

CURRENT POSITION	Associate Professor Operations Management and Quantitative Techniques (OM&QT) Area Indian Institute of Management (IIM) Indore
RESEARCH INTERESTS	Stochastic Processes; Quantitative Finance; Statistics, <i>nyāyadarśana</i> and Generative AI.
EXPERIENCE	Associate Professor , OM&QT Area, IIM Indore Jul 2023 to present Assistant Professor , OM&QT Area, IIM Indore Jun 2017 to Jul 2023 Research Associate Dept. of Mathematics, IIT Bombay Jan 2017 to Jun 2017
PROJECTS	Role: co-PI . Title: BharatGPT: A Suite of Generative AI Tech for India Funding Agency: Department of Science and Technology Duration: 2024–26, 2 years. Role: PI . Title: Mathematics and Nyaaya Darshana Funding Agency: Indian Knowledge Systems (IKS) Division, Ministry of Education. Duration: 2023–24, 2 years. Role: co-PI . Title: Digitization and Content Creation on Sankhya Darshan, Yoga Sutra, Prana and Swara with a case study on mental benefits of Mantra Dhyaan Funding Agency: IKS Division, Ministry of Education. Duration: 2023, 6 months.
ADMINISTRATION	Chair , Integrated Program in Management, IIM Indore April 2025–present Coordinator , EPGAIBA March 2026–present Coordinator , AMPCL April 2025–present Member, Internal Quality and Assurance Committee Mahirish Panini Sanskrit and Vaidik Vishwavidyalaya, Ujjain Feb 2022–present Advisor , Modern Group of Institutions, Indore Aug 2021–present Coordinator , CPAFRM May 2023 – April 2025 Area Chair , OMQT Area Apr 2019–Mar 2021
EDUCATION	Ph.D. Mathematics , Department of Mathematics, IIT Bombay Dec 2016 M.Sc. Mathematics , University of Kota, Kota, Rajasthan Jul 2009 B.Sc. (PCM) , University of Kota, Kota, Rajasthan Jul 2007 ‘A’ level Advanced Diploma , NIELIT, erstwhile DOEACC Society May 2008
PUBLICATIONS	Published/Accepted papers 1. Neha Gupta and Aditya Maheshwari (2026). Fractional generalizations of the compound Poisson process. <i>Submitted</i> . https://arxiv.org/abs/2307.12252 . <i>Accepted in Methodology and Computing in Applied Probability</i> . 2. Gupta, N., Maheshwari, A. , and Goyal, D. (2027). Geometrical subordinated Poisson processes and its extensions. <i>Journal of Applied Probability</i> 64 , 1–29. https://arxiv.org/abs/2502.18951 3. Gupta, N. and Maheshwari, A. (2026). NeuroMemFPP: A recurrent neural approach for memory-aware parameter estimation in fractional Poisson process. <i>Physica Scripta</i> . 101 , 215204. https://doi.org/10.1088/1402-4896/ae6ad3 4. Gupta, N. and Maheshwari, A. (2026). Hawkes process with tempered Mittag-Leffler kernel. <i>Statistics and Probability Letters</i> 234 , 110661. https://doi.org/10.1016/j.spl.2026.110661 .

