

# Curriculum Vitae

## Kapil Kumar

Assistant Professor,  
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### Educational Qualifications

- **PhD (Statistics).** Department of Statistics, Ch. Charan Singh University, Meerut in 2011.  
**Thesis Title:** Reliability Inferences with Censored Sample Information.
- **MPhil (Statistics).** Department of Statistics, Ch. Charan Singh University, Meerut in 2008.
- **NET (Mathematical Sciences).** Joint CSIR-UGC in June 2007.
- **MSc (Statistics).** Department of Statistics, Ch. Charan Singh University, Meerut in 2006.

### Career Profile

- **Assistant Professor.** Department of Statistics, Central University of Haryana, Mahendergarh-123031 since June 10, 2016, to date.
- **Assistant Professor (Ad-hoc).** Department of Statistics, University of Delhi, Delhi-110007 from September 11, 2012, to May 20, 2016.
- **Teaching Assistant.** Department of Statistics, Ch. Charan Singh University, Meerut-250004 from September 15, 2008, to September 10, 2012.

### Administrative Assignments

- Member of Book Reading Club, CUH since 24-12-2020 to date.
- Member of School Board of School of Basic Science, CUH since 23-06-2020 to date.
- Member of School Board of School of Physical and Mathematical Sciences, CUH from 19-06-2018 to 22-06-2020.
- Member of Board of Studies, Department of Statistics, CUH from 10-06-2016 to 15-01-2019 and 16-01-2019 to date.
- Member of Departmental Research Committee, Department of Statistics, CUH since 10-06-2016 to date.
- Member, Admission Committee, Department of Statistics, CUH since 2016 to date.
- Introduced new/modified syllabus at PG level, Department of Statistics, CUH.
- Introduced new/modified syllabus for Ph.D. course work, Department of Statistics, CUH.
- Faculty Coordinator, Credence - The Placement Cell of the Department of Statistics, University of Delhi for academic sessions 2013-2016.
- Member, Purchase Committee, Department of Statistics, University of Delhi for academic sessions 2013-2016.
- Member, Syllabus Revision Committee for B.Sc. (H) Statistics under Choice Based Credit System (CBCS), Department of Statistics, University of Delhi, for the academic session 2014-2015.

- Member, Syllabus Revision Committee for B.Sc. (H) Statistics under Four Year Undergraduate Programme (FYUP), Department of Statistics, University of Delhi, for the academic session 2012-2013.

### Area of Interest/Specialization

- Statistical Inference; Censored Data; Reliability and Life Testing; Survival Analysis; Bayesian Inference.

### Subjects Taught

- **Ph.D. Level:** Reliability and Life Testing.
- **Postgraduate Level:** Linear Models and Regression Analysis; Survival Analysis; Sampling Techniques; Econometrics, Bayesian Inference; Statistical Methodology; Statistical Computing using R, Statistical Inference.

### Research Guidance

- **Ph.D. Students:** 03 (In Progress)
- **M.Sc. Students Dissertation:** 19 (Completed)

\* List is given in Appendix.

