

Curriculum Vitae

Dr. Mohd. Arshad

(Ph.D., IIT Kanpur; Statistics)

Associate Professor

Statistics and Data Science Research Group

Department of Mathematics

Indian Institute of Technology Indore

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Madhya Pradesh, India.

Profile Links: Home Page; Google Scholar; Scopus; ORCID



Personal Details:

Date of Birth February 05, 1985

Nationality Indian

Sex Male

Marital Status Married

Email arshad@iiti.ac.in

Educational Qualifications:

- 2015, Ph.D. from Indian Institute of Technology Kanpur.
Thesis Supervisor: Professor Neeraj Misra
Thesis Title: Selection and Related Estimation Problems Involving Gamma and Exponential Populations.
- 2004-2006, Master of Science in Statistics (Gold Medalist)
from C.S.J.M. University, Kanpur.
- 2001-2004, Bachelor of Science in Statistics, Mathematics and
Physics from C.S.J.M. University, Kanpur.

Research Interest:

- Copula Modelling
- Data Science and Machine Learning
- Estimation Theory
- Information Theory
- Ranking and Selection

Employment Details:

- Associate Professor at the Department of Mathematics, Indian Institute of Technology Indore since September 23, 2025.
- Assistant Professor at the Department of Mathematics, Indian Institute of Technology Indore from July 21, 2020 to September 22, 2025.
- Assistant Professor at Department of Statistics and Operations Research, Aligarh Muslim University, Aligarh from March 06, 2014 to July 20, 2020, and on extraordinary leave from July 21, 2020 to July 20, 2022.
- Faculty in Mathematics and Statistics at the College of Management and Information Technology, Kanpur, run by the Punjab Technical University from July 2007 to June 2008.

Professional Experience:

- Teaching Experience: 12 years
- Research Experience: 12 years

Awards, Honors, and Recognition:

- Received the Excellence in Research Paper award 2025 from IIT Indore, for the paper titled “RoBoSS: A Robust, Bounded, Sparse, and Smooth Function for Supervised Learning.”
- Travel grant awarded by the Simons Foundation to attend the International Congress of Mathematicians (ICM) 2026, being held during July 23-30, 2026, at the Pennsylvania Convention Center in Philadelphia, Pennsylvania, USA.
- Received two cash awards of Rs 20,000 (Rs 10,000 each) from the Dean, Resources and Alumni, IIT Kanpur, for publication of two research papers in the journals listed by the ISI Web of Science during the Ph.D. Programme (March 2014).
- Received an appreciation letter from the Chairman, Senate, IIT Kanpur, for outstanding performance as a tutor in the course ESO209 (Probability and Statistics) during the 2011-12-II semester.
- Qualified CSIR-JRF-NET examination - 2008 (June) conducted jointly by CSIR and UGC. Worked as CSIR-JRF from August 2009 to July 2011 and CSIR-SRF from August 2011 to February 2014.
- Smt. Rama Devi Memorial Gold Medal in 2007 from C.S.J.M. University, Kanpur.
- Cleared paper CT3 (Probability and Mathematical Statistics) conducted by the Institute of Actuaries of India in June 2007.

Research Projects/Grants:

Project Title	Funding Agency & Scheme	Status
Statistical Analysis of the Selected Treatment using Drop-the-Losers Designs	ANRF (SERB), Govt. of India; CORE Research Grant	Ongoing
Detection of Communities in Network	IIT Indore	Completed
Statistical Modelling in Ranking and Selection	Accelerate Vigyan, SERB (DST); Karyashala	Completed
Improved Estimation Based on Records	SERB (DST), Govt. of India; MATRICS	Completed
Selection and Related Estimation Problems	UGC, New Delhi	Completed

Journal Publications (Published/Accepted for publication):

1. Zachariah, S. G., Arshad, M., and Sarkar, M. H. (2026) “Nonparametric estimation of a bivariate mean inactivity time function with application in pink eye disease data,” **Statistics & Probability Letters, Elsevier**, vol. 235, 110753, doi: 10.1016/j.spl.2026.110753
2. Akhtar, M., Quadir, A., Tanveer, M. and Arshad, M. (2026), “Dual-Center RAPID-LSSVM: Radius-Adaptive, Probability and Imbalance Driven Weighting for Alzheimer’s Diagnosis,” **Neural Networks, Elsevier**, vol. 202, 108956, doi: 10.1016/j.neunet.2026.108956.
3. Akhtar, M., Tanveer, M. and Arshad, M. (2026), “RoBoTS: A Robust Bounded Twin SVM Based on RoBoSS Loss Function,” **Pattern Recognition, Elsevier**, vol. 179, Part-B, 113653, doi: 10.1016/j.patcog.2026.113653.
4. Akhtar, M., Kumari, A., Sajid, M., Quadir, A., Arshad, M., Suganthan, P. N. and Tanveer, M. (2026), “Towards robust and inversion-free randomized neural networks: The