5. Gupta, N. and **Maheshwari, A.** (2026). Tempered fractional Hawkes process and its generalization. *Journal of Mathematical Analysis and Applications* **554** (2), 129996. <https://doi.org/10.1016/j.jmaa.2025.129996>
6. Garg, S., Pathak, A. K. & **Maheshwari, A.** (2025). Fractional counting process at Lévy times and its applications. *Journal of Statistical Physics* **192**, 130. <https://doi.org/10.1007/s10955-025-03515-9>.
7. Babulal, M. S., Gauttam, S. K. and **Maheshwari, A.** (2025). Parameter estimation and long-range dependence of the fractional binomial process. <https://arxiv.org/abs/2405.08332>. Accepted in *Theory of Probability and its Applications*.
8. Shilpa Garg, Ashok Kumar Pathak, **Maheshwari, A.** (2025). Tempered space-time fractional negative binomial process. *Methodology and Computing in Applied Probability* **27** (51). <https://doi.org/10.1007/s11009-025-10179-1>
9. Babulal, M. S., Gauttam, S. K. and **Maheshwari, A.** (2025). Lévy processes with jumps governed by lower incomplete gamma subordinator and its variations. *Theory of Probability and its Applications* **70** (1), 88–110. <https://doi.org/10.4213/tvp5648>
10. **Maheshwari, A.** (2023). Tempered space fractional negative binomial process. *Statistics and Probability Letters* **109700** (196). <https://doi.org/10.1016/j.spl.2023.109799>
11. Beghin, L., Gajda, J. and **Maheshwari, A.** (2020). Integro-differential equations linked to compound birth processes with infinitely divisible addends. *Mathematical Methods in the Applied Sciences* **47**, 10742–10758. <https://doi.org/10.1002/mma.6467>.
12. Sengar, A., **Maheshwari, A.** and Upadhye, N. (2020). Time-changed Poisson process of order k . *Stochastic Analysis and Applications* **28** (1), 124–148. <https://doi.org/10.1080/07362994.2019.1653198>.
13. Kumar A., **Maheshwari, A.** and Wyłomańska, A. (2019). Linnik Levy Process and Some Extensions. *Physica A: Statistical Mechanics and its Applications* **529**, 121539. <https://doi.org/10.1016/j.physa.2019.121539>
14. **Maheshwari, A.** and Vellaisamy, P. (2019). Fractional Poisson process time-changed by Lévy subordinator and its inverse. *Journal of Theoretical Probability* **32** (3), 1278–1305. <https://doi.org/10.1007/s10959-017-0797-6>.
15. **Maheshwari, A.** and Vellaisamy, P. (2018). Non-homogeneous space-time fractional Poisson processes. *Stochastic Analysis and Applications* **37** (2), 137–152. <https://doi.org/10.1080/07362994.2018.1541749>.
16. Vellaisamy, P. and **Maheshwari, A.** (2018). Fractional negative binomial and Polya processes. *Probability and Mathematical Statistics* **38** (1), 77–101. [link](#)
17. **Maheshwari, A.** and Vellaisamy, P. (2016). On the long-range dependence of fractional Poisson and negative binomial processes. *Journal of Applied Probability* **53** (4), 989–1000. URL: <http://dx.doi.org/10.1017/jpr.2016.59>.

Submitted papers

18. Kumar, R. and **Maheshwari, A.** (2026). NEXUS: A compact neural architecture for high-resolution spatiotemporal air quality forecasting in Delhi National Capital Region. <https://doi.org/10.48550/arXiv.2602.19654>
19. **Maheshwari, A.**, Gajkeshwar, A., Sharma, K. and Patel, V. (2026). SectEval: Evaluating the Latent Sectarian Preferences of Large Language Models. <https://doi.org/10.48550/arXiv.2603.12768>
20. Maheshwari, A., Sharma, K., Patel, V., and **Maheshwari, A.** (2025). IndicParam: Benchmark to evaluate LLMs on low-resource Indic Languages. <http://arxiv.org/abs/2512.00333>

21. Kumavat, M., and **Maheshwari, A.** (2025). TwinFormer: A Dual-Level Transformer for Long-Sequence Time-Series Forecasting. <http://arxiv.org/abs/2512.12301>
22. Singh, R., and **Maheshwari, A.** (2026). Generalized Space-Fractional Poisson Process via Variable-Order Stable Subordinator. <http://arxiv.org/abs/2601.06808>
23. Sharma, K., Patel, V., Maheshwari, A., & **Maheshwari, A.** (2025). ParamBench: A graduate-level benchmark for evaluating LLM understanding on Indic subjects. <http://arxiv.org/abs/2508.16185>
24. Bapat, S. and **Aditya Maheshwari** (2024). Modelling and prediction of the wildfire data using fractional Poisson process. <https://arxiv.org/abs/2411.13995> *Submitted.*
25. **Maheshwari, A.**, Orsingher, E. and Sengar, A. S. (2019). Superposition of time-changed Poisson processes and their hitting times. *Submitted.* URL: <https://arxiv.org/abs/1909.13213>
26. Arun Kumar, Harsh Verma and **Aditya Maheshwari** (2020). Potential Theory of Normal Tempered Stable Process. *Submitted.*

