

CV for Dr. Manoj Kumar

CONTACT INFORMATION Asst. Professor, Contact No. +9453123422
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CUH, Haryana, Mahendergarh, India. E-mail: manustats@gmail.com

OBJECTIVE Seeking a challenging position in the field of Statistics, quantitative techniques & high quality research where my skills and experience can improve organizational and our own achievements.

RESEARCH FOCUS With broad research interest in mathematical Statistics, I use variety of lifetime models in real life problem to analyze and address some basic questions in Statistical inference under classical and Bayesian paradigm. I develop variety of lifetime and ecological models and count models of the form stochastic variable. Beside, I work on survival analysis and to develop different types of censoring and to make algorithm. Particularly, I use the following computational techniques in my research work: Markov Chain Monte Carlo (MCMC), Gibbs Sampler, Acceptance-Rejection method, EM algorithm and numerical methods.

EDUCATION

- **Ph.D.** Bayesian Inference and Survival Analysis, Department of Statistics, Banaras Hindu University, Varanasi-221005, U.P.
 - Thesis Topic: *Bayesian Estimation for the Parameters of Life Time Models*
 - Advisors: Prof. S. K. Singh and Prof. U. Singh
 - Ph.D. Course Work:
 - * Elements of distribution and inference (STPC-01) with **60%**
 - * Advanced statistical techniques (STPC-02) with **60%**
 - * Reliability and life testing (STPR-02) with **72%**
 - * Bayesian inference (STPR-07) with Grade **62%**
 - * Preparation and presentation of the research plan proposal (STPR-09) with **92%**
 - * Ethics in Science(FSCP-01)with **satisfactory**
 - * Methods of research and good laboratory practices (FSCP-02) with **satisfactory**
 - * Science communication (FSCP-03) with **satisfactory**
 - * Research Methodology.
 - * Completed Ph.d. course work with **69.2%**
- **M.Phil** Statistics, C.C.S. University, Meerut, U.P., 2009.

- **M.Sc** Statistics, C.C.S. University, Meerut, U.P., 2008.
- **B.Sc** Statistics, K.M.C. College University of Delhi, Delhi, 2006.
- **Intermediate**, B.I.E.C. S.S. College, Sasaram, Bihar, 2001.
- **High School**, B.S.E.B. S.S. College, Sasaram, Bihar, 1999.

RESEARCH
INTERESTS

- Bayesian inference,
- Ecological Models,
- Survival analysis,
- Stochastic Process,
- Progressive Censoring.

ACHIEVEMENTS
/AWARDS

- Best paper presentation award for the paper "Bayesian Inference for Weibull poisson model under progressive type-II censoring data with binomial removal" in 2nd International Conference on "Innovative Trends in Engineering, Applied Science and Management (**ICITEASM-2018**)", 20th may 2018 held in Osmania University Center for International Programmes, Osmania University Campus, Hyderabad, Telangana, India.
- **Organizing Member/ Treasurer** in National Workshop on Statistical Techniques and Data Analysis using R (STDAR) 2018, 19/03/2018-23/03/2018, at Department of Statistics, Central University of Haryana, Haryana, India.
- Member of Departmental Research Committee(DRC), Department of Statistics, Central University of Haryana.
- Member of PG admission committee, Department of Statistics, Central University of Haryana.
- Member of the Cell for Persons with Disabilities (PWD), Central University of Haryana.

ORIENTATION
PROGRAMME

- Participated in Orientation Programme from 08-10-2018 to 02-11-2018 organized by **UGC Human Resource Development Centre (HRDC), Jawaharlal Neharu University, Delhi** and obtained **A grade**.

ORGANIZATION
OF
CONFERENCE
AND
WORKSHOP/
MEMBER

- National Workshop on Statistical Techniques and Data Analysis with R from 19-23 March 2018, Department of Statistics, Central University of Haryana, Jant-Pali-123030 .

