(Last Updated: May 19, 2025)

Prateek Jaiswal

Contact Information

Young Hall (420)
Mitchell E. Daniels Jr. School of Business
Purdue University
West Lafayette, IN 47906 USA

Phone: +1 (765) 409-5910
E-mail: jaiswalp@purdue.edu
Homepage: pvjaiswal.github.io

Academic Positions

Clinical Assistant Professor of Management **August 2024 - present**
Quantitative Methods Area, Mitchell E. Daniels Jr. School of Business, **Purdue University, West Lafayette**

Postdoctoral Research Associate **September 2021 - August 2024**
Department of Statistics, **Texas A&M University, College Station**

Education

Purdue University, West Lafayette, Indiana, USA

Ph.D. in Industrial Engineering **August 2021**
Dissertation Topic: "Variational Inference for Data-driven Stochastic Programming"
Committee: Dr. Harsha Honnappa (Chair), Dr. Vinayak A. Rao, Dr. Raghu Pasupathy, Dr. Gesualdo Scutari, and Dr. J. George Shanthikumar

Indian Institute of Technology, Patna, India

B. Tech. in Mechanical Engineering **May 2012**

Honors and Awards

Finalist (top 4) at INFORMS 2022 Data Mining Best Paper Competition (General Track)

Joe Newton Best Poster Award at 2022 Conference on Advances in Data Science: Theory, Methods and Computation

Sustainable Horizons Institute grant to attend the SIAM CSE21 conference and Broader Engagement (BE) program.

PGSG Travel grant to attend INFORMS 2020 and NeurIPS 2020.

Research Interests

Bandits, Bayesian statistics, Large deviations analysis, Machine learning, Reinforcement learning, Sequential decision-making, Stochastic programming, Stochastic optimization

Journal Publications

Jaiswal, P. and Larson, J. "Multistart Algorithm for Identifying all Optima of a Nonconvex Stochastic Oracle". *Optimization Letters 18, 1335–1360 (2024)***(OL)**

Jaiswal, P., Honnappa, H., and Rao, V.A. "Bayesian Joint Chance Constrained Optimization: Approximations and Statistical Consistency", *SIAM Journal on Optimization, Vol. 33, No. 3, pp. 1968–1995, 2023* **(SIOPT)**
(Shorter version) *Proceedings of The 2nd Symposium on Advances in Approximate Bayesian Inference, PMLR 118:1-12, 2020.*

Jaiswal, P., Rao, V.A.; and Honnappa, H. "Asymptotic Consistency of $\alpha-$Rényi-Approximate Posteriors", *Journal of Machine Learning Research, (156):1- 42, 2020.* **(JMLR)**

Jaiswal, P., Honnappa, H., and Rao, V.A. "Asymptotic Consistency of Loss-calibrated Variational Bayes", *Stat 9, no. 1 (2020): e258.* **(Stat)**

Conference Publications

Jaiswal, P., Honnappa, H., and Rao, V.A. "On the Statistical Consistency of Risk-Sensitive Bayesian Decision-Making", *Accepted at the 37th Conference on Neural Information Processing Systems, 2023.* **(NeurIPS)**

Jaiswal, P., and Honnappa, H. 'Statistical Inference for Approximate Bayesian Optimal Design'. *In Proceedings of the 2020 Winter Simulation Conference, Piscataway, NJ, 2020. IEEE, Inc.* **(WSC)**

Wang R., **Jaiswal, P.**, and Honnappa, H. 'Estimating Stochastic Poisson Intensities Using Deep Latent Models'. *In Proceedings of the 2020 Winter Simulation Conference, Piscataway, NJ, 2020. IEEE, Inc.* **(WSC)**

Jaiswal, P., Honnappa, H., and Pasupathy, R. 'Optimal Allocations for Sample Average Approximation . *In Proceedings of the 2018 Winter Simulation Conference, Piscataway, NJ, 2018. IEEE, Inc.* **(WSC)**

Submitted Manuscripts

Jaiswal, P., Pati, D.; Bhattacharya, A.; and Mallick, B.K. "Generalized Regret Analysis of Thompson Sampling using Fractional Posteriors", 2023+ *Revision submitted to JMLR.*
– **Finalist (top 4) at INFORMS 2022 Data Mining Best Paper Competition (General Track)**
– **2022 Joe Newton Best Poster Award at Conference on Advances in Data Science: Theory, Methods and Computation**

Jaiswal, P., Pati, D.; Bhattacharya, A.; and Mallick, B.K. "Frequentist Regret Analysis of Thompson Sampling with Fractional Posteriors for Generalized Linear Bandit", 2024+ *Submitted to Math OR.*

Bajaj, S., **Jaiswal, P.**, Gupta, V. "Leveraging Offline Data from Similar Systems for Online Linear Quadratic Control", 2025+ *Submitted to Transaction on Automatic Control*

Jaiswal, P., Keyvanshokooh, E., Cao, J., "Deconfounded Warm-Start Thompson Sampling with Applications to Precision Medicine", 2025+ *Submitted to NeurIPS 2025*