### Research Papers Published

**Google Scholar Profile:** <https://bit.ly/3mF2Bz7>

**Research Gate Profile:** <https://bit.ly/3hV8nsL>

\* **Corresponding Author**

1. Indrajeet Kumar, Shishir Kumar Jha and **Kapil Kumar\*** (2021). On Some Estimation Methods for the Inverse Pareto Distribution. Annals of Data Science. ISSN: 2198-5812. (**Springer**).
2. Indrajeet Kumar and **Kapil Kumar\*** (2021). On Estimation of  $P(V < U)$  for Inverse Pareto Distribution under Progressively Censored Data. International Journal of Systems Assurance Engineering and Management, pp. 1-14. ISSN: 0975-6809. (**Springer**).
3. Renu Garg\* and **Kapil Kumar** (2021). On Estimation of  $P(Y < X)$  for Generalized Inverted Exponential Distribution based on Hybrid Censored Data. Statistica, 81(3), pp. 335-361. ISSN: 1973-2201.
4. Manisha Sharma, **Kapil Kumar**, and Kashyap Kumar Dubey (2021). Disposal of Unused Antibiotics as Household Waste: A Social Driver of Antimicrobial Resistance. Environmental Quality Management, pp. 30(4), pp. 127-140. ISSN:1520-6483. (**Wiley**).
5. **Kapil Kumar\*** and Indrajeet Kumar (2020). Parameter Estimation for Inverse Pareto Distribution with Randomly Censored Life Time Data. International Journal of Agricultural and Statistical Sciences. 16(1), pp. 419-430. ISSN: 0973-1903.
6. **Kapil Kumar\*** and Indrajeet Kumar (2019). Estimation in Inverse Weibull Distribution based on Randomly Censored Data. Statistica 79(1), pp.47-74. ISSN: 1973-2201.
7. **Kapil Kumar\*** (2018). Classical and Bayesian Estimation in Log-Logistic Distribution under Random Censoring. International Journal of Systems Assurance Engineering and Management. 9(2), pp. 440-451. ISSN: 0975-6809. (**Springer**).
8. Ajit Chaturvedi, Narendra Kumar and **Kapil Kumar\*** (2018). Statistical Inference for the Reliability Functions of a Family of Lifetime Distributions based on Progressive Type-II Right Censoring. Statistica. 78(1), pp. 81-101. ISSN: 1973-2201.

9. **Kapil Kumar\***, Renu Garg and Hare Krishna (2017). Nakagami Distribution as a Reliability Model under Progressive Censoring. International Journal of Systems Assurance Engineering and Management. 8(1), pp. 109-122. ISSN: 0975-6809. (Springer).
10. Renu Garg, Madhulika Dube, **Kapil Kumar\*** and Hare Krishna (2016). On Randomly Censored Generalized Inverted Exponential Distribution. American Journal of Mathematical and Management Sciences. 35(4), pp. 361-379. ISSN: 0196-6324. (Taylor & Francis).
11. Hare Krishna, Vivekanand and **Kapil Kumar\*** (2015). Estimation in Maxwell Distribution with Randomly Censored Data. Journal of Statistical Computation and Simulation. 85(17), pp. 3560-3578. ISSN: 0094-9655. **Impact Factor: 1.424.** (Taylor & Francis).
12. **Kapil Kumar\***, Hare Krishna and Renu Garg (2015). Estimation of  $P(Y < X)$  in Lindley Distribution using Progressively First Failure Censoring. International Journal of Systems Assurance Engineering and Management. 6(3), pp. 330-341. ISSN: 0975-6809. (Springer).
13. **Kapil Kumar** and Renu Garg (2014). Estimation of the Parameters of Randomly Censored Generalized Inverted Rayleigh Distribution. International Journal of Agricultural and Statistical Sciences. 10(1), pp. 147-155. ISSN: 0973-1903.
14. Hare Krishna and **Kapil Kumar** (2013). Reliability Estimation in Generalized Inverted Exponential Distribution with Progressively Type-II Censored Sample. Journal of Statistical Computation and Simulation. 83(6), pp. 1007-1019. ISSN: 0094-9655. **Impact Factor: 1.424.** (Taylor & Francis).
15. Hare Krishna and **Kapil Kumar** (2011). Reliability Estimation in Lindley Distribution with Progressively Type-II Right Censored Sample. Mathematics and Computers in Simulation. 82(2), pp. 281-294. ISSN: 0378-4754. **Impact Factor: 2.463.** (Elsevier Science Publishers).
16. Hare Krishna and **Kapil Kumar** (2011). Reliability Estimation in Generalized Gamma Distribution with Progressively Censored Data. International Journal of Agricultural and Statistical Sciences. 7(1), pp. 15-29. ISSN: 0973-1903.

### Books Published

1. Krishna H. and Kumar K. (2016). Statistical Methods-II, 3<sup>rd</sup> Edition. Shree Sai Prakashan, India. ISBN: 9789380965673.
2. Krishna H. and Kumar K. (2011). Business Statistics. Shree Sai Prakashan, India. ISBN: 9789380965338.
3. Krishna H., Joshi P.K. and Kumar K. (2009). Mathematics and Statistics for Managers. Shree Sai Prakashan, India. ISBN: 9789380273235.