- XG-RVFL framework,” **Pattern Recognition, Elsevier**, vol. 172, Part-D, 112711, doi.org/10.1016/j.patcog.2025.112711.
5. Akhtar, M., Tanveer, M. and Arshad, M. (2025). “HawkEye: A Robust Loss Function for Regression with Bounded, Smooth, and Insensitive Zone Characteristics,” **Applied Soft Computing, Elsevier**, vol. 176, 113118, doi.org/10.1016/j.asoc.2025.113118.
 6. Akhtar, M., Tanveer, M. and Arshad, M. (2025), RoBoSS: A Robust, Bounded, Sparse, and Smooth Loss Function for Supervised Learning. **IEEE Transactions on Pattern Analysis and Machine Intelligence**, vol. 47 (1), 149-160, doi: 10.1109/TPAMI.2024.3465535.
 7. Ali, A., Pathak, A. K., Arshad, M. and Sheikhi, A. (2025), Copula-based estimation of causal effects in multiple linear and path analysis models. **Journal of Statistical Computation and Simulation**, vol. 95 (3), 609-627, doi.org/10.1080/00949655.2024.2433715.
 8. Pathak, A. K., Arshad, M. Azhad, Q. J. and Ali, A. (2025). On bivariate generalized lifetime distribution. Accepted in **Communications in Statistics – Simulation and Computation**, doi.org/10.1080/03610918.2025.2529459
 9. Arshad, M., Khandelwal, N., Athar, H. and Azhad, Q. J. (2025), On Inadmissibility Results of Common Scale Parameters of $k(\geq 2)$ Pareto Populations for Generalized Ordered Statistics. Accepted in **REVSTAT – Statistical Journal**.
 10. Zachariah, S. G., Arshad, M., and Pathak, A. K. (2024). A new class of copulas having dependence range larger than FGM-type copulas. **Statistics & Probability Letters, Elsevier**, 206, 109988, doi.org/10.1016/j.spl.2023.109988.
 11. Zachariah, S. G., Arshad, M. and Pathak, A. K. (2024). A new family of copulas based on probability generating functions. **Mathematica Slovaca**, vol. 74 (4), 1039-1060, DOI: 10.1515/ms-2024-0076.
 12. Arshad, M., Khetan, M., Kumar, V., and Pathak, A. K. (2024). Record-based transmuted generalized linear exponential distribution with increasing, decreasing and bathtub shaped failure rates. **Communications in Statistics- Simulation and Computation, Taylor & Francis**, 53 (7), 3489–3513.
 13. Akhtar, M., Tanveer, M., Arshad, M. and Alzheimer’s Disease Neuroimaging Initiative. (2024), “Advancing Supervised Learning with the Wave Loss Function: A Robust and Smooth Approach,” in **Pattern Recognition, Elsevier**, vol. 155, 110637, doi: 10.1016/j.patcog.2024.110637.
 14. Ali, A., Pathak, A. K., Arshad, M., and Emura, T. (2024). Copula-based regression estimation in the presence of outliers. Accepted in **Communications in Statistics-Simulation and Computation, Taylor & Francis**, DOI: 10.1080/03610918.2024.2372657.
 15. Kumari, A., Akhtar, M., Tanveer, M. and Arshad, M. (2024), “Diagnosis of breast cancer using flexible pinball loss support vector machine,” in **Applied Soft Computing, Elsevier**, vol. 157, 111454, ISSN 1568-4946, doi: 10.1016/j.asoc.2024.111454.

16. Pathak, A. K., Arshad, M., Pandey, A.K. and Ali, A. (2024), Record-Based Transmuted Unit-Omega Distribution: Different Methods of Estimation and Applications. Accepted in **REVSTAT – Statistical Journal**.
17. Ali, A., Pathak, A. K. and Arshad, M. (2024). Parametric and semiparametric approaches for copula-based regression estimation. **Hacettepe Journal of Mathematics and Statistics**, vol 53 (4) (2024), 1141 – 1157, DOI : 10.15672/hujms.1359072.
18. Anas, M., Dar, A. A., Ahmed, A., and Arshad, M. (2024). K th-order equilibrium Weibull distribution: properties, simulation, and its applications. **Communications in Statistics - Simulation and Computation, Taylor & Francis**, VOL. 53(12), 6237–6259, doi.org/10.1080/03610918.2023.2230390.
19. Khetan, M., Kumar, V., Pradhan, K. C., Shaikh, M. A., and Arshad, M. (2024). Forecasting gold price and inflation for India and US: An analysis of ARIMA and Holt Winters models. **Theoretical and Applied Economics**, 31(2) (639), Summer, 255-268.
20. Arshad, M., Pathak, A. K., Azhad, Q. J. and Khetan, M. (2023). Modeling bivariate data using linear exponential and Weibull distributions as marginals. **Mathematica Slovaca**, 73 (4), 1075–1096.
21. Arshad, M., Azhad, Q. J., Gupta, N., and Pathak, A. K. (2023). Bayesian inference of Unit Gompertz distribution based on dual generalized order statistics. **Communications in Statistics- Simulation and Computation, Taylor & Francis**, 52 (8), 3657–3675.
22. Pathak, A. K., Arshad, M., J. Azhad, Q., Khetan, M., and Pandey, A. (2023). A novel bivariate generalized Weibull distribution with properties and applications. **American Journal of Mathematical and Management Sciences**, 42(4), 279-306.
23. Arshad, M. and Abdalghani, O. (2023). Estimating a parametric function involving several exponential populations. **Communications in Statistics-Theory and Methods, Taylor & Francis**, 52 (23), 8351–8370.
24. Arshad, M., Abdalghani, O., Meena, K. R., Pathak, A. K. (2022). Estimation after selection from bivariate normal population with application to poultry feeds data. **Hacettepe Journal of Mathematics & Statistics**, 51 (4), 1141–1159.
25. Jodra, P. and Arshad, M. (2022). An intermediate Muth distribution with increasing failure rate. **Communications in Statistics-Theory and Methods**, 51 (23), 8310–8327, **Taylor & Francis**.
26. Arshad, M. Khandelwal, N. and Azhad, Q. J. (2022). Stress–strength reliability estimation in a system with p-type non-identical multicomponents from PRHR family based on records. **Journal of Statistical Computation and Simulation**, 92 (13), 2740–2771, **Taylor & Francis**.

