



# Dr. Avik Pradhan

## Curriculum Vitae

### Personal Information

Name Avik Pradhan  
Present Department of Mathematics, School of Basic and Applied Sciences  
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Google Scholar [scholar.google.co.in/citations?user=jSCBPAUAAAAJ&hl=en&oi=ao](https://scholar.google.co.in/citations?user=jSCBPAUAAAAJ&hl=en&oi=ao)  
Professional Membership Life Member of Operational Research Society of India  
International Multiple Criteria Decision Making Society Member

### Education

2011–2016 **PhD (Operations Research)**, *Indian Institute of Technology Kharagpur, India, Kharagpur.*  
2009–2011 **M.Sc. (Mathematics)**, *Indian Institute of Technology Madras, India, Chennai.*  
First Class  
2006–2009 **B.Sc. (Hons) Mathematics**, *Ramakrishna Mission Residential College, Narendrapur, University of Calcutta, India.*  
First Class  
2006 **XII Class**, *West Bengal Council of Higher Secondary Education, India.*  
First Class  
2004 **X Class**, *West Bengal Board of Secondary Education, India.*  
First Class

### PhD thesis

Title *Computational Study of Some Multi-Choice Programming Problems*  
Supervisor Prof. M.P. Biswal, Department of Mathematics, Indian Institute of Technology Kharagpur, India

## Research interest

- Operations Research
- Stochastic Programming
- Robust Optimization
- Decision Making under Uncertainty

## Research/Teaching Experience

- Assistant Professor, Department of Mathematics, School of Basic and Applied Sciences, Adamas University, West Bengal, India (August 2019–Present).
- Assistant Professor, School of Sciences, Indrashil University, Gujarat, India (June 2018–August 2019).
- Assistant Professor, Department of Humanities and Sciences, Indrashil Institute of Science and Technology, Gujarat Technological University, India (November 2016–August 2019).
- Research internship, Department of Mining Engineering, IIT Kharagpur, India (August 2016–October 2016).
- Research Fellowship, Department of Mathematics, IIT Kharagpur, India (July 2011–July 2016).

## Courses in present Semester

- Engineering Mathematics II
- Introduction to Financial Risk Analytics
- Introduction to Linear Programming and Game Theory
- Multivariate Calculus

## Courses Taught

- Engineering Mathematics I (B.Tech)
- Engineering Mathematics II (B.Tech)
- Advance Engineering Mathematics (B.Tech)
- Numerical and Statistical Methods (B.Tech)
- Partial Differential Equations (B.Sc)
- Analytical Geometry (B.Sc)
- Quantitative Techniques for Management (MBA)
- Management Science (MBA)
- Operations Research (M.Sc)
- Probability and Statistics (M.Sc)
- Numerical Linear Algebra (M.Sc)
- Operations Research Lab (B.Tech)

- Queueing Theory (Integrated M.Sc in Mathematics and Computing)
- Mathematics for Data Science (M.Sc. Tech Statistics and Data Science)

## Honors and Awards

- "Second Best Paper" award under Academic Category for the paper entitled "Multi-Objective Solid Transportation Problem with Staircase Cost Matrix" with Shubham Singh and Prof. M. P. Biswal at 56th Annual Convention of Operational Research Society of India (ORSI) and 10th International Conference on Business Analytics and Intelligence held at the Indian Institute of Science, Bangalore during 18-20 December 2023.
- B G Raghavendra Memorial Award for best application Paper on "Multi-objective Multi-Choice Random Linear Programming Problem" with Prof. M. P. Biswal at 48th Annual Convention of Operational Research Society of India (ORSI) (2015).
- Travel and accommodation grant from IIT Kharagpur to attend "Winter Simulation Conference-2015".
- Research Fellowship, Department of Mathematics, IIT Kharagpur, India (July 2011–July 2016).
- Qualified Graduate Aptitude Test in Engineering (GATE) 2011, and secured all India rank 46 in Mathematical Sciences.
- Merit-cum-Means Scholarship for M.Sc., Department of Mathematics, IIT Madras (For all four Semesters).
- Qualified Joint Admission Test for M.Sc. (JAM) 2009, and secure all India rank 129 in mathematics.
- Ranked 12<sup>th</sup> in B.Sc., University of Calcutta, 2009.

