SUJAY KUMAR MUKHOTI

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Indian Institute of Management Indore,
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Education

PhD	Indian Institute of Management, Bangalore	2014
M.Sc. (Statistics)	University of Kalyani	2000
B.Sc. (Hons. in Statistics)	Ramakrishna Mission Residential College, Narendrapur	1998

Work Experience

Visiting Scientist	Institute of Biomedical Engineering, University of Oxford	Jan '24 - Mar '24
Associate Professor	Indian Institute of Management, Indore	June '19 -
Assistant Professor	Indian Institute of Management, Indore	April '14 - June, '19
Visiting Assistant Professor	Indian Institute of Management, Kozhikode QM& OM Area	June'13- March'14
Business Analyst	HSBC, Data Processing India Pvt. Ltd.	Dec'07-May'10
Statistical Analyst	Tyfone Communications India Pvt. Ltd.	Mar'07-Dec'07
Lecturer in Statistics	St. Xavier's College, Kolkata	Aug'05-Feb'07
Research Fellow	Department of Statistics, University of Calcutta	Jul'02- Aug'05
Guest Lecturer, Statistics	University of Kalyani, WB	2002

Visiting Lecturer, Statistics	Bidhannagar College, Kolkata	Aug'01-Mar'02
Lecturer, Statistics	St. Xavier's College, Kolkata	Aug'01-Jun'02
Guest Lecturer, Statistics (Postgraduate Statistics)	University of Kalyani, WB	2001
Visiting Lecturer, Statistics	Acharya Prafulla Chandra College, WB	2000-2001
Part-time Lecturer, Statistics	Barrackpore Rastraguru Surendranath College, WB	2000-2001

Publications

Journal Publications

11. Banerjee, A. & **Mukhoti, S.**(2023): Characterization of a robust probabilistic framework for brain magnetic resonance image data distributions. Stat, 12(1), e541.
10. Ghosh, S., Mukhoti, S. (2023): Non-parametric generalised newsvendor model. Ann Oper Res 321, 241–266. https://doi.org/10.1007/s10479-022-05112-5
9. **Mukhoti, S.** and Ranjan, P. (2019): A New Class of Discrete-time Stochastic Volatility Model with Correlated Errors; *Applied Economics*, **51 (3)**, 259-277
8. **Mukhoti, S.** and Ranjan, P. (2016): Mean-correction and Higher Order Moments for a Stochastic Volatility Model with Correlated Errors; *International Journal of Statistics and Probability*, **5 (4)**, 102-110.
7. Ranjan, P, Mark Thomas, Holger Teismann, and **Sujay Mukhoti** (2016):Inverse Problem for a Time-Series Valued Computer Simulator via Scalarization; *Open Journal of Statistics*,**6 (03)**, 528-544
6. Sengupta, S. and **Mukhuti, Sujay** (2009): Unbiased Estimation of the Distribution Function of a Two-Parameter Exponential Population Using Order Statistics, *Communications in Statistics - Theory and Methods*, **38(15)**, 2578-2585.
5. Sengupta, S. and **Mukhuti, Sujay** (2008): Unbiased estimation of $P(X > Y)$ using ranked set sample data, *Statistics*, **42(3)**, 223-230.
4. Sengupta, S. and **Mukhuti, Sujay** (2008): Unbiased Estimation of P($X > Y$) for Exponential Populations Using Order Statistics with Application in Ranked Set Sampling, *Communications in Statistics - Theory and Methods*, **37(6)**, 898-916.
3. Sinha, Bikas K., Das, Kishore K. and **Mukhuti, Sujay** (2008): On Some Aspects of Unbiased Estimation of Parameters in Quasi-Binomial Distributions, *Communications in Statistics - Theory and Methods*, **37(19)**, 3023-3028.
2. Sengupta, S. and **Mukhuti, Sujay** (2006): Unbiased variance estimation in a simple exponential population using ranked set samples, *Journal of Statistical Planning and Inference*, **136(4)**, 1526-1553.
1. Sinha, Bikas K., Sengupta, S. and **Mukhuti, Sujay** (2006): Unbiased Estimation of the Distribution Function of an Exponential Population Using Order Statistics with Application in Ranked Set Sampling, *Communications in Statistics - Theory and Methods*, **35(9)**, 1655-1670.

Peer Reviewed Book Chapter

1. Ghosh S., Sahare M., **Mukhoti S.** (2021) A New Generalized Newsvendor Model with Random Demand and Cost Misspecification. In: Sinha B.K., Bagchi S.B. (eds) Strategic Management, Decision Theory, and Decision Science. Springer, Singapore. https://doi.org/10.1007/978-981-16-1368-5_14

Current Research

Under Review

2. Ghosh, S., **Mukhoti, S.** & Sharma, P. (2024): A New Likelihood Based Estimation of Generalised Beta Parameters for Shape Robust Inventory Optimization
1. **Mukhoti, S.** & Guhathakurta, K.: Generalised Model for Capital Structure and Product Market Performance: A Bayesian Semi-parametric Analysis

Preprint

4. Ghosh, S., Sharma, P., **Mukhoti, S.** & Banerjee, A.: On Misspecified Newsvendor Models : A Precision and Complexity Comparison
3. **Mukhoti, S.**, Baraiya, R. & Banerjee, A.: Poor Newsboy Problem: Generalised Inventory Model with Asymmetric Losses
2. **Guhathakurta, K.** & Mukhoti, S.: Does debt boost sales in the Tourism Industry: A Hierarchical Bayesian Semi-parametric Analysis of Indian Firms
1. Ghosh, S., **Mukhoti, S.**, & Sharma, P. (2024): A New Drought Index for Autoregressive Rainfall Data