27. Azhad, Q. J., Arshad, M. and Khandelwal, N. (2022). Statistical inference of reliability in multicomponent stress strength model for Pareto distribution based on upper record values. **International Journal of Modelling and Simulation**, 42 (2), 319–334, **Taylor & Francis**.
28. Chesneau, C., Kumar, V., Khetan, M. and Arshad, M. (2022). On a modified weighted exponential distribution with applications. **Math. Comput. Appl.** 27, 17.
29. Modibbo, U. M., Arshad, M., Abdalghani, O. and Ali, I. (2021). Optimization and estimation in system reliability allocation problem. **Reliability Engineering and System Safety**, Vol 212, 1-9, **Elsevier**.
30. Mangla, S., Pathak, A. K., Arshad, M. , Ghosh, Sahoo, P. K., Garg, V. K., and Haque, U. (2021). Impact of Environmental Indicators on the COVID-19 Pandemic in Delhi, India. **Pathogens**, Vol 10 (8), 1-13 (1003).
31. Mangla, S., Pathak, A. K., Arshad, M., and Haque, U. (2021). Short-term forecasting of the COVID-19 outbreak in India. **International Health, (RSTMH)**, 13, 410-420, **Oxford Academic**.
32. Ahmad, F., Zaidi, S., and Arshad, M. (2021). Postharvest quality assessment of apple during storage at ambient temperature. **Heliyon, (Cell Press)**, 7 (8), e07714.
33. Jamal, Q. A., Arshad, M. and Misra, A. K. (2021) Estimation of common location parameter of several heterogeneous exponential populations based on generalized order statistics. **Journal of Applied Statistics, Taylor & Francis**, 48 (10), 1798-1815.
34. Arshad, M. and Abdalghani, O. (2020) On estimating the location parameter of the selected exponential population under the LINEX loss function. **Brazilian Journal of Probability and Statistics**, 34 (1), 167–182. **Institute of Mathematical Statistics**.
35. Arshad, M. and Azhad, Q. J. (2020). Parametric and reliability estimation of the Kumaraswamy generalized distribution based on record values. **Journal of Modern Applied Statistical Methods**, 19 (1), 1–26, eP2886.
36. Arshad, M. and Baklizi, A., (2019). Estimation of common location parameter of two exponential populations based on records. **Communications in Statistics - Theory and Methods**, 48 (6), 1545-1552. **Taylor & Francis**.
37. Arshad, M. and Jamal, Q. A., (2019). Statistical inference for ToppLeone-generated family of distributions based on records. **Journal of Statistical Theory and Applications**, 18 (1), 65-78.
38. Arshad, M. and Jamal, Q. A., (2019). Interval estimation for Topp-Leone generated family of distributions based on dual generalized order statistics. **American Journal of Mathematical and Management Sciences**, 38 (3), 227-240. **Taylor & Francis**.