### Invited Lectures/Talk

1. Chaired a session in the 4th International Conference on Frontiers in Industrial and Applied Mathematics (Virtual Conference) during **December 21-22, 2021**, organized by SLIET Longowal Punjab.
2. Chaired a session in the International Conference (Online) on Recent Application of Statistical Techniques and Analysis (RASTA-2021) from **15-17 December 2021**, organized by the Department of Statistics, Banaras Hindu University, Varanasi.
3. Delivered an invited lecture on the topic, "Applications on Statistical Software R", in One Week Online National Workshop on Applications of Mathematical and Statistical Tools, Central University of Haryana, Mahendergarh - 123031 on **March 23, 2021**.
4. Chaired a session in the National webinar on the topic, "Living with Covid-19: Holistic Sustainable Solutions" on **June 07, 2020**, organized by Nari Shiksha Niketan PG College, Lucknow.

5. Delivered an invited lecture on the topic, “On Bayesian Analysis of the Randomly Censored Log-Logistic Distribution”, in the 24<sup>th</sup> International Conference of the International Academy of Physical Sciences on Innovation in Physical Sciences during **August 09-11, 2019** at CCS. University, Meerut - 250004. Also, Chaired a Session.
6. Delivered a series of lectures on the topic, “Data Analysis using R”, in a One Day Workshop, Manipal University Jaipur – 303007 on **February 09, 2019**.
7. Delivered a series of lectures on the topic, “Data Science using R-Programming”, in a Two-Day Workshop, Hindu College, University of Delhi, Delhi - 110007 during **November 2-3, 2018**.
8. Delivered a series of lectures on the topic, “Statistical Techniques using R”, in Faculty Induction Training Programme under PMMMNMTT, Central University of Haryana, Mahendergarh - 123031 on **June 22 and 29, 2018**.

### Conferences/Workshops Organized

1. Convenor, One Week Online National Workshop on Applications of Mathematical and Statistical Tools from **March 20-24, 2021**, organized by Department of Mathematics, Department of Statistics, and School of Education under the scheme of Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT), Central University of Haryana, Mahendergarh-123031.
2. Member, Organizing Committee, National Science Day on **February 28, 2020, and 2021**.
3. Member, Organizing Committee, International Conference on Trends in Computational and Cognitive Engineering during **November 28-30, 2019**, organized by School of Engineering & Technology and Department of Mathematics, Central University of Haryana, Mahendergarh (Sponsored by CSIR and DST-SERB).
4. Coordinator, Two-Day Annual Interdisciplinary National Conference On “Transcending Borders and Disciplines: Culture, Literature and Society” during **April 27-28, 2019**, organized by IQAC, Central University of Haryana.
5. Member, Organizing Committee, Two Week Interdisciplinary Faculty Development Programme on Data Analysis using Software Packages during **December 12-24, 2018**, organized by Department of Statistics & IQAC, Hindu College, University of Delhi, Delhi.
6. Co-Convener, National Workshop on “Statistical Techniques and Data Analysis using R” during **March 19-23, 2018**, organized by Department of Statistics, Central University of Haryana, Mahendergarh.
7. Member, Organizing Committee, Workshop on “Statistical Computing using R” during **September 14-15, 2013**, organized by Department of Statistics, University of Delhi.

### Conference Presentations

1. Attended and presented a paper, “Estimation of Stress-Strength Reliability in a Family of Lifetime Models using Progressively Censored Data”, in the 4th International Conference on Frontiers in Industrial and Applied Mathematics (Virtual Conference) during **December 21-22, 2021**, organized by SLIET Longowal Punjab.
2. Attended and presented a paper, “Reliability Estimation in Inverse Pareto Distribution under Progressive Censoring”, in Online International Conference on Recent Advances in Computational Mathematics & Engineering during March 19-21, 2021, at BK Birla Institute of Engineering & Technology, Pilani, India.

