

Dr. Anoop Kumar

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BRIEF INTRODUCTION I have completed Ph.D. in Applied Statistics from the Department of Mathematics and Statistics, Dr. Shakuntala Misra National Rehabilitation University, Lucknow, India. I have research publications in various reputed national and international journals. My articles have been published/accepted in various prestigious Science Citation Indexed (SCI)/Scopus/SJR/Web of Science (WoS)/UGC indexed journals, namely, Sankhya-B, Scientia Iranica, Communications in Statistics - Simulation and Computation, Communications in Statistics - Theory and Methods, Journal of Computational and Applied Mathematics, AEJ-Alexandria Engineering Journal, Mathematics, AIMS Mathematics, Plos One, Axioms, Journal of Indian Society of Agricultural Statistics, Statistics in Transition-new series, Pakistan Journal of Statistics, Philippine Statistician, Thailand Statistician, Life Cycle Reliability and Safety Engineering, etc. Also, I have delivered one invited talk, contributed 4 research papers in various national and international conferences. Further, I have attended 2 faculty development programs, 7 workshops and completed an on-line course in R organized by IIT-Kanpur through NPTEL. Moreover, I am currently serving as an academic editor in some reputed journals like Plos One and Computational and Mathematical Methods in Medicine.

EDUCATION

- **Ph.D.** (Applied Statistics) from the Department of Mathematics and Statistics, Dr. Shakuntala Misra National Rehabilitation University, Lucknow in June, 2022.
- **M.Sc.** (Applied Statistics) from the Department of Statistics, Babasaheb Bhimrao Ambedkar University (A Central University), Lucknow in 2015 with F.G.P.A. 7.578 (75.78 %).
- **B.Sc.** (Mathematics, Statistics and Physics) from University of Lucknow, Lucknow in 2013 with 65.27%.
- **Intermediate** (Hindi, Mathematics, Drawing, Physics, Chemistry) from U.P. Board, Allahabad in 2010 with 78%.
- **High School** (Hindi, English, Mathematics, Science, Social Science, Drawing) from U.P. Board, Allahabad in 2008 with 71.83%.

OTHER QUALIFICATIONS	<ul style="list-style-type: none"> • UGC NET (January and November, 2017) in Population Studies.
COMPUTER SKILLS	Experienced in MS Office, \LaTeX , SPSS and R.
TEACHING EXPERIENCE	<p>Central University of Haryana, Jant-Pali, Mahendergarh, Haryana, India, 123031</p> <p style="text-align: right;"><i>Assistant Professor</i> 10 January, 2024 to Present</p> <ul style="list-style-type: none"> • Teaching M.Sc. courses in Department of Statistics, Central University of Haryana from January, 2024 to Present. <p>Amity University, Lucknow Campus, Uttar Pradesh</p> <p style="text-align: right;"><i>Assistant Professor</i> 08 August, 2022 to 09 January, 2024</p> <ul style="list-style-type: none"> • Teaching B.Sc. and M.Sc. courses (Statistics) in Amity School of Applied Sciences from 08 August, 2022 to 09 January, 2024. <p>Amity University, Lucknow Campus, Uttar Pradesh</p> <p style="text-align: right;"><i>Visiting Faculty</i> October, 2021 to May, 2022</p> <ul style="list-style-type: none"> • Taught B.Sc. and M.Sc. courses (Statistics) in Amity School of Applied Sciences during October, 2021 to May, 2022. <p>Babasaheb Bhimrao Ambedkar University</p> <p style="text-align: right;"><i>Guest Lecturer</i> July, 2018 to December, 2018</p> <ul style="list-style-type: none"> • Taught Post Graduate course (Statistics) in the Department of Microbiology during July to December, 2018.
SUBJECT TAUGHT	<ul style="list-style-type: none"> • Descriptive Statistics • Statistical modelling and applications • Econometrics • Statistical Inference • Design of experiment • Multivariate Analysis • Probability Distribution • Research Methodology and Biostatistics • R programming
ACADEMIC EDITOR	<ul style="list-style-type: none"> • Plos One • Computational and Mathematical Methods in Medicine • Mathematical Problems in Engineering