39. Arshad, M. and Jamal, Q. A., (2019). Estimation of common scale parameter of several heterogeneous Pareto populations based on records. **Iranian Journal of Science and Technology**, Transactions A: Science, 43 (5), 2315-2323. **Springer**.
40. Arshad, M. and Abdalghani, O., (2019). Estimation after selection from uniform populations under an asymmetric loss function. **American Journal of Mathematical and Management Sciences**, 38 (4), 349-362. **Taylor & Francis**.
41. Meena, K. R., Arshad, M. and Gangopadhyay, A., (2018). Estimating the parameter of selected uniform population under the squared log error loss function. **Communications in Statistics - Theory and Methods**, 47 (7), 1679-1692. **Taylor & Francis**.
42. Chanda, E., Arshad, M., Khaloua, A., Zhang, W., et al., (2018). An investigation of plasmodium falciparum malaria epidemic in Kavango and Zambezi region of Namibia in 2016. **Transaction of the Royal Society of Tropical Medicine & Hygiene**, 112 (12), 546-554. **Oxford University Press**.
43. Arshad, M. and Misra, N., (2017). On estimating the scale parameter of the selected uniform population under the entropy loss function. **Brazilian Journal of Probability and Statistics**, 31(2), 303-319. **Institute of Mathematical Statistics**.
44. Khan, M. J. S. and Arshad, M., (2016). UMVU estimation of reliability function and stress-strength reliability from proportional reversed hazard family based on lower records. **American Journal of Mathematical and Management Sciences**, 35(2), 171-181. **Taylor & Francis**.
45. Arshad, M. and Misra, N., (2016). Estimation after selection from exponential populations with unequal scale parameters. **Statistical Papers**, 57 (3), 605-621. **Springer**.
46. Arshad, M., Misra, N. and Vellaisamy, P., (2015). Estimation after selection from gamma populations with unequal known shape parameters. **Journal of Statistical Theory and Practice**, 9 (2), 395-418. **Taylor & Francis**.
47. Arshad, M. and Misra, N., (2015). Estimation after selection from uniform populations with unequal sample sizes. **American Journal of Mathematical and Management Sciences**, 34(4), 367-391. **Taylor & Francis**.
48. Arshad, M. and Misra, N., (2015). Selecting the exponential population having the larger guarantee time with unequal sample sizes. **Communications in Statistics-Theory and Methods**, 44 (19), 4144-4171. **Taylor & Francis**.
49. Misra, N. and Arshad, M., (2014). Monotonicity of certain integrals involving gamma distributions and their applications in multiple comparisons. **Statistics and Probability Letters**, 85, 144-152. **Elsevier**.
50. Misra, N. and Arshad, M., (2014). Selecting the best of two gamma populations having unequal shape parameters. **Statistical Methodology**, 18, 41-63. **Elsevier**.

Conference Papers:

1. M. Akhtar, A. Varshney, A. Quadir, A. Rahaman, M. Arshad and M. Tanveer, "Robust Broad Learning System with Wave Loss for Classification under Data Uncertainty," **IEEE World Congress on Computational Intelligence (WCCI)**, 2026. (Accepted).
2. A. Varshney, M. Akhtar, M. Arshad and M. Tanveer, "Metric-Enhanced Hybrid Kernel Probabilistic Neural Networks for Robust Classification," **IEEE World Congress on Computational Intelligence (WCCI)**, 2026. (Accepted).
3. M. Akhtar, M. Tanveer and M. Arshad, "Residual-Guided Randomized Neural Networks," **IEEE World Congress on Computational Intelligence (WCCI)**, 2026. (Accepted).
4. M. Akhtar, M. Tanveer and M. Arshad, "CAWI: Copula-Aligned Weight Initialization for Randomized Neural Networks," Accepted in **AISTATS 2026: Twenty-Ninth Annual Conference on Artificial Intelligence and Statistics**, May 2-5, 2026, Tangier, Morocco.
5. M. Akhtar, M. Tanveer and M. Arshad, "GL-TSVM: A robust and smooth twin support vector machine with guardian loss function," **International Conference on Pattern Recognition**, pp. 63-78, Dec. 2024, Cham: **Springer Nature Switzerland**.
6. M. Akhtar, R. Mishra, M. Tanveer and M. Arshad, "Advancing RVFL networks: Robust classification with the HawkEye loss function," **31st International Conference on Neural Information Processing**, Dec. 2024.

Book Chapters:

1. Azhad, Q. J., Arshad, M., Devi, B., Khandelwal, N., Ali, I. (2023). Record-based transmuted Kumaraswamy generalized family of distributions: properties and application. **G Families of Probability Distributions: Theory and Practices**, edited by Ali, M. M., et al. Chapter-14, **CRC Press**.
2. Pathak, A. K., Arshad, M., Bakshi, S., Khetan, M. and Mangla, S. (2023). A new alpha power transformed Weibull distribution: properties and applications. **G Families of Probability Distributions: Theory and Practices**, edited by Ali, M. M., et al. Chapter-19, **CRC Press**.
3. Homa, F., Arshad, M., Kumar, V., Thakur, S. and Mishra, P. (2023). Descriptive Statistics: Principles and Applications. **Distribution Theory: Principles and Applications**, edited by Homa et al. Chapter 1, **Apple Academic Press**, co-publishing with **CRC Press**.