3. Attended and presented a paper, "On Random Censoring: Classical and Bayesian Estimation Methods", in International Conference on Emerging Innovations in Statistics & Operations Research during December 27-30, 2018, at MD. University, Rohtak, India.
4. Attended and presented a paper, "Stress-Strength Reliability Estimation for Exponentiated Inverted Exponential Distribution using Hybrid Censored Samples", International Conference on Emerging Trends in Inventory, Supply Chain & Reliability Modeling during December 21-23, 2018, at the University of Delhi, Delhi, India.
5. Attended and presented a paper, "Exponentiated Inverted Exponential Distribution under Random Censoring", International Conference on Recent Trends of Computing in Mathematics, Statistics & Information Technologies during March 09-11, 2018, at Bundelkhand University, Jhansi, India.
6. Attended and presented a paper, "Estimation in Log-logistic Distribution under Random Censoring", National Conference on Statistics and Optimization in Techniques during February 11-13, 2017, at MD. University, Rohtak, India.
7. Attended and presented a paper, "On Randomly Censored Inverse Weibull Distribution", VIII International Symposium on Statistics and Optimization in Conjunction with XXXVI- Annual Convention of Indian Society for Probability & Statistics (ISPS) during December 17-19, 2016, at Aligarh Muslim University, Aligarh, India.
8. Attended and presented an Invited Paper, "Estimation in Stress-Strength Model with Lindley Distribution using Progressively First Failure Censored Data", National Conference on Recent Statistical Computing Techniques and their Applications during March 11-12, 2016 at Ramanujan College, University of Delhi, Delhi, India. Also, Chaired a Session.
9. Attended and presented a paper, "Inverted Exponentiated Rayleigh Distribution under Random Censoring", National Conference on Recent Trends and Developments in Statistics during February 21-23, 2015, at MD. University, Rohtak, India.
10. Attended and presented a paper, "Estimation of Parameters of Nakagami Distribution with Progressively Censored Samples", National Conference on Statistical Inference, Sampling Techniques and Related Areas during February 18-19, 2014, at Aligarh Muslim University, Aligarh, India.
11. Attended and presented a paper, "Inferences on Scale Parameter of Progressively Censored Generalized Gamma Distribution", National Conference on Statistical Inference, Sampling Techniques and Related Areas during March 28-29, 2011, at Aligarh Muslim University, Aligarh, India.
12. Attended and presented a paper, "Reliability Inferences in Lindley Distribution with Progressively Type II Right Censored Sample", International Conference on New Trends in Life Testing, Bayesian Inference, Sampling Theory, Bio-Statistics, Bio-Informatics and Computer Applications during January 5-8, 2011 organized by Banaras Hindu University, Varanasi, India.
13. Attended and presented a paper, "Reliability Inferences on Exponentiated Inverted Exponential Distribution under Progressive Type II Censoring", International Conference on Development and Applications of Statistics in Emerging Areas of Science & Technology during December 8-10, 2010, at the University of Jammu, Jammu, India.

#### **Workshops/FDP/Orientation/Refresher Attended**

1. Participated in Two Week Interdisciplinary Refresher Course in Research Methodology under the Ministry of Education sponsored Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) conducted by Teaching Learning Centre, Ramanujan College, University of Delhi, Delhi during **September 21, 2021, to October 05, 2021**, and obtained "A+" grade.

2. Participated in Two Week refresher Course in Statistics on "Application of Statistical Techniques in Real World" under the Ministry of Education sponsored Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNTT) conducted by Teaching Learning Centre, Ramanujan College, University of Delhi, Delhi during **May 01-15, 2021**, and obtained "A+" grade.
3. Participated in UGC Sponsored Refresher Course on 2<sup>nd</sup> Computational and Mathematical Sciences conducted by UGC-Human Resources Development Centre, Jamia Millia Islamia University, New Delhi during **February 07-20, 2020**, and obtained "A" grade.
4. Attended a One Week Workshop on, "Professional Development and Capacity Building of Teaching of Higher Education Institutions" during **March 11-18, 2019** at Central University of Haryana, Mahendergarh, India.
5. Participated in four-week UGC Sponsored 110<sup>th</sup> Orientation Programme conducted by UGC-Human Resources Development Centre, Jawaharlal Nehru University, New Delhi from **July 23, 2018, to August 17, 2018**, and obtained "A" grade.
6. Attended a Workshop on, "Reliability Theory and Survival Analysis" during **November 04-06, 2015**, at Panjab University, Chandigarh, India.
7. Attended a Workshop on, "Information Literacy & Competency", on **January 17, 2013**, organized by the University of Delhi, Delhi, India.
8. Attended a Workshop on, "Statistical Analysis for Engineers", during **July 2-6, 2012**, organized by the Indian Institute of Technology, Kanpur, India.
9. Attended a Workshop on, "Reliability Theory and Survival Analysis", during **November 23-25, 2011**, organized by Indian Statistical Institute, Kolkata, India.
10. Attended a Workshop on, "Modern Tools in Applied Statistics" during **December 4-7, 2010**, at the University of Jammu, Jammu, India.