In preparation

3. Ghosh, S., & **Mukhoti, S.**: Forecasting optimal order quantity with random demand and heteroscedastic supply in the newsvendor set-up
2. Bharadwaj, R. & Mukhoti, S. & Kundu, T.: Generalisability of Optimal Order Quantity Estimation for Critical Resources
1. **Mukhoti, S.** & Banerjee, A.: Clustering Brain Tissues from MRI data using flat-top feature distributions

Conference Papers

Invited Talks

- **Mukhoti, S.** & Banerjee, A. (Dec. 16-18, 2023): Asymmetric generalized newsvendor model, 16^{th} *International Conference of the ERCIM WG on Computational and Methodological Statistics*, Berlin, Germany
- **Mukhoti, S.** (May 20-23, 2021): Distribution free estimation of optimal order quantity for a newsboy, *IISA International Conference, Virtual Mode*

- **Mukhoti, S.** (Dec. 26-30, 2019): Bayesian stochastic volatility model for dynamic leverage effect, *IISA International Conference, IIT Bombay*
- **Mukhoti, S.**, Ghosh, S and Sahare, M (Jan. 4-6, 2020): Estimating Optimum Order Quantity in Generalized Newsvendor Problem, *IAPQR-CSIR-CGCRI SMDTDS International Conference, Kolkata*
- **Mukhoti, S.** and Ranjan, P. (Jan. 4-6, 2018): On leverage and skewness in contemporaneously correlated Stochastic Volatility Model, *IAPQR International Conference on New Paradigms in Statistics for Scientific & Industrial Research, Kolkata*
- **Mukhoti, S.** and Ranjan, P. (Dec. 27-30, 2017): Time for Volatility: Skewness and Leverage in Discrete-time Stochastic Volatility Models, *IISA International Conference on Statistics, Hyderabad*
- **Mukhoti, S** (November, 2014): Single factor stochastic volatility model for bounded stationary returns, *Department of Economics, IIT Kanpur*

Contributory Talks

- **Mukhoti, S.** (Jan, 6-7, 2023): Elicitation of demand distribution from partially informed vendors, *4th Annual Economics Conference, Amrut Mody School of Management, Ahmedabad University, Ahmedabad, India*
- **Mukhoti, S.** (Jan. 2-4, 2020): Bounded Non-stationarity of Dynamic Leverage of Stochastic Volatility, *AIMS-17 international conference on management , IIM Kozhikode*
- **Mukhoti, S.** and Ranjan, P. (Dec. 16-18, 2017): On lead-lag correlations in stochastic volatility models with jump, *11th International Conference on Computational and Financial Econometrics, University of London*
- **Mukhoti, S.** and Guhathakurta, K. (April 17 & 18, 2015): Product market performance and capital structure, *TAPMI-CSU international conference in finance, TAPMI, Manipal.*
- **Mukhoti, S.** (February, 2015): Single factor stochastic volatility model for skewed returns, *International Conference on Applied Economics and Finance, GITAM University, Vishakhapatnam*
- **Mukhoti, S** & Ghosh, P (January 2013): Simultaneous Modeling of Skewness and Sparse Time-Varying Jumps in Asset Returns with Stochastic Volatility, *ISBA Regional Meeting and International Workshop/Conference on Bayesian Theory and Applications (IWCBTA) at Banaras Hindu University, Varanasi, INDIA.*
- **Mukhoti, S** & Ghosh, P (December, 2011): Modeling Stock Market Jump Intensity Dynamics With Macroeconomic Surprises: A Bayesian Approach, *India Finance Conference, Indian Institute of Management, Bangalore.*
- Sengupta, S. & **Mukhoti, S** (2004): Unbiased variance estimation in exp(λ) population using RSS, *Eleventh International Conference - SCRA- 2004 - FIM - XI, Lucknow.*
- Sengupta, S. & **Mukhoti, S** (March 2003): A note on estimation of distribution function in simple exponential population using Ranked Set Sampling, *National seminar*

on Statistics in Industry, Business and Finance, Department of Statistics, University of Calcutta.

Grants and Awards

- Awarded **IIM Indore grant,2022** to support international visit to collaborative institution.
- Awarded **IIM Indore grant,2019** to support international visit to collaborative institution.
- Awarded **IIM Indore international workshop grant, 2020** for participation in Simulation and Monte-Carlo Estimation workshop, Madrid.
- **Leading Light Award** for Service delivery, 2009 from Global Analytics Center, HSBC.
- Awarded **Senior Research Fellowship** from Council of Scientific and Industrial Research (CSIR) (2004) for research project on "Estimation problems in Ranked Set Sampling and Order Statistics".
- Awarded **Junior Research Fellowship** from Council of Scientific and Industrial Research (CSIR) (2002) for research project on "Estimation problems in Ranked Set Sampling and Order Statistics".
- **S. B Dasgupta memorial endowment** award for standing first in first class in M.Sc examination in Statistics.

Services:

- Served as referee of articles for *JRSS (C), Statistical Papers, Sankhya, California Management Review, Statistical Analysis and Data Mining*
- Associate Editor: Indore Management Journal *(2014-2020)*

Training and Consultancy

- *Certificate Program for Project Management* (Joint coordinator)
- Executive program for L&T project management module (Instructor)
- Integrated Program in Business Analytics (Instructor)
- Analytics and Forecasting (Guest Lecturer in MBA, IIM Sirmaur)
- TEQIP, IIT Indore (Guest Lecturer)
- Bayesian Statistics (Guest Faculty at IIM Amritsar)

References : Available on request