4. Kumar, V., Khetan, M., Arshad, M. and Dixit, S. (2023). Random Variables and Their Properties, edited by Homa et al. Chapter 2, **Apple Academic Press, co-publishing with CRC Press**.
5. Khetan, M., Kumar, V., Arshad, M. and Verma, P. (2023). Discrete Distributions, edited by Homa et al. Chapter 3, **Apple Academic Press, co-publishing with CRC Press**.
6. Dixit, S. Khetan, M., Arshad, M., Verma, P. and Pathak, A. K. (2023). Continuous Distributions, edited by Homa et al. Chapter 4, **Apple Academic Press, co-publishing with CRC Press**.
7. Arshad, M., Kumar, V., Khetan, M. and Homa, F. (2023). Family of Weibull Distributions, edited by Homa et al. Chapter 5, **Apple Academic Press, co-publishing with CRC Press**.
8. Arshad, M., Khetan, M., Kumar, V. and Homa, F. (2023). Life Distributions, edited by Homa et al. Chapter 6, **Apple Academic Press, co-publishing with CRC Press**.
9. Abdalghani, O., Arshad, M., Meena, K. R. and Pathak, A. K. (2022). Adjusted bias and risk for estimating treatment effect after selection with an application in idiopathic osteoporosis. **Optimal Decision Making in Operations Research and Statistics: Methodologies and Applications**, edited by Ali, I., et al. Chapter-22, **CRC Press**.

Books/Edited Books:

1. Mohd. Arshad, Mukti Khetan, Ashok Kumar Pathak and Fozia Homa (2026). “**Recent Advances in Simulation and Modeling**”. ISBN: 9781779645678, **Apple Academic Press, co-publishing with CRC Press, Taylor & Francis**.
2. Fozia Homa, Mukti Khetan, Mohd. Arshad, and Pradeep Mishra (2023). “**Distribution Theory: Principles and Applications**”. ISBN: 9781774912140, **Apple Academic Press, co-publishing with CRC Press, Taylor & Francis**.
3. Misra, A. K. and Arshad, M. (2018). “**Solutions to IIT JAM for Mathematical Statistics**” ISBN: 978-93-5346-351-9.

Membership of Professional Societies:

S. No.	Name of the Professional Society	Membership Status (Lifetime/Annual)
1	IEEE Society	Annual
2	IEEE Computational Intelligence Society	Annual
3	American Statistical Association	Annual
4	International Indian Statistical Association	Lifetime
5	Calcutta Statistical Association	Lifetime
6	Indian Statistical Association	Lifetime
7	Indian Science Congress	Lifetime
8	Indian Society for Probability and Statistics	Lifetime
9	Indian Mathematical Society	Lifetime

Supervision:

1. Research Associates / Post-Doctoral Students

S. No.	Name	Duration	Title of the Project
1	Mojammel Haque Sarkar	May 2024 – Present	Statistical Analysis of the Selected Treatment using Drop-the-Losers Designs

2. Ph.D. Students

S. No.	Name of the Student	Year	Title of Thesis
1	Parmjeet Singh	Ongoing	—
2	Abhishek Varshney	Ongoing	—
3	Shubham Babasaheb Alte	Ongoing	—
4	Mushir Akhtar	Ongoing	—
5	Swaroop Georgy Zachariah	2025	Dependence and Uncertainty: A Copula-Based Framework
6	Nancy Khandelwal	2024	Some Contributions to the Theory of Statistical Estimation
7	Omer Abdalghani Abasher Alhaj	2020	Some Estimation Problems Related to Ranking and Selection
8	Qazi Azhad Jamal	2020	Estimation Problems Based on Record Data

3. M.Sc. Project Students

S. No.	Name of the Student	Year	Title of Thesis
1	Anjali Chouhan	Ongoing	—
2	Shivani Sharma	2026	Image Analysis using Entropy Measures
3	Saurabh Kumar Maurya	2026	Estimating the Location Parameter of the Selected Exponential Population
4	Harsha Rahul Kumar Jain	2026	Estimation of Mutual Information
5	Rahul Choudhary	2025	Multivariate Exponentiated FGM Copula
6	Rohan Arun	2025	Financial Strength Scoring from Consent-Based Financial Data Through Open Finance
7	Prathamesh Hambar	2025	Terrain Tracker - Land Cover Classification on Sentinel-2 Multi-Spectral Imagery using Deep Learning
8	Ishita Agrawal	2024	Construction of Bivariate Beta Log Logistic Distribution
9	Shubham Babasaheb Alte	2024	A Study on Estimation of Parameters in Logistic Regression Using Flexi MLq,aE
10	Leela Krishna Prasad A.	2024	Statistical Modelling of Cricket Data
11	Kashish Nigam	2024	Statistical Modeling: Interdependence of Stock Market Indices and Oil Prices Using Copula
12	Tejaswita Srivastava	2024	Quantitative Analysis of Organized Global Crime Using Lasso Regression
13	Masihuddin	2016	Stochastic Ordering of Continuous Random Variables and its Applications

4. B.Tech. Project Students

S. No.	Name of the Student	Year	Title of Thesis
1	Chetanya Sharma	2024	Statistical Arbitrage Using Pairs Trading
2	Akshay Tak	2023	Optimal Portfolio of Stocks Using Statistical Methods

New Courses Developed at IIT Indore:

- MA 215: Probability and Statistics (Core Course for B.Tech. M&C)
- MA 302: Statistical Inference (Core Course for B.Tech. M&C)
- MA 232/ MA 332/ MA 432: Bayesian Statistical Methods (Professional Basket Course for all B.Tech. students)
- MA 212: Regression Analysis (Elective Course)
- MA 402/MA 602: Industrial Statistics (Elective Course)
- MA 311: Statistical Distribution Theory (Elective Course)
- MA 414/ MA 614: Time Series Analysis (Elective Course)
- MA 619: Probability and Statistics (Core Course for M.Sc. Mathematics)
- DSM 101: Probability and Statistics (Core Course for M.Sc. Data Science and Management)

Courses Taught at IIT Indore:

- MA 215: Probability and Statistics
- MA 212: Regression Analysis
- MA 311: Statistical Distribution Theory
- MA 302: Statistical Inference
- MA 306: Monte Carlo Simulation
- ME 675 /MA 675: Probability and Statistical Methods
- MA 701: Experimental Design and Data Analysis
- MA 680: Computational Techniques
- MA 203: Complex Analysis and Differential Equations-II
- MA 204: Numerical Methods

Courses Taught at AMU:

UG Courses

Descriptive Statistics

Probability Theory

Statistical Inference

Sampling Theory

Sampling Distributions

PG Courses

Probability Theory-I

Statistical Inference-II

Stochastic Processes

Real and Complex Analysis

Participation in Committees:

- Member of national-level committees for various confidential academic operations.
- Convener, Outreach Vision Committee (December 20, 2023, to date).
- Convener, Department Undergraduate Committee (DUGC), Mathematics, IITI (August 1, 2025, to date).
- Member, Department Placement Committee, Mathematics, IITI (July, 2025, to date).
- Member, Department Undergraduate Committee (DUGC), Mathematics, IITI (February 1, 2022, to July 31, 2025).
- Member, Committee for Academic Vision, Mathematics, IITI (December 20, 2023, to date).
- Member, Department Seminar Committee, Mathematics, IITI (December 29, 2022, to July 2025).
- Member of the SC, ST, OBC, PD, and Minority Cell of the IITI (January 25, 2021 to November 10, 2021).
- Member of the Medical Board of IITI (February 12, 2021 to February 11, 2022).
- Convener, Ph.D. Admission Committees in the Department of Mathematics, IITI (September 2021 to August 2022).
- Member, Ph.D. Admission Committees in the Department of Mathematics, IITI (October 2020 to September 2021; September 2022 to August 2024).
- Member, Committee for ICCR-admission at IITI for 2023-24.
- Member, Committees for finalisation of Institute Holiday List for the years 2023–2024.
- Member, Board of Studies, Department of Statistics and OR, AMU (March 2014 to June 2020).
- Member of various committees at AMU from March 2014 to June 2020.

Events Organization:

- Convenor, One-Day visit of School students under the SSR event of ANRF project, held on January 31, 2026.
- Member Organizing Committee, 2nd International Conference on Applied Mathematics and Mechanics (ICAMM 2026) during December 3-5, 2026, at IIT Indore.
- Convenor, 7-Day High-End Workshop (KARYASHALA) on “Statistical Modelling in Ranking and Selection” from January 18-24, 2024, at IIT Indore.
- Member Organizing Committee, International Conference on Special Functions, Analytic Functions, Metrics and Quasiconformality, during December 17-20, 2024, at IIT Indore.
- Member Organizing Committee, 10th Indian Conference on Logic and its Applications during March 3-5, 2023, at IIT Indore.
- Member Organizing Committee, International Conference on Applied Mathematics and Mechanics (ICAMM 2023) during October 18-20, 2023, at IIT Indore.
- Website Chairs, 29th International Conference on Neural Information Processing (ICONIP 2022) during November 22-26, 2022, at IIT Indore.
- Member Organizing Committee, 2022 IEEE CIS Summer School on Deep Learning and Computational Intelligence: Theory and Applications during December 12-16, 2022, at IIT Indore
- Member Organizing Committee, 2020 IEEE CIS Summer School on Emerging Research Trends in Computational Intelligence: Theory and Applications during November 26-30, 2020, at IIT Indore.
- Publicity Chairs, International Conference on Computational Mathematics and its Applications during November 12-14, 2019, at IIT Indore.

Invited Lectures/Talks:

- An invited talk in the workshop “Exploratory Data Analysis and Statistical Modelling with RStudio: A Hands-on Workshop”, organized by the ICMR, Rajasthan. (June 5, 2026).
- An invited talk, “An overview of Statistical Approaches in Machine Learning”, organized by the School of Advanced Sciences, Department of Mathematics, VIT (April 6, 2026).
- An invited talk on “Dependence and Uncertainty: Information Measures using Tsallis Entropy”, in the 1st INTERNATIONAL CONFERENCE ON MATHEMATICAL OPTIMIZATION AND APPLICATIONS 2026, organized by the Department of Mathematical Sciences, IIT (BHU) (March 14-16, 2026).
- An invited talk, “From Data to Decisions: The Fundamentals of Statistical Estimation”, organized by the School of Advanced Sciences, Department of Mathematics, VIT (March 5, 2026).