TEACHING
EXPERIENCE

- June, 2016- Present. Assistant Professor(Regular), School of Physical and Mathematical Sciences, Department of Statistics, Central University of Haryana, Mahendergarh, India.
- January, 2015 - May, 2016. Assistant Professor, School of Mathematics, Statistics and Computational Sciences, Department of Statistics, Central University of Rajasthan, Kishangarh, India.
- I had taught the following two courses and taking three practical lab:
(i) Statistical Inference-III (BST-601) (ii) Stochastic Model (MST-203) (i) Practicls based on (BST-203) (ii) Practicls based on (BST-303) (iii) Practicls based on (BST-304)
- September, 2014 - January, 2015. Assistant Professor, School of Basic Science and Research, Sharda University, Greater Noida, UP, India.
- July, 2013 - May, 2013. Engagement of Data Analyst, Center of Excellence (Scheme No. 4080) in Department of Medicine, Institute of Medical Sciences, Banaras Hindu University, Varanasi, UP, India.
- August, 2012 - November, 2012. Practical Lecturer of B.A.(App.Statistics) (temp.) in Banaras Hindu University, Varanasi, UP, India.
- August, 2012 - November, 2012. Practical Lecturer of B.Sc.(App.Statistics) (temp.) in Banaras Hindu University, Varanasi, UP, India.
- Currently I am teaching the following two courses:
(i) Linear Algebra (MTM-201) (ii) Vector calculus and matrices (MT-201)

OTHER
EXPERIENCES

- November, 2016, Member, Cell for Persons with Disabilities, Central University of Haryana, Mahendergarh-123031, India.
- October, 2016, Member, Departmental Research Committee, Department of Statistics, Central University of Haryana, Mahendergarh-123031, India.
- October, 2016, Special Invitee member, Bord of Studies, School of Physical and Mathematical Sciences, Department of Statistics, Central University of Haryana, Mahendergarh-123031, India.

- July, 2016, Member, Admission Committee, Department of Statistics, Central University of Haryana, Mahendergarh-123031, India.
- January, 2015 - May, 2015. Warden Ship, B-07 Hostel, Central University of Rajasthan, Kishangarh, India.
- September, 2014 - January, 2015. Warden Ship, Vivekananda Hostel, Sharda University, Greater Noida, UP, India.

REFEREED
JOURNAL
PUBLICATIONS

1. **Kumar M.**, Pathak A., Singh S., Singh U. Empirical Bayesian estimation of the Kumaraswamy parameter and reliability function using informative prior, *Life Cycle Reliability and Safety Engineering*, Accepted, 2019.
2. **Kumar M.**, Pathak A., Soni S. Bayesian Inference for Rayleigh Distribution under Step-Stress Partially Accelerated Test with Progressive Type-II Censoring with Binomial Removal, *Annals of Data Science*, Accepted, 2019.
3. Kumar D., **Kumar M.** Record values from exponentiated Pareto type I distribution and associated inference, *Model Assisted Statistics and Applications*, 13, 19-43, 2018.
4. Kumar D., **Kumar M.** A New Generalization of the Extended Exponential Distribution with an Application, *Annals of Data Science*, 6, 1-22, 2018.
5. **Kumar M.**, Singh S., Singh U. Bayesian inference for Poisson-inverse exponential distribution under progressive type-II censoring with binomial removal, *International Journal of System Assurance Engineering and Management*, 9(1), 1-15, 2018.
6. Kumar D., **Kumar M.**, Saran J., Jain N. The Kumaraswamy-Burr III Distribution Based on Upper Record Values, *American Journal of Mathematical and Management Sciences*, 36(3), 205-228, 2017.
7. **Kumar M.**, Kaushik A., Manzoor I. A Model Compatibility Study for Lifetime Data, *International Journal of Essential Sciences*, 11(1), 1-15, 2017.
8. **Kumar M.**, Singh S., Singh U. Reliability estimations for Poission-exponential model under Progressive type-II censoring data with Binomial removal, *STATISTICA*, LXXVI, n.1, 1-24, 2016.