PUBLICATIONS

- [1] Bhushan, S. and **Kumar, A.*** (2023). Imputation of missing data using multi auxiliary information under ranked set sampling. *Communications in Statistics - Simulation and Computation*, 1-23. [**SCI, Scopus**]
- [2] Bhushan, S., **Kumar, A.***, Hussam, E., Mustafa, M.S., Zakarya, M. and Alharbi, W.R. (2024). On stratified ranked set sampling for the quest of an optimal class of estimators. *Alexandria Engineering Journal*, 86, 79-97. [**SCI, Scopus**]
- [3] **Kumar, A.**, Bhushan, S.*, Shukla, S., Emam, W., Tashkandy, Y. and Gupta, R. (2023). Impact of correlated measurement errors on some efficient classes of estimators. *Journal of Mathematics*, 2023, 1-27. [**SCI, Scopus**]
- [4] Bhushan, S., **Kumar, A.*** and Shukla, S. (2023). Impact assessment of correlated measurement errors using logarithmic-type estimators. *Statistics A Journal of Theoretical and Applied Statistics*. <https://doi.org/10.1080/02331888.2023.2260915>. [**SCI, Scopus**]
- [5] Bhushan, S., **Kumar, A.*** and Shukla, S. (2023). On classes of robust estimators in presence of correlated measurement errors. *Measurement*. <https://doi.org/10.1016/j.measurement.2023.113383>. [**SCI, Scopus**]
- [6] Bhushan, S., **Kumar, A.*** and Shukla, S. (2023). Performance evaluation of novel logarithmic estimators under correlated measurement errors. *Communications in Statistics - Theory and Methods*, <https://doi.org/10.1080/03610926.2023.2219793>. [**SCI, Scopus**]
- [7] Bhushan, S., **Kumar, A.***, Lone, S.A., Anwar, S. and Gunaim, N.M. (2023). An efficient class of estimators in stratified random sampling with an application to real data. *Axioms*, 12, 576. [**SCI, Scopus**]
- [8] Bhushan, S., **Kumar, A.***, Zaman, T. and Al Mutairi, A. (2023). Efficient difference and ratio-type imputation methods under ranked set sampling. *Axioms*, 12, 558. [**SCI, Scopus**]
- [9] Bhushan, S., **Kumar, A.***, Alsadat, N., Mustafa, M.S. and Alsolmi, M.M. (2023). Some optimal classes of estimators based on multi-auxiliary information. *Axioms*, 12(6), 515. [**SCI, Scopus**]
- [10] Bhushan, S., **Kumar, A.***, Pandey, A.P. and Singh, S. (2023). Estimation of population mean in presence of missing data under simple random sampling. *Communications in Statistics - Simulation and computation*, 52(12), 6048-6069. [**SCI, Scopus**]
- [11] Bhushan, S. and **Kumar, A.*** (2023). Optimal imputation methods under stratified ranked set sampling. *RevStat-Statistical Journal*, (Article in Press). [**SCI, Scopus**]