- An invited talk, “Modern Approaches to Statistical Inference”, organized by the School of Advanced Sciences, Department of Mathematics, VIT (March 5, 2026).
- An invited talk on “Multivariate Information Measures: A Copula Based Approach”, in the X International Symposium on Statistics, Optimization and Related Areas, organized by the Department of Statistics and Operations Research, Aligarh Muslim University (December 15-17, 2025).
- An invited talk on “Multivariate Information Measures: A Copula Based Approach”, in the International Conference on Recent Developments in the Techniques of Bayesian Paradigm organized by the Department of Statistics, Institute of Science, Banaras Hindu University (January 06-08, 2025).
- An invited talk on “Introduction to R-Programming for Biostatistics”, organized by ICMR-NIOH, Ahmedabad (September 25-27, 2024).
- An invited Lecture on “Introduction to Data Science” at IIT Indore (June 22, 2024).
- An invited Lecture on “Statistical Testing of Hypothesis Using R” at the Department of Mathematics, School of Advanced Sciences, Vellore Institute of Technology (April 16, 2024).
- An invited lecture in “Three days workshop on LaTeX”, organized by Panjab University, Chandigarh (February 28 to March 01, 2024).
- Four lectures in the “7-day High-End Workshop (Karyashala) on Statistical Modelling in Ranking and Selection”, organized by IIT Indore (January 18 - 24, 2024).
- An invited lecture entitled “Applications of Statistics” organized by IIT Indore and Rajya Shiksha Kendra, Bhopal (August 02, 2023).
- An invited lectures in the “Training Program on experimental methods and numerical techniques” organized by the Department of Physical Sciences and Department of Mathematics & Statistics, Banasthali Vidyapith (February 22-28, 2023).
- An invited lecture on “Basics of Statistics with R Programming” organized by Sage University, Indore. (November 2022).
- An invited lecture in the 3rd workshop on “ Mathematics, Science and Technology” for school teachers of Madhya Pradesh entitled “Aankadon Ka Jaadoo” organized by IIT Indore and Rajya Shiksha Kendra, Bhopal (Oct 07-09, 2022).
- Two invited lectures in the “First Indian Workshop on Artificial Intelligence (iWAI) 2021” organized by the Department of Computer Science and Engineering, IIT Indore (March 19-25, 2021).
- Five invited lectures in the workshop on “Tools & Techniques in Statistical Analysis”, organized by Acharya Narendra Dev College, University of Delhi (April 06-19, 2021).
- An invited lecture in the refresher course “Application of Statistical Techniques in Real World”, organized by Ramanujan College, University of Delhi (May 01-15, 2021).

- An invited lecture entitled “Aankadon Ka Jaadoo” organized by IIT Indore and Rajya Shiksha Kendra, Bhopal (August 18, 2021).
- An invited lecture in “Three days workshop on LaTeX”, organized by Panjab University, Chandigarh (January 05-07, 2022).

Editorial Experience:

- Associate Editor, Journal of Statistical Theory and Applications, Springer (2026 to date)
- Associate Editor, Probability and Statistics, Frontiers in Applied Mathematics and Statistics (2025 to date).
- Review Editor, Mathematics of Computation and Data Science, Frontiers in Applied Mathematics and Statistics (2020 to 2025).
- Associate Editor, The Aligarh Journal of Statistics (2018 to 2022).

Review Work For Journals:

Statistical Papers (Springer), Computational Statistics (Springer), Statistics and Probability Letters (Elsevier), Communications in Statistics - Theory and Methods (Taylor and Francis), Communications in Statistics - Simulation and Computation (Taylor and Francis), Journal of Statistical Computation and Simulation (Taylor and Francis), IEEE Transactions on Artificial Intelligence, Transactions on Fuzzy Systems, IEEE Transactions on Cybernetics, IEEE Transactions on Pattern Analysis and Machine Intelligence, American Journal of Mathematical and Management Sciences (Taylor and Francis), The Aligarh Journal of Statistics, Mathematical Reviews (American Mathematical Society), Iranian Journal of Science and Technology, Transactions A: Science (Springer), etc.

Faculty Development Programs Attended:

- “Orientation Programme” from 01-09-2016 to 30-09-2016 organized by UGC Human Resource Development Centre (HRDC), Aligarh Muslim University.
- “Subject Refresher Course on Environmental Studies” from 01-12-2017 to 22-12-2017 organized by UGC Human Resource Development Centre (HRDC), Aligarh Muslim University.
- “Special Winter School” from 06-12-2018 to 27-12-2018 organized by UGC Human Resource Development Centre (HRDC), Aligarh Muslim University.
- “MOOC’s, E-Content Development and Open Educational Resources” from 01-02-2019 to 07-02-2019 organized by UGC Human Resource Development Centre (HRDC), Aligarh Muslim University.

- “Enhancing of Teaching and Learning Skills in Statistics” from 12-03-2019 to 16-03-2019 organized by Teaching Learning Centre, Central University of Rajasthan.