9. **Kumar M.**, Singh S., Singh U. Extension of exponential count model and its application to emissions of beta particles from a nuclear reaction, *Isaac Scientific Publishing (ISP) Journals*, 3(1), 136-145, 2016.
10. Singh S., Singh U., **Kumar M.** Bayesian estimation for Poission-exponential model under Progressive type-II censoring data with Binomial removal and its application to ovarian cancer data, *Communications in Statistics-Simulation and Computation*, 45(9), 3457-3475, 2016.
11. Singh S., Singh U., Sharma, V., **Kumar M.** Estimation and prediction for flexible Weibull distribution under progressive censoring, *Journal of Data Science Journal*, 13, 21-42, 2015.
12. Singh S., Singh U., **Kumar M.** Bayesian inference for exponentiated Pareto model with application to bladder cancer remission time, *Transition in Statistics*, 15 (3), 405-426, 2014.
13. Singh S., Singh U., **Kumar M.**, Vishwakrma, P. Classical and Bayesian Inference for an Extension of the Exponential Distribution under Progressive Type-II censored data with binomial Removal, *Journal of Statistics Applications and probability letters*, 1 (3), 1-11, 2014.
14. Singh S., Singh U., **Kumar M.** Estimation of Parameters of Generalized Inverted Exponential Distribution for Progressive Type-II Censored Sample with Binomial Removals, *Journal of Probability and Statistics*, 1 (3), 1-12, 2013.
15. Singh S., Singh U., **Kumar M.** Estimation for the Parameter of Poisson-Exponential Distribution under Bayesian, *Journal of Data Science*, 12 (3), 157-173, 2013.
16. Singh S., Singh U., **Kumar M.** Estimation of Parameters of Exponentiated Pareto Distribution for Progressive Type-II Censored Data with Random Removals Scheme, *Electronic Journal of Applied Statistical Analysis*, 6 (2), 130-148, 2013.
17. Singh S., Singh U., **Kumar M.** Bayesian inference for exponential distribution based on progressive Type- II Censored data with random scheme, *Elixir Journal of Statistics*, 58, 14874-14881, 2013.
18. Singh S., Singh U., **Kumar M.** Estimation of Parameters of Exponentiated Pareto Model for Progressive Type-II Censored Data with Binomial Removals Using Markov Chain Monte Carlo Method, *International Journal of Mathematics and Computation*, 21(4), 88-102, 2013.

SUBMITTED
JOURNAL
PUBLICATIONS

1. **Kumar M.**, Manzoor I., Singh S. and Singh U., Bayesian inference for Weibull Poisson model under PT-II CBRs/ Application to bladder cancer data, RevStat, August, 2018.

CONFERENCE
PROCEEDINGS

1. **Kumar M.**, Singh S., Singh U., Estimation of parameters of Exponentiated Pareto Distribution, *Emerging Application of Bayesian and Stochastic Modeling*, ISBN 978-93-82359-60-9, Published by Mudranik Technologies Pvt. Ltd., 2012.
2. **Kumar M.**, Singh S., Singh U., Bayesian Estimation of Parameter of Exponential Distribution Under General Entropy Loss Function for Progressive Type-II Censored Data with Random Scheme, *Proceedings of National Seminar on Impact of Physics on Biological Science*, 21(4), 186-194, 2010.

PAPERS UNDER
PREPARATION

1. **Kumar, M.**, Singh, S. K., Singh U., E-Bayesian Inference for the Parameter of PIED under Progressive Type II Censoring with Binomial Removals under different Losses.
2. **Kumar, M.**, Singh, S. K., Singh U., Statistical Inference for Poisson exponential distribution under Optimal progressive type-II censoring.

POST
GRADUATE
THESIS
SUPERVISION

- Major Project
 - **2015**
 - Generalisations of Poisson Count Model submitted by **Ihtisham Bashir Salroo, Enrolment No. 2013MSTA006.**
 - **2016**
 - Statistical Inference for Weibull Poisson Model under Progressive type-II censoring with binomial Removal submitted by **Iqura Manzoor, Enrolment No. 2014MSTA008.**
 - Statistical Inference for Poisson exponential Model under Optimal Progressive type-II censoring submitted by **Saurabh Jain, Enrolment No. 2014MSTA019.**
 - Statistical Inference for Rayleigh Model with partially accelerated life test under Progressive type-II censoring with binomial Removal submitted by **Sukriti soni, Enrolment No. 2014MSTA020.**
 - **2017**
 - Bayesian Inference for Mixture of Exponential Model under Asymmetric Loss Function submitted by **Sangeeta Kumari, Roll No. 6203.**

- Bayesian Inference for Constant Hazard Model under Progressive Type-II Censoring with Binomial Removals submitted by **Manju Yadav, Roll No. 6202.**
- Exploratory Data Analysis Using Motor Trend Cars Data submitted by **R. Venkat Rao, Roll No. 6200.**
- **2018**
- Analysing Factors Affecting Delays in U.A.E. Road Construction Project submitted by **Ashish Yadav, Roll No. 8951.**
- An Introduction to Cluster Analysis Using R submitted by **R. Karandeep, Roll No. 8953.**
- Data Analysis of Logistic Regression Using R submitted by **Karre Srinu, Roll No. 8954.**