- [12] Bhushan, S. and **Kumar, A.*** (2022). On the quest of optimal class of estimator under ranked set sampling. *Scientia Iranica*, (Article in Press). [SCI, Scopus]
- [13] Bhushan, S. and **Kumar, A.*** (2022). Predictive estimation approach using difference and ratio type estimators in ranked set sampling. *Journal of Computational and Applied Mathematics*. <https://doi.org/10.1016/j.cam.2022.114214> [SCI, Scopus]
- [14] Bhushan, S. and **Kumar, A.*** (2022). Novel log type class of estimators under ranked set sampling. *Sankhya B*, 84, 421-447. [Scopus]
- [15] Bhushan, S. and **Kumar, A.*** (2022). On optimal classes of estimators under ranked set sampling. *Communications in Statistics - Theory and Methods*, 51(8), 2610-2639. [SCI, Scopus]
- [16] Bhushan, S. and **Kumar, A.*** (2022). Novel predictive estimators using ranked set sampling. *Concurrency and Computation: Practice and Experience*, e7435. doi: 10.1002/cpe.7435. [SCI, Scopus]
- [17] Bhushan, S. and **Kumar, A.*** (2022). New efficient logarithmic estimators using multi-auxiliary information under ranked set sampling. *Concurrency and Computation: Practice and Experience*, e7337. <https://doi.org/10.1002/cpe.7337>. [SCI, Scopus]
- [18] Bhushan, S., **Kumar, A.***, Al-Omari, A.I. and Alomani, G.A. (2022). Mean estimation for time-based surveys using memory-type logarithmic estimators. *Mathematics*, 11, 2125. [SCI, Scopus]
- [19] Bhushan, S., **Kumar, A.***, Shukla, S., Bakr, M.E., Tashkandy, Y.A. and Hossain, M.M. (2023). New logarithmic type imputation techniques in presence of measurement errors. *AEJ-Alexandria Engineering Journal*, 71, 707-730. [SCI, Scopus]
- [20] Bhushan, S., **Kumar, A.***, Alrumayh, A., Khogeer, H.A. and Onyango, R. (2022). Evaluating the performance of memory type logarithmic estimators using simple random sampling. *PLoS ONE*, 17(12), e0278264. [SCI, Scopus]
- [21] Shahzad, U., Ahmad, I., Luengo, A.V.G., Zaman, T., Al-Noor, N.H. and **Kumar, A.*** (2023). Estimation of coefficient of variation using calibrated estimators in double stratified random sampling. *Mathematics*, 11, 252. <https://doi.org/10.3390/math11010252>. [SCI, Scopus]
- [22] Bhushan, S., **Kumar, A.***, Shahzad, U., Al-Omari, A.I. and Almanjahie, A.I. (2022). On some improved class of estimators by using stratified ranked set sampling. *Mathematics*, 10, 3283, 1-32. [SCI, Scopus]

- [23] Bhushan, S., **Kumar, A.***, Shahab, S., Lone, S.A. and Almutlak, S.A. (2022). Modified class of estimators using ranked set sampling. *Mathematics*, 10, 3921, 1-13. [**SCI, Scopus**]
- [24] Bhushan, S., **Kumar, A.*** and Lone, S.A. (2022). On some novel classes of estimators under ranked set sampling. *AEJ-Alexandria Engineering Journal*, 61, 5465-5474. [**SCI, Scopus**]
- [25] Bhushan, S., **Kumar, A.*** and Singh, S. (2023). Some efficient classes of estimators under stratified sampling. *Communications in Statistics - Theory and Methods*, 52(6), 1767-1796. [**SCI, Scopus**]
- [26] Bhushan, S., **Kumar, A.***, Alzubie, A.A. and Lone. S.A. (2022). Variance estimation under an efficient class of estimators in simple random sampling. *Ain Shams Engineering Journal*, 1-8. <https://doi.org/10.1016/j.asej.2022.102012>. [**SCI, Scopus**]
- [27] Bhushan, S., **Kumar, A.**, Akhtar, M.T. and Lone. S.A. (2022). Logarithmic type predictive estimators under simple random sampling. *AIMS Mathematics*, 7(7), 11992-12010. [**SCI, Scopus**]
- [28] Bhushan, S., **Kumar, A.**, Shahab, S., Lone. S.A. and Akhtar, M.T. (2022). On efficient estimation of population mean under stratified ranked set sampling. *Journal of Mathematics*, 2022(3), 1-20. [**SCI, Scopus**]
- [29] Bhushan, S. and **Kumar, A.*** (2023). Evaluating the performance of logarithmic type estimators using auxiliary attribute. *Life Cycle Reliability and Safety Engineering*, 12, 285-292.
- [30] Bhushan, S., **Kumar, A.*** and Pokhrel, R. (2023). Logarithmic type direct and synthetic estimators using bivariate auxiliary information with an application to real data. *Journal of Indian Society of Agricultural Statistics*, 77(1), 125-140. [**Scopus**]
- [31] Bhushan, S., **Kumar, A.*** and Pokhrel, R. (2023). Improved direct estimators for domain mean with an application to municipalities data. *International Journal of Agricultural and Statistical Sciences*, 19(2), 835-841. [**Scopus**]
- [32] Bhushan, S. and **Kumar, A.*** (2023). Novel logarithmic imputation methods under ranked set sampling. *Measurement: Interdisciplinary Research and Perspectives*, (Article in Press). [**Scopus**]
- [33] Bhushan, S., **Kumar, A.*** and Shukla, S. (2023). Novel logarithmic type estimators in presence of measurement errors. *Journal of Statistical Theory and Practice*, 17(3), 35. [**Scopus**]