Papers Presented in Conferences:

1. Estimation after selection from uniform populations: Unequal sample sizes. Presented in international conference “Twenty-first International Conference of Forum for Interdisciplinary Mathematics”, organized by Department of Statistics, Panjab University at Chandigarh (December 15-17, 2012).
2. Estimation after selection from uniform populations: Unequal sample sizes. Presented in international conference “Statistics, Science and Society: New Challenges and Opportunities”, organized by IISA at Chennai (January 2-5, 2013).
3. Selecting the best of two gamma populations having unequal shape parameters. Presented in “Annual Departmental Open House 2013”, organized by Department of Mathematics and Statistics, IIT Kanpur (December 7, 2013).
4. On UMVU estimation of reliability function and stress-strength reliability from proportional reversed hazard family based on lower records. Presented in “V National Conference on Statistical Inference, Sampling Techniques and Related Areas”, organized by Department of Statistics and O.R., AMU (March 24-25, 2015).
5. Records based estimation of parameters of Topp-Leone generated family of distributions. Presented in “VIII International Symposium on Statistics and Optimization in conjunction with XXXVI-Annual Convention of Indian Society for Probability and Statistics”, organized by ISPS and Department of Statistics and O.R., AMU (December 17-19, 2016).
6. On estimating the location parameter of the selected exponential population under the LINEX loss function. Presented in “VIII International Symposium on Statistics and Optimization in conjunction with XXXVI-Annual Convention of Indian Society for Probability and Statistics”, organized by ISPS and Department of Statistics and O.R., AMU (December 17-19, 2016).
7. Estimation of common location parameter of two exponential populations based on records. Presented in “National Conference on Advances in Operations Research and Mathematical Sciences” organized by Department of Mathematics, Vardhaman College, Bijnor (February 24-25, 2018).
8. Multicomponent stress strength reliability estimation of Pareto distribution based on record values. Presented in “VII National Seminar on Optimization, Inference, Sampling Techniques and Related Areas”, organized by Department of Statistics and O.R., AMU (March 09-10, 2019).
9. Estimation of reliability function of the selected exponential population. Presented in “VII National Seminar on Optimization, Inference, Sampling Techniques and Related Areas”, organized by Department of Statistics and O.R., AMU (March 09-10, 2019).

Seminars, Workshops and Conferences Attended:

1. “Advanced Training Program on Bayesian Statistics: Theory and Applications”, organized by Department of Statistics, Banaras Hindu University (December 21-27, 2009).
2. “International Congress of Mathematicians (ICM)”, organized by University of Hyderabad (August 19-27, 2010).
3. “Golden Jubilee Department Day”, organized by Department of Mathematics and Statistics, IIT Kanpur (October 29-31, 2010).
4. “Workshop on Reliability Theory and Survival Analysis”, organized by Department of Mathematics and Statistics, IIT Kanpur (December 3-5, 2012).
5. “Twenty-first International Conference of Forum for Interdisciplinary Mathematics”, organized by Department of Statistics, Panjab University (December 15-17, 2012).
6. “Statistics, Science and Society: New Challenges and Opportunities”, jointly organized by IISA, ISI and Department of Statistics, University of Madras (January 2-5, 2013).
7. “Statistical Analysis for Engineers-2013”, organized by Centre for Development of Technical Education, IIT Kanpur (June 17-21, 2013).
8. “Annual Departmental Open House 2013”, organized by Department of Mathematics and Statistics, IIT Kanpur (December 7, 2013).
9. “Research Scholars Meet on Reliability Theory, Survival Analysis and Related Topics”, organized by SQC & OR Unit, ISI Kolkata (February 19-21, 2014).
10. “One-Day Data Dissemination Workshop on Census-2011”, jointly organized by Department of Statistics and O.R., AMU and Directorate of Census Operations, Uttar Pradesh, Govt. of India, Ministry of Home Affairs (November 19, 2014).
11. “V National Conference on Statistical Inference, Sampling Techniques and Related Areas”, organized by Department of Statistics and O.R., AMU (March 24-25, 2015).
12. “VIII International Symposium on Statistics and Optimization in conjunction with XXXVI-Annual Convention of Indian Society for Probability and Statistics”, organized by ISPS and Department of Statistics and O.R., AMU (December 17-19, 2016).
13. “National Conference on Advances in Operations Research and Mathematical Sciences” organized by Department of Mathematics, Vardhaman College, Bijnor (February 24-25, 2018).
14. “Workshop on How to Deliver Smart Classroom Teaching”, organized by UGC Human Resource Development Centre (HRDC), Aligarh Muslim University. (October 24, 2018)
15. “One Day Workshop on 5G Systems & Technologies”, organized by Department of Electronics Engineering, Aligarh Muslim University. (February 16, 2019)
16. “VII National Seminar on Optimization, Inference, Sampling Techniques and Related Areas”, organized by Department of Statistics and O.R., AMU (March 09-10, 2019)

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

Yours Sincerely

Date: 23-06-2026

(Dr. M. Arshad)