#### **Association with Professional Bodies**

1. Life Member of International Indian Statistical Association.
2. Life Member of Indian Society for Probability and Statistics (LM/2018/36/1213).
3. Life Member of Vigyan Bharati.
4. Life Member of Association of Inventory Academicians and Practitioners.
5. Life Member of the Indian Science Congress Association.

#### **Reviewer for Academic Journals**

Annals of Data Science (Springer), Applied Mathematical Modelling (Elsevier Science Publishers), Austrian Journal of Statistics, Communications in Mathematics and Statistics (Springer), Communications in Statistics - Theory and Methods (Taylor & Francis), Electronic Journal of Applied Statistical Analysis. International Journal of Systems Assurance Engineering and Management (Springer), Iran Journal of Computer Science (Springer), Journal of Applied Statistics (Taylor & Francis), Journal of Modern Applied Statistical Methods, Journal of Statistical Computation and Simulation (Taylor & Francis), Journal of Taibah University for Science, Life Cycle Reliability and Safety Engineering (Springer), Malaysian Journal of Science, Scientific African (Elsevier Science Publishers), Statistical Methodology (Elsevier Science Publishers), Statistics and Its Interface, Thailand Statistician.



**Guidance of Ph.D. Students: 03 Under Progress**

| <b>Student Name</b>               | <b>Year</b> | <b>Thesis Title</b>   |
|-----------------------------------|-------------|---|
| Ravi Chaudhary<br>(Co-Supervisor) | Pursuing    | Reliability Modeling and Analysis                                   |
| Anita Kumari                      | Pursuing    | Inferential Procedures for Some Lifetime Models under Censored Data |
| Indrajeet Kumar                   | Pursuing    | Classical and Bayesian Estimation Methods for Censored Data         |

**Guidance of M.Sc. Students: 19**

| <b>Student Name</b> | <b>Year</b> | <b>Dissertation Title</b>  |
|---------------------|-------------|--|
| Anushka             | 2021        | Reliability Estimation in Multicomponent Stress-Strength Model for Some Lifetime Distributions     |
| Neelakshi Vasnik    | 2021        | E-Bayesian Estimation and Hierarchical Bayesian Estimation for Different Lifetime Models: A Review |
| Sachin Kumar        | 2021        | Estimation of Reliability of Stress-Strength Models: A Review                                      |
| Yashdev             | 2021        | Some New Ridge Parameter for Ridge Regression: A Review  |
| Ankit Kumar         | 2020        | Delhi Air Pollution: Regression Analysis and Prediction of Air Quality Index                       |
| Sumit Kumar         | 2020        | Bayesian Estimation for Some Interval Censored Lifetime Models: A Review                           |
| Sushma              | 2020        | Estimation in Some Randomly Censored Lifetime Distributions: A Review                              |
| Pooja Kumari        | 2019        | Meta Analysis: An Introduction.  |
| Sunil Machara       | 2019        | Classical Estimation in Some Reliability Models: A Review.   |
| Rajbala             | 2019        | Analysis of Some Data Sets using Regression Techniques.  |
| Anita Kumari        | 2019        | Bayesian Estimation for Some Lifetime Distributions: A Review                                      |
| Jyoti               | 2019        | Classical Estimation Procedures for Some Statistical Distributions: A Review.                      |
| Pawan Kumar         | 2019        | Reliability and Life Testing: A Review.  |
| Jogesh Dhiman       | 2018        | Data Analysis using R and Python.  |
| Deekshith Perala    | 2018        | Data Analysis using SPSS.  |
| Sheetal Yadav       | 2018        | A Review of Estimation Procedures for Some Lifetime Distributions.                                 |
| Allen V. Thundiyil  | 2017        | Estimation in Some Lifetime Models.  |
| Kuldeep Sharma      | 2017        | Maximum Likelihood Estimation in Some Reliability Models.  |
| Pavitra Kumari      | 2017        | Bayesian Estimation in Some Lifetime Models.   |