- [34] Bhushan, S. and **Kumar, A.*** (2022). On some efficient classes of estimators based on higher order moments of an auxiliary attribute. *The Phillipine Statistician*, 71(1), 71-85. [**Scopus**]
- [35] Bhushan, S., **Kumar, A.**, Onyango, R. and Singh, S. (2022). Some improved classes of estimators in stratified sampling using bivariate auxiliary information. *Journal of Probability and Statistics*, 2022(2), 1-23. [**WoS**]
- [36] Bhushan, S., **Kumar, A.***, Singh, S. and Kumar, S. (2021). An improved class of estimators of population mean under simple random sampling. *Philippine Statistician*, 70(1), 33-47. [**Scopus**]
- [37] Bhushan, S. and **Kumar, A.*** (2022). An efficient class of estimators based on ranked set sampling. *Life Cycle Reliability and Safety Engineering*, 11, 39-48.
- [38] Bhushan, S., **Kumar, A.*** and Banarjie, J. (2022). Mean estimation using logarithmic estimators in stratified ranked set sampling. *Life Cycle Reliability and Safety Engineering*, 12, 1-9. [**Scopus**]
- [39] Bhushan, S., **Kumar, A.***, Kumar, S. and Singh, S. (2022). Some modified classes of estimators for population variance using auxiliary attribute. *Pakistan Journal of Statistics*, 38(2), 235-252. [**Scopus**]
- [40] Bhushan, S., **Kumar, A.***, Tyagi, D. and Singh, S. (2022). On some improved classes of estimators under stratified sampling using attribute. *Journal of Reliability and Statistical Studies*, 15(1), 187-210. [**Scopus/WoS**]
- [41] Bhushan, S. **Kumar, A.*** and Shukla, S. (2022). Mean estimation in presence of measurement errors using log type estimators. *Thailand Statistician*. (Accepted, in press). [**Scopus**]
- [42] Bhushan, S. and **Kumar, A.*** (2022). Log type estimators using multi-auxiliary information under ranked set sampling. *Thailand Statistician*. (Accepted, in press). [**Scopus**]
- [43] Bhushan, S. and **Kumar, A.*** (2022). Improved estimation of population mean in simple random sampling using attribute. *Thailand Statistician*. (Accepted, in press). [**Scopus**]
- [44] Bhushan, S., **Kumar, A.*** and Shukla, S. (2022). Regression cum log type estimator of population mean in presence of measurement errors. *International Journal of Research and Analytical Reviews*, 9(4), 646-652. <http://doi.one/10.1729/Journal.32438> [**UGC-CARE listed**]
- [45] Bhushan, S., **Kumar, A.*** and Kumar, S. (2021). Some modified class of estimators for population variance using auxiliary attribute. *Revista Investigacion Operacional*. (Accepted, in press). [**Scopus**]