Book chapter

27. **Maheshwari, A.** and Singh, R. (2021). Recent Developments on Fractional Point Processes. In: Beghin, L., Mainardi, F., Garrappa, R. (eds) Nonlocal and Fractional Operators. SEMA SIMAI Springer Series, vol 26. Springer, Cham.
28. **Maheshwari, A.** and Vellaisamy, P. (2013). Some recent results on fractional diffusions. Fractional Calculus: Theory and Applications. Edited by Varsha Daftardar-Gejji, Narosa Publishing House, New Delhi, 169-190. URL: http://www.narosa.com/books_display.asp?catgcode=978-81-8487-333-7

PHD STUDENTS

1. Meena Sanjay Babulal, LNMIIT, Jaipur
2. Shilpa, Central University of Punjab, Bhatinda.

TEACHING AT
IIM INDORE

Undergraduate courses:

Core: R programming (2024), Foundations of Mathematics and Statistics (2024), Numerical Analysis (2017 – 2019, 2021 – 2024), Probability-1 (2017–2023), Statistical Methods - 1 (2018), Differential Calculus (2020), Introduction to Business History (2022).

Elective: Introduction to GenAI and NLP (2025), Stochastic Process - 1 (2019–20, 2022–24), Introduction to Stochastic Calculus (2018–2020, 2022–24), Stochastic Calculus - II (2019), Statistical Learning with Python (2019), Elections and Voting: A Mathematical Treatment (2020), People and Power: Understanding Elections, Power and Apportionment Through Mathematics (2024).

Postgraduate:

Core: Introduction to Probability and Statistics (2026), Introduction to Business Statistics (2020–2022, 2024-25), Introduction to Social Science Research and Probability & Statistics (2021).

Elective: Introduction to GenAI and NLP (2025), People and Power: Understanding Elections, Power and Apportionment Through Mathematics (2023).

PhD courses:

Core: Applied Probability and Statistics (2019), Introduction to Business Statistics (2020).

Elective: Topics in Generative AI (2025–26), Topics in Stochastic Processes (2019–20).

MDP: Decision making under uncertainty (Leadership MDP for BSF, 2 batches). Data Analytics for Supply Chain Management (Logistics MDP for Indian Army, 2 batches). Business Statistics (Annual FDP, 3 batches)

Online Learning Programs: Problem Structuring and Decision Making (APMCL 01–05), Business Statistics (EPOSCM 01–08), Storytelling with data (PGPCM Batch 05–10). Mathematics and Statistics for Risk Management (CPAFRM Batch 01–03). Introduction to R and Python (CPAFRM Batch 01–03). Machine Learning using Python (CPAFRM Batch 01–03). Business Analytics (MSDSM Batch 01–04). Business Statistics (PGCBM Batch 02).

SELECTED INVITED TALKS • Sovereign AI at Lal Bahadur Shastri National Academy of Administration (LBSNAA), Mussoorie, March 19, 2026

- Mathematical Logic Meets Bhartiya Thought: A Neuro-Symbolic Synthesis at CDAC Bangalore, June 16, 2025.
- “रामकथा के भागीरथ वाल्मीकि” at Government Holkar (Model Autonomous) Science College, Indore, Nov 28, 2022.
- “Non-homogeneous space-time fractional Poisson processes” at University of Turin, May 23, 2019.
- “Fractional Poisson process” at IIT Ropar on May 25, 2018.
- “Some Fractional Stochastic Processes” at IIM Indore, June 13, 2017.

AWARDS/ ACHIEVEMENTS	• Best Teacher Award 2018 at IIM Indore • UGC Junior Research Fellowship • Eligibility for Lectureship (NET) award	Sep 2018 Dec 2009 Jun 2009
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VISITING POSITION • University of Turin, May 13, 2019 – June 6, 2019.
 • University of Rome, June 7, 2019 – July 7, 2019.

CONTACT INFORMATION	Block J-204, Indian Institute of Management Indore Prabandh Shikhar, Rau-Pithampur Road Indore - 453556, Madhya Pradesh, India	 +91 9869342910  : adityam@iimidr.ac.in
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