

Prateek Jaiswal

CONTACT INFORMATION	Blocker Building Department of Statistics Texas A&M University College Station, TX 77843 USA	Phone: +1 (765) 409-5910 E-mail: jaiswalp@stat.tamu.edu Homepage: pvjaiswal.github.io
EDUCATION	Purdue University , West Lafayette, Indiana, USA Ph.D. in Industrial Engineering <i>Dissertation Topic</i> : “Variational Inference for Data-driven Stochastic Programming” <i>Committee</i> : 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	August 2021 May 2012
RESEARCH INTERESTS	Bandits, Bayesian statistics theory, Large deviations analysis, Machine learning, Reinforcement learning, Sequential decision-making, Stochastic programming, Stochastic optimization	
SUBMITTED MANUSCRIPTS	Jaiswal, P. , Pati, D.; Bhattacharya, A.; and Mallick, B.K. “ Generalized Regret Analysis of Thompson Sampling using Fractional Posteriors ”, <i>Submitted</i> . – 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. and Larson, J. “ Multistart Algorithm for Identifying all Optima of a Nonconvex Stochastic Oracle ”. <i>Under revision for Optimization Letters</i> .	
JOURNAL PUBLICATIONS	Jaiswal, P. , Honnappa, H., and Rao, V.A. “ Bayesian Joint Chance Constrained Optimization: Approximations and Statistical Consistency ”, <i>SIAM Journal on Optimization</i> , Vol. 33, No. 3, pp. 1968–1995, 2023 (SIOPT) Jaiswal, P. , Rao, V.A.; and Honnappa, H. “ Asymptotic Consistency of α-Rényi-Approximate Posteriors ”, <i>Journal of Machine Learning Research</i> , (156):1- 42, 2020. (JMLR) Jaiswal, P. , Honnappa, H., and Rao, V.A. “ Asymptotic Consistency of Loss-calibrated Variational Bayes ”, <i>Stat 9, no. 1 (2020): e258</i> . (Stat)	
CONFERENCE PUBLICATIONS	Jaiswal, P. , Honnappa, H., and Rao, V.A. “ On the Statistical Consistency of Risk-Sensitive Bayesian Decision-Making ”, <i>In the 37th Conference on Neural Information Processing Systems, 2023</i> . (NeurIPS) Jaiswal, P. , and Honnappa, H. ‘ Statistical Inference for Approximate Bayesian Optimal Design ’. <i>In Proceedings of the 2020 Winter Simulation Conference, Piscataway, NJ, 2020</i> . <i>IEEE, Inc.</i> (WSC) Wang R., Jaiswal, P. , and Honnappa, H. ‘ Estimating Stochastic Poisson Intensities Using Deep Latent Models ’. <i>In Proceedings of the 2020 Winter Simulation Conference, Piscataway, NJ, 2020</i> . <i>IEEE, Inc.</i> (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)

WORKING PAPER **Jaiswal, P.**, Pati, D.; Bhattacharya, A.; and Mallick, B.K. “Unified Framework for Bayesian Sequential Decision-making: Formulation and Regret Bounds”

EXPERIENCE **Texas A&M University**, College Station, TX
Postdoctoral Research Associate, Department of Statistics and TRIPODS Research Institute for Foundations of Interdisciplinary Data Science Sep 2021 - present
PIs: Dr. Bani K. Mallick, Dr. Anirban Bhattacharya, and Dr. Debdeep Pati
Topic: Developing and analyzing Bayesian sequential decision-making algorithms.

Purdue University, West Lafayette, IN
Graduate Research Assistant, School of Industrial Engineering May 2017 - May 2020
PI: Dr. Harsha Honnappa
External advisors: Dr. Vinayak A. Rao and Dr. Raghu Pasupathy
Topics: Variational inference for stochastic programming, Large deviations analysis of Sample average approximation

Graduate Teaching Assistant, School of Industrial Engineering
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

Argonne National Laboratory, Lemont, IL
Givens Associate May 2020 - Aug 2020
PI: Dr. Mohan Krishnamoorthy
Topic: Multistart stochastic optimization method to tune the parameters of a high-energy physics event generator.

Givens Associate May 2019 - Aug 2019
PI: Dr. Jeffrey M. Larson
Topic: Multistart algorithm for non-convex stochastic optimization.

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
Topic: Manufacturing and analysis of Graphene-based nano-composites.

INVITED TALKS **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 Thomp-

son 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 Thompson 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.

HONORS AND AWARDS

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

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

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.

IIT Patna MCM Scholarship 2010 and 2011.

ACADEMIC SERVICE **Academic Reviewer**

<i>Journals</i>	<i>(manuscripts reviewed)</i>
Journal of Machine Learning Research (JMLR)	(1)
Journal of American Statistical Association (JASA)	(1)
IIE Transactions	(1)

<i>Conferences</i>	
International Conference on Machine Learning (ICML)	(4)
Conference on Neural Information Processing Systems (NeurIPS)	(5)
International Conference on Artificial Intelligence and Statistics (AISTATS)	(4)
Uncertainty in Artificial Intelligence (UAI)	(1)

Member

Institute for Operations Research and the Management Sciences (INFORMS)

Society for Industrial and Applied Mathematics (SIAM)

American Statistical Association (ASA)

Training & Placement Cell, IIT Patna

Student Head and Founder

Aug 2010 - May 2012

- COMPUTER SKILLS
- Statistical Packages: R, Python (SciPy, NumPy, scikit-learn)
 - Languages: C, C++, Python
 - High-Performance Computing: (Clusters: Purdue RCAC- Brown and Argonne National Lab-Powell, TAMU- Grace)
 - Version Control: Git, Bitbucket