- [46] Bhushan, S. and **Kumar, A.*** (2023). On some efficient classes of estimators using auxiliary attribute. *Statistics in Transition-new series*, 24(2), 141-157. [**Scopus**]
- [47] Bhushan, S., **Kumar, A.*** (2023). Enhanced estimation of population mean under two-phase sampling. *International Journal of Mathematical Modelling and Numerical Optimization*, 13(1), 34-48. [**Scopus**]
- [48] Bhushan, S. and **Kumar, A.*** (2023). New efficient class of estimators of population mean using two-phase sampling. *International Journal of Mathematics in Operation Research*, 24(2), 155-172. [**Scopus**]
- [49] Bhushan, S., **Kumar, A.*** and Kumar, S. (2023). Efficient class of estimators of population mean under double sampling. *Thailand Statistician*. 21(3), 498-509. [**Scopus**]
- [50] Bhushan, S., **Kumar, A.*** and Kumar, S. (2021). Efficient classes of estimators for population variance using attribute. *International Journal of Mathematics in Operation Research*, 22(1), 74-92. DOI:10.1504/IJMOR.2021.10040442. [**Scopus**]
- [51] Bhushan, S., **Kumar, A.***, Kumar, S. and Singh, S. (2021). On Some efficient classes of estimators under double sampling. *International Journal of Agricultural and Statistical Sciences*, 17(2), 519-524. DocID: <https://connectjournals.com/03899.2021.17.519>. [**Scopus**]
- [52] Bhushan, S., **Kumar, A.*** and Gupta, R. (2022). Novel logarithmic estimator using two auxiliary attribute. *International Journal of Agricultural and Statistical Sciences*, 18(1), 367-372. [**Scopus**]
- [53] Bhushan, S., **Kumar, A.*** and Singh, S. (2022). Log type estimators of population mean in stratified random sampling. *International Journal of Agricultural and Statistical Sciences*, 18(2), 667-674. [**Scopus**]
- [54] Bhushan, S. and **Kumar, A.*** (2020). Improved class of estimator under ranked set sampling. *International Journal of Research and Analytical Reviews*, 7(3), 794-800. <http://doi.one/10.1729/Journal.24508>. [**UGC-CARE listed**]
- [55] Bhushan, S., Gupta, R., Singh, S. and **Kumar, A.*** (2020). A modified class of log-type estimators for population mean using auxiliary information on variables. *International Journal of Applied Engineering Research*, 15(6), 612-627. [**UGC-CARE listed**]
- [56] Bhushan, S., **Kumar, A.*** and Pokhrel, R. (2023). Enhanced estimation of domain mean using logarithmic type estimator. *International Journal of Research and Analytical Reviews*, 10(2), 72-80. [**Peer reviewed**]

- [57] Bhushan, S., **Kumar, A.*** and Pokhrel, R. (2023). Log type direct estimators for domain mean using bivariate auxiliary information. *International Journal of Research and Analytical Reviews*, 10(2), 728-733. **[Peer reviewed]**
- [58] Bhushan, S., **Kumar, A.*** and Shukla, S. (2023). Estimation of mean in case of measurement errors using logarithmic type estimator. *Journal of Applied Statistics and Machine Learning*, 2(1), 39-50. **[Peer reviewed]**
- [59] Bhushan, S., Gupta, R., Singh, S. and **Kumar, A.*** (2020). Some improved classes of estimators using auxiliary information. *International Journal for Research in Applied Science & Engineering Technology*, 8(VI), 1088-1098. DOI:10.22214/ijraset.2020.6176
- [60] Bhushan, S., Gupta, R., Singh, S. and **Kumar, A.*** (2020). Some New Improved Classes of Estimators Using Multiple Auxiliary Information. *Global Journal of Pure and Applied Mathematics*, 16(3), 515-528.
- [61] Bhushan, S., Gupta, R., Singh, S. and **Kumar, A.*** (2020). A new efficient log-type class of estimators using auxiliary variable. *International Journal of Statistics and Systems*, 15(1), 19-28.
- [62] Bhushan, S., Gupta, R., Singh, S. and **Kumar, A.*** (2020). Some log-type classes of estimators using multiple auxiliary information. *International Journal of Scientific Engineering and Research*, 8(6), 12-17.
- [63] Bhushan, S., **Kumar, A.***, Tyagi, D. and Shukla, S. (2019). New efficient class of estimator in case of measurement errors using simple random sampling. *International Journal of Essential Sciences*, 13(1&2), 75-83.