Invited Talks

Jaiswal, P., Generalizing Regret Bounds for Thompson Sampling via Minimax-Optimal α-Posterior Concentration 2025 IISA Conference, Nebraska, Lincoln, June 2025

Jaiswal, P., "Bayesian methodologies for data-driven decision-making",
Department of Statistics, Indiana University, Bloomington, Dec 2023
Industrial & Systems Engineering Program, University of Cincinnati, Dec 2023
Department of Industrial and Systems Engineering, University of Tennessee, Knoxville, April 2024

Jaiswal, P., Honnappa, H., and Rao, V.A. "Variational Bayesian method for Stochastically Constrained System Design Problem", *The 13th Young European Queueing Theorists (YEQT) workshops, EURANDOM, TU Eindhoven, The Netherlands - Oct 2019.*

Jaiswal, P., Honnappa, H., and Rao, V.A. "Variational Bayes for Data-driven Newsvendor Problem", *Conference on Data Science for Business and Economics, Purdue University, West Lafayette, IN, USA - May 2018.*

Conferences & Workshops Presentations

Jaiswal, P., Pati, D.; Bhattacharya, A.; and Mallick, B.K. "Generalized Regret Analysis of Thompson Sampling using Fractional Posteriors" - *Conference on Advances in Data Science: Theory, Methods and Computation - Oct 2022.*

Jaiswal, P., Pati, D.; Bhattacharya, A.; and Mallick, B.K. "Generalized Regret Analysis of Thomp-

son Sampling using Fractional Posteriors" - *INFORMS Annual Meeting - Oct 2022.*

Jaiswal, P., Pati, D.; Bhattacharya, A.; and Mallick, B.K. "Generalized Regret Analysis of Thompson Sampling using Fractional Posteriors" - *TTIC Summer Workshop: New Models in Online Decision Making for Real-World Applications - July 2022.*

Jaiswal, P., Honnappa, H. "Statistical Inference for Approximate Bayesian Optimal Design", *Winter Simulation Conference (Virtual)- Dec 2020.*

Jaiswal, P., Honnappa, H. "Variational Inference for Bayes Optimal Design", *INFORMS Annual Meeting (Virtual) - Nov 2020.*

Jaiswal, P., Honnappa, H., and Rao, V.A. "Variational Inference for Risk-Sensitive Decision-Making", *NeurIPS Workshop on Safety and Robustness in Decision Making - Dec 2019.*

Jaiswal, P., Honnappa, H., and Rao, V.A. "Variational Bayesian method for Stochastically Constrained System Design Problem", *INFORMS Annual Meeting - Oct 2019.*

Teaching Experience

Instructor, Mitchell E. Daniels Jr. School of Business, Purdue University, West Lafayette, IN

MGMT306- Management Science (4.0,4.3)	Fall 2024, Spring 2025
MGMT472- Advanced Spreadsheet Modeling and Simulation (4.1,4.3)	Fall 2024, Spring 2025

Teaching Assistant, School of Industrial Engineering, Purdue University, West Lafayette

IE343-Engineering Economics	Fall 2016
IE533-Industrial Applications of Statistics	Spring 2017
IE336-Operations Research-Stochastic Models	Fall 2020
IE230-Probability and Statistics in Engineering	Spring 2021

Academic Service

Academic Committees

Purdue University, West Lafayette, IN

Clinical Assistant/Associate Professors Search Committee Member	2024/2025
University Sustainability Committee	2025/2026

Academic Reviewer

Journals	*(manuscripts reviewed)*
Journal of Machine Learning Research (JMLR)	(2)
Journal of American Statistical Association (JASA)	(2)
IISE Transactions	(1)

Conferences

International Conference on Machine Learning (ICML)	(5)
Conference on Neural Information Processing Systems (NeurIPS)	(11)
International Conference on Artificial Intelligence and Statistics (AISTATS)	(4)
Uncertainty in Artificial Intelligence (UAI)	(1)
AAAI Conference on Artificial Intelligence (AAAI)	(5)

Member

Institute for Operations Research and the Management Sciences (INFORMS)
Society for Industrial and Applied Mathematics (SIAM)
American Statistical Association (ASA)
Indian and International Statistical Association (IISA)

Training & Placement Cell, IIT Patna
Student Head and Founder **Aug 2010 - May 2012**

Experience

Purdue University, West Lafayette, IN
Graduate Research Assistant, School of Industrial Engineering **May 2017 - May 2020**
PI: Dr. Harsha Honnappa
Co-advisors: Dr. Vinayak A. Rao and Dr. Raghu Pasupathy

Argonne National Laboratory, Lemont, IL
Givens Associate **May 2020 - Aug 2020**
PI: Dr. Mohan Krishnamoorthy

Givens Associate **May 2019 - Aug 2019**
PI: Dr. Jeffrey M. Larson

Bharat Petroleum Corporation Ltd. (BPCL), India
Assistant Manager, Engineering & Projects **Jul 2012 - Jul 2016**

University of Auckland, New Zealand
Research Assistant, Centre for Advanced Composites Manufacturing **May 2011 - Jul 2011**
PI: Dr. Debes Bhattacharyya