## Publications

1. **Avik Pradhan** and M. P. Biswal: "A Bi-level Multi-choice Programming Problem", *International Journal of Mathematics in Operational Research (Switzerland)*, 7, no. 1 (2015): 1-18.
2. **Avik Pradhan** and M. P. Biswal: "Multilevel Linear Programming Problem Involving Some Multi-choice Parameters", *International Journal of Mathematics in Operational Research (Switzerland)*, 7, no. 3 (2015): 297-317.
3. **Avik Pradhan** and M. P. Biswal: "Multi-choice Probabilistic Linear Programming Problem", *OPSEARCH (Springer)*, 54, no.1 (2017): 122-142.
4. **Avik Pradhan** and M. P. Biswal: "Linear Programming Problems With Some Multi-choice Fuzzy Parameters", *Yugoslav Journal of Operations Research*, 28, no. 2 (2018): 249-264.
5. **Avik Pradhan** and M. P. Biswal: "Linear Fractional Programming Problems With Some Multi-

- choice Parameters”, *International Journal of Operational Research (Switzerland)*, 34, no. 3 (2019): 321-338.
6. Shubham Singh, **Avik Pradhan**, and M. P. Biswal: “Multi-objective Solid Transportation Problem under Stochastic Environment”, *Sadhana (Springer)*, 44, no. 5 (2019): 1-12
  7. Dipak Mohanty, **Avik Pradhan**, and M. P. Biswal: “Chance constrained programming with some non-normal continuous random variables”, *OPSEARCH (Springer)*, 57, no. 4 (2020): 1281-1298
  8. Shubham Singh, **Avik Pradhan**, and M. P. Biswal: “Computation of Some Stochastic Transportation Problems Using Essen Inequality”, *International Journal of Applied and Computational Mathematics (Springer)*, 7, no. 6 (2021): 1-26
  9. **Avik Pradhan** and M. P. Biswal: “Computational Methodology for Linear Fractional Transportation Problem”, *Proceedings of the 2015 Winter Simulation Conference (IEEE Press)*, 2015, 3158-3159.
  10. **Avik Pradhan** and M. P. Biswal: “Multi-level Nonlinear Programming Problem with Some Multi-choice Parameters”, *Mathematics and Computing 2013 (Springer India)*, 2014, 91-101.
  11. **Avik Pradhan** and M. P. Biswal: “Multi-objective Multi-Choice Random Linear Programming Problem”, *Operations Research in Development Sector, (Springer Singapore)*, 2019, 29-51.
  12. **Avik Pradhan**, Ashis Karan, Satyajit Das, and M. P. Biswal: “Avoid Maximum Cost Method for Solving Linear Fractional Transshipment Problem”, *International Journal of Mathematical, Engineering and Management Sciences (Under Review)*
  13. Shubham Singh, **Avik Pradhan**, and M. P. Biswal: “Multi-Objective Solid Transportation Problem with Staircase Cost Matrix”, *International Journal of Operational Research (Under Review)*

## Workshops/ Conferences

- Organize International Conference on Recent Advances in Mathematics, Statistics, and Data Science (RAMSDS 2024) held on November 27-28, 2024 as organizing secretary.
- Presented paper in *TOPAS*, A National Conference on Engineering Mathematics organized by Department of Mathematics, IIT Kharagpur, India during December 16-17, 2017.
- Presented paper in the 48th annual convention of the Operational Research Society of India and International Conference at Institute of Technical Education and Research, SOA University, Bhubaneswar, India, 2015.
- Presented poster in Winter Simulation Conference-2015 organized by INFORMS, Huntington Beach, CA at the Hyatt Regency Huntington Beach Resort and Spa, USA, December 6-9, 2015.
- Presented paper in the International Conference on Recent trends in Mathematics and its Applications-2013 organized by Department of Mathematics Vidyasagar University, West Bengal, India.
- Presented paper in the International Conference on Mathematics and Computing (ICMC 2013) organized by Haldia Institute of Technology, West Bengal, India.

- Attended Author Workshop on Scholarly Publishing jointly organized by Central Library IIT Kharagpur and Wiley, India during March 2015.

## Computer skills

Programming Languages C, Julia  
Operating Systems Windows, Ubuntu  
Applications Latex, MS Office  
Packages and Softwares MATLAB, CPLEX, Mathematica, Gams, Lingo, Excel

### Declaration

I hereby declare that the information given above is true to the best of my knowledge.

Avik Pradhan

**(Avik Pradhan)**

Date: January 14, 2025