where * represents corresponding author.

BOOK
CHAPTERS

- [1] Bhushan, S. and **Kumar, A.*** (2020). Log type estimators of population mean under ranked set sampling. *Predictive Analytics using Statistics and Big Data: Concepts and Modelling*, 28, 47-74. DOI:10.2174/9789811490491120010007.

INVITED
LECTURES

- Delivered an invited talk on "Role of Statistics in Data Science" and "Sample size determination in medical and biological sciences" at Department of Statistics, Pachhunga University College (PUC) on 27th July, 2020.

CONFERENCE
PAPERS
PRESENTED

- Presented a research paper entitled "Novel class of log type estimators under ranked set sampling" in the "International Conference on Applications of Statistics" during 2-3 February, 2023.

- Presented a research paper entitled “Log type estimators of population mean under ranked set sampling” in 14th national conference "The Indian Science Congress Association" during 8-9 February, 2020.
- Presented a research paper entitled "An improved ranked set sampling strategy for estimation of population mean" in 35th Annual Conference of Indian Society for Medical Statistics held in Department of Biostatistics and Health Informatics, SGPGI, Lucknow during 02-04 November, 2017.
- Presented a research paper entitled "A review of estimation procedures under ranked set sampling" in the International Conference on Statistics and Related Areas for Equity, Sustainability and Development in conjunction with 35th Annual Convention of Indian Society for Probability and Statistics (ISPS) held in department of Statistics, University of Lucknow during 28-30 november, 2015.

WORKSHOP/FDP/
TRAINING
ATTENDED

- Attended “Online two week refresher course in Statistics-Application of Statistical Techniques in Real World” held at teaching learning centre, department of statistics, Ramanujan college, University of Delhi in collaboration with department of statistics, University of Delhi during 01-15 May, 2021.
- Attended “National Workshop on Sensor Network, Internet of Things and Internet of Everything” held at Pachhunga University College during 1-13 september, 2019.
- Completed an online course on “Descriptive Statistics with R Software” organized by IIT-Kanpur through NPTEL funded by Ministry of HRD, Government of India.
- Attended “Pre-Conference Workshop on Epidemiological Study Designs” in department of Biostatistics and Health Informatics, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow during 02-04 November, 2017.
- Attended “International Workshop Cum Seminar on Data Analytics Using R” in department of Mathematics and Statistics, Dr. Shakuntala Misra National Rehabilitation University, Lucknow during 23-29 June, 2017.
- Attended “Workshop on Biostatistical Computing with R” in department of Biostatistics and Health Informatics, Sanjay Gandhi Postgraduate Institute of Medical Sciences, Lucknow during 15-20 May, 2017.
- Attended “National Workshop on Scientific Writing Using Latex” in department of Mathematics and Statistics, Dr. Shakuntala Misra National Rehabilitation University, Lucknow during 14-17 February, 2017.

- Attended faculty development program on “Econometrics & Structural Equation Modelling” organized by Centre of Banking & Finance and Research Committee of Jaipuria Institute of Management, Lucknow during 17-18 September, 2016.
- Attended seminar on “Awareness of Official Statistical System in India and Career Prospects” sponsored by Ministry of Statistics and Programme Implementation, Government of India at University of Lucknow, Lucknow during 23rd November, 2013.

REFERENCES

1. Prof. Shashi Bhushan
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