CONFERENCES • International:
SYMPOSIA

- **2010**
- **Presented** a paper titled "Bayesian Estimation of Parameter of Exponential Distribution Under General Entropy Loss Function for Progressive Type-II Censored Data with Random Scheme" in international conference on "Nineteenth International Conference:(IMST2010-FIM XIX) on Interdisciplinary Mathematical and Statistical Techniques" during 18/12/2010- 20/12/2010, organized by Department of Statistics, Patna University, Patna-800005.
- **2011**
- **Presented** a paper entitled "Classical and Bayesian Estimation of Parameters of Exponentiated Pareto Distribution for Progressive Type-II Censored Data with Random Scheme" in international conference on "New trends in life testing, Bayesian inference, Sampling Theory, Bio-Statistics, Bio-informatics and Computer Applications" during 05/01/2011- 08/01/2011, organized by Department of Statistics and DST-CIMS, B. H. U., Varanasi-221005.
- **2012**
- **Presented** a paper entitled "Statistical Inferences of Generalized Inverted Exponential Distribution for Progressive Type-II Censored Data", international conference on "Recent Advances in Mathematical Statistics and Its Applications in Applied Sciences" during 31/12/12- 02/01/2013, Department of Statistics, Gauhati University, Gauhati.
- **2015**
- **Presented** a paper entitled "Reliability Estimation in Poisson-exponential distribution Under progressive Type-II Censoring data with binomial removal data", International Conference on "Optimization,

computing and business analysis for sustainable development” during 20/02/2015-22/02/2015, Department of Mathematics, Central University of Rajasthan, Bandarsindri-305802, Ajmer, Rajasthan, India.

- **Presented** a paper entitled ”Reliability Estimation for Poisson-Exponential distribution under progressive Type-II Censoring under Progressive type-II censoring data with binomial removal data” International Conference on ”Statistics and Related Areas for Equity, Sustainability and Development (SRAESD-2015), XXXV Annual Convention of Indian Society for Probability and Statistics (ISPS)” during November 28/11/2015-30/11/2015, Department of Statistics, University of Lucknow, Lucknow-226007, India.
- **2016**
- **Presented** a paper entitled ”Bayesian Inference for Poisson-inverse exponential distribution under progressive type-II censoring data with binomial removal with its application to bladder cancer data”, International Conference on ”ISSAC-2016 VIII International Symposium on Statistics and Optimization” during 17/12/2016-19/19/2015, Department of Statistics and Operation Research, Aligarh Muslim University, Aligarh-202002, UP, India.
- **2018**
- **Presented** a paper entitled ”Bayesian Inference for Weibull poisson model under progressive type-II censoring data with binomial removal”, 2nd International Conference on ”Innovative Trends in Engineering, Applied Science and Management (ICITEASM-2018)” on 20th may 2018, Osmania University Center for International Programmes, Osmania University Campus, Hyderabad, Telangana, India.
- National:
 - **2011**
 - **Presented** a paper entitled ”Bayesian Estimation of Parameter of Exponential Distribution Under Square and General Entropy Loss Function for Progressive Type-II Censored Data with Random Scheme”, national conference on ”Bayesian Statistics and Its Emerging Application” during 09/12/2011-10/12/2011, organized by Department of Statistics and DST-CIMS, B. H. U., Varanasi-221005.
 - **2013**
 - **Presented** a paper entitled ”Estimation of parameters of Generalized Inverted Exponential Distribution for Progressive Type-II Censored sample with Binomial Removal”, national conference on ”Recent Advances in Statistics and Applications (RASA)” during 15/11/2013-17/11/2013, School of Studies in Statistic, Pt. Ravishankar Shukla University Raipur-492010, Chhattisgarh.

– **2014**

– **Presented** a paper entitled "Bayesian Estimation for poisson-exponential model under progressive Type-II Censoring data with binomial removal and its application to ovarian cancer data", national conference on "Recent Advances in Statistical and Mathematical sciences and their Applications" during 04/10/2014-06/10/2014, Department of Statistic, Kumaun University, S. S. J. Campus, almora, U. K. India.

– **2015**

– **Presented** a paper entitled "Bayesian Estimation for poisson-exponential model under progressive Type-II Censoring data with binomial removal and its application to ovarian cancer data", national conference on "V National Conference on Statistical inference, Sampling Techniques and Related Areas" during 24/03/2015-25/03/2015, Department of Statistics and Operation Research, Aligarh Muslim University, Aligarh-202002, UP, India.

– **Presented** a paper entitled "Survival Inference for Poisson-Exponential distribution under progressive Type-II Censoring" national Conference on "Time Series, