of the 2010 Erlang Prize. He also received a PECASE award given by NSF in 2010. He worked as an analyst in Protego Financial Advisors, a leading investment bank in Mexico. He has research interests in applied probability and Monte Carlo methods. He serves in the editorial board of Advances in Applied Probability, Journal of Applied Probability, Mathematics of Operations Research, QUESTA, Stochastic Models, and Stochastic Systems.

ACADEMIC APPOINTMENTS

- Professor, Management Science and Engineering
- Member, Wu Tsai Neurosciences Institute

HONORS AND AWARDS

- William H. Keck Scholar, Stanford University (2017)
- Professional Merit Award, ITAM, Mexico (2012)
- Distinguished Alumni Scholar Lecture, Stanford University (2012)
- Kavli Fellow, Kavli Foundation and National Academies (2013)
- Biennial Best Publication in Applied Probability Award, INFORMS Applied Probability Society (2009)
- Erlang Prize, INFORMS Applied Probability Society (2010)
- NSF Career Award, NSF (2008)
- Presidential Early Career Awards for Scientists and Engineers, White House (2009)

Teaching

COURSES

2021-22

- Introduction to Stochastic Modeling: MS&E 121 (Win)
- Simulation: MS&E 223 (Spr)
- Stochastic Systems: MS&E 321 (Spr)

2020-21

- Introduction to Stochastic Modeling: MS&E 121 (Spr)

- Stochastic Systems: MS&E 321 (Spr)

2019-20

- Optimal Transport in Operations Research, Statistics, and Economics: MS&E 325 (Win)
- Simulation: MS&E 223 (Spr)
- Stochastic Systems: MS&E 321 (Spr)

2018-19

- Advanced Topics in Applied Probability: MS&E 325 (Win)
- Simulation: MS&E 223 (Spr)
- Stochastic Systems: MS&E 321 (Spr)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Sergio Camelo Gomez, Vincent Dufour Decieux, Lin Fan

Postdoctoral Faculty Sponsor

Jiajin Li

Doctoral Dissertation Advisor (AC)

Carson Kent, Saied Mehdian, Yanlin Qu, Nian Si, Jin Xie, Teng Zhang

Master's Program Advisor

Bohan Gao, Nathan Hedgecock, Zilu Wang, Miao-Chin Yen, Yiting Zhao

Doctoral Dissertation Co-Advisor (AC)

Yue Hui, Linjia Wu

Doctoral (Program)

Monte Fischer, Xinru Hua, Sirui Lin, Xuhui Zhang

Publications

PUBLICATIONS

- **EXACT SIMULATION FOR MULTIVARIATE ITO DIFFUSIONS** *ADVANCES IN APPLIED PROBABILITY*
Blanchet, J., Zhang, F.
2020; 52 (4): 1003–34
- **On distributionally robust extreme value analysis** *EXTREMES*
Blanchet, J., He, F., Murthy, K.
2020; 23 (2): 317–47
- **Rates of Convergence to Stationarity for Reflected Brownian Motion** *MATHEMATICS OF OPERATIONS RESEARCH*
Blanchet, J., Chen, X.
2020; 45 (2): 660–81
- **EXACT SAMPLING FOR SOME MULTI-DIMENSIONAL QUEUEING MODELS WITH RENEWAL INPUT** *ADVANCES IN APPLIED PROBABILITY*
Blanchet, J., Pei, Y., Sigman, K.
2019; 51 (4): 1179–1208
- **Queue length asymptotics for the multiple-server queue with heavy-tailed Weibull service times** *QUEUEING SYSTEMS*
Bazhba, M., Blanchet, J., Rhee, C., Zwart, B.
2019

- **SAMPLE PATH LARGE DEVIATIONS FOR LEVY PROCESSES AND RANDOM WALKS WITH REGULARLY VARYING INCREMENTS** *ANNALS OF PROBABILITY*
Rhee, C., Blanchet, J., Zwart, B.
2019; 47 (6): 3551–3605
- **Optimal uncertainty size in distributionally robust inverse covariance estimation** *OPERATIONS RESEARCH LETTERS*
Blanchet, J., Si, N.
2019; 47 (6070): 618–21
- **On logarithmically optimal exact simulation of max-stable and related random fields on a compact set** *BERNOULLI*
Liu, Z., Blanchet, J. H., Dieker, A. B., Mikosch, T.
2019; 25 (4A): 2949–81
- **ROBUST WASSERSTEIN PROFILE INFERENCE AND APPLICATIONS TO MACHINE LEARNING** *JOURNAL OF APPLIED PROBABILITY*
Blanchet, J., Kang, Y., Murthy, K.
2019; 56 (3): 830–57
- **Rare-Event Simulation for Distribution Networks** *OPERATIONS RESEARCH*
Blanchet, J., Li, J., Nakayama, M. K.
2019; 67 (5): 1383–96
- **Efficient Rare-Event Simulation for Multiple Jump Events in Regularly Varying Random Walks and Compound Poisson Processes** *MATHEMATICS OF OPERATIONS RESEARCH*
Chen, B., Blanchet, J., Rhee, C., Zwart, B.
2019; 44 (3): 919–42
- **Quantifying Distributional Model Risk via Optimal Transport** *MATHEMATICS OF OPERATIONS RESEARCH*
Blanchet, J., Murthy, K.
2019; 44 (2): 565–600
- **Perfect Sampling of Generalized Jackson Networks** *MATHEMATICS OF OPERATIONS RESEARCH*
Blanchet, J., Chen, X.
2019; 44 (2): 693–714
- **EXACT SAMPLING OF THE INFINITE HORIZON MAXIMUM OF A RANDOM WALK OVER A NONLINEAR BOUNDARY** *JOURNAL OF APPLIED PROBABILITY*
Blanchet, J., Dong, J., Liu, Z.
2019; 56 (1): 116–38
- **Robust Actuarial Risk Analysis** *NORTH AMERICAN ACTUARIAL JOURNAL*
Blanchet, J., Lam, H., Tang, Q., Yuan, Z.
2019; 23 (1): 33–63
- **DATA-DRIVEN OPTIMAL TRANSPORT COST SELECTION FOR DISTRIBUTIONALLY ROBUST OPTIMIZATION**
Blanchet, J., Kang, Y., Murthy, K., Zhang, F., IEEE
IEEE.2019: 3740–51
- **A DISTRIBUTIONALLY ROBUST BOOSTING ALGORITHM**
Blanchet, J., Zhang, F., Kang, Y., Hu, Z., IEEE
IEEE.2019: 3728–39
- **Learning in Generalized Linear Contextual Bandits with Stochastic Delays**
Zhou, Z., Xu, R., Blanchet, J., Wallach, H., Larochelle, H., Beygelzimer, A., d'Alche-Buc, F., Fox, E., Garnett, R.
NEURAL INFORMATION PROCESSING SYSTEMS (NIPS).2019
- **Semi-Parametric Dynamic Contextual Pricing**
Shah, V., Blanchet, J., Johari, R., Wallach, H., Larochelle, H., Beygelzimer, A., d'Alche-Buc, F., Fox, E., Garnett, R.
NEURAL INFORMATION PROCESSING SYSTEMS (NIPS).2019
- **Multivariate Distributionally Robust Convex Regression under Absolute Error Loss**

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- Blanchet, J., Glynn, P. W., Yan, J., Zhou, Z., Wallach, H., Larochelle, H., Beygelzimer, A., d'Alche-Buc, F., Fox, E., Garnett, R.
NEURAL INFORMATION PROCESSING SYSTEMS (NIPS).2019
- **Online EXP3 Learning in Adversarial Bandits with Delayed Feedback**
Bistritz, I., Zhou, Z., Chen, X., Bambos, N., Blanchet, J., Wallach, H., Larochelle, H., Beygelzimer, A., d'Alche-Buc, F., Fox, E., Garnett, R.
NEURAL INFORMATION PROCESSING SYSTEMS (NIPS).2019
 - **Queueing Theory-Based Perspective of the Kinetics of "Channeled" Enzyme Cascade Reactions** *ACS CATALYSIS*
Tsitkov, S., Pesenti, T., Palacci, H., Blanchet, J., Hess, H.
2018; 8 (11): 10721–31
 - **Perfect sampling of GI/GI/c queues** *QUEUEING SYSTEMS*
Blanchet, J., Dong, J., Pei, Y.
2018; 90 (1-2): 1–33
 - **EXACT SIMULATION OF MULTIDIMENSIONAL REFLECTED BROWNIAN MOTION** *JOURNAL OF APPLIED PROBABILITY*
Blanchet, J., Murthy, K.
2018; 55 (1): 137–56
 - **Bandit Learning with Positive Externalities**
Shah, V., Blanchet, J., Johari, R., Bengio, S., Wallach, H., Larochelle, H., Grauman, K., CesaBianchi, N., Garnett, R.
NEURAL INFORMATION PROCESSING SYSTEMS (NIPS).2018
 - **COMPUTING WORST-CASE EXPECTATIONS GIVEN MARGINALS VIA SIMULATION**
Blanchet, J., He, F., Lam, H., Chan, D'Ambrogio, A., Zacharewicz, G., Mustafee, N.
IEEE.2017: 2315–23
 - **ANALYSIS OF A STOCHASTIC APPROXIMATION ALGORITHM FOR COMPUTING QUASI-STATIONARY DISTRIBUTIONS** *ADVANCES IN APPLIED PROBABILITY*
Blanchet, J., Glynn, P., Zheng, S.
2016; 48 (3): 792-811
 - **Affine Point Processes: Approximation and Efficient Simulation** *MATHEMATICS OF OPERATIONS RESEARCH*
Zhang, X., Blanchet, J., Giesecke, K., Glynn, P. W.
2015; 40 (4): 797-819
 - **UNBIASED MONTE CARLO FOR OPTIMIZATION AND FUNCTIONS OF EXPECTATIONS VIA MULTI-LEVEL RANDOMIZATION**
Blanchet, J. H., Glynn, P. W., IEEE
IEEE.2015: 3656–67
 - **UNBIASED MONTE CARLO COMPUTATION OF SMOOTH FUNCTIONS OF EXPECTATIONS VIA TAYLOR EXPANSIONS**
Blanchet, J. H., Chen, N., Glynn, P. W., IEEE
IEEE.2015: 360–67
 - **Large deviations for the empirical mean of an queue** *QUEUEING SYSTEMS*
Blanchet, J., Glynn, P., Meyn, S.
2013; 73 (4): 425-446
 - **Empirical Analysis of a Stochastic Approximation Approach for Computing Quasi-stationary Distributions** *EVOLVE 2012 International Conference*
Blanchet, J., Glynn, P., Zheng, S.
SPRINGER-VERLAG BERLIN.2013: 19–37
 - **On Lyapunov Inequalities and Subsolutions for Efficient Importance Sampling** *ACM TRANSACTIONS ON MODELING AND COMPUTER SIMULATION*
Blanchet, J., Glynn, P., Leder, K.
2012; 22 (3)
 - **ON THE TRANSITION FROM HEAVY TRAFFIC TO HEAVY TAILS FOR THE M/G/1 QUEUE: THE REGULARLY VARYING CASE** *ANNALS OF APPLIED PROBABILITY*
Olvera-Cravioto, M., Blanchet, J., Glynn, P.
2011; 21 (2): 645-668

- **Asymptotic Robustness of Estimators in Rare-Event Simulation** *ACM TRANSACTIONS ON MODELING AND COMPUTER SIMULATION*
L'Ecuyer, P., Blanchet, J. H., Tuffin, B., Glynn, P. W.
2010; 20 (1)
- **Rare event simulation for a slotted time M/G/s model** *Conference on 100 Years of Queueing - Erlang Centennials*
Blanchet, J., Glynn, P., Lam, H.
SPRINGER.2009: 33–57
- **RARE EVENT SIMULATION FOR A GENERALIZED HAWKES PROCESS** *Winter Simulation Conference 2009*
Zhang, X., Glynn, P. W., Giesecke, K., Blanchet, J.
IEEE.2009: 1271–1278
- **EFFICIENT RARE EVENT SIMULATION OF CONTINUOUS TIME MARKOVIAN PERPETUITIES** *Winter Simulation Conference 2009*
Blanchet, J., Glynn, P.
IEEE.2009: 405–412
- **Efficient Simulation of Light-Tailed Sums: an Old-Folk Song Sung to a Faster New Tune ...** *8th International Conference on Monte Carlo and Quasi-Monte Carlo Methods in Scientific Computing (MCQMC 08)*
Blanchet, J. H., Leder, K., Glynn, P. W.
SPRINGER-VERLAG BERLIN.2009: 227–248
- **Efficient rare-event simulation for the maximum of heavy-tailed random walks** *ANNALS OF APPLIED PROBABILITY*
Blanchet, J., Glynn, P.
2008; 18 (4): 1351-1378
- **Uniform renewal theory with applications to expansions of random geometric sums** *ADVANCES IN APPLIED PROBABILITY*
Blanchet, J., Glynn, P.
2007; 39 (4): 1070-1097
- **Fluid heuristics, Lyapunov bounds and efficient importance sampling for a heavy-tailed G/G/1 queue** *QUEUEING SYSTEMS*
Blanchet, J., Glynn, P., Liu, C.
2007; 57 (2-3): 99-113
- **Efficient suboptimal rare-event simulation** *2007 Winter Simulation Conference*
Zhang, X., Blanchet, J., Glynn, P. W.
IEEE.2007: 368–373
- **Complete corrected diffusion approximations for the maximum of a random walk** *ANNALS OF APPLIED PROBABILITY*
Blanchet, J., Glynn, P.
2006; 16 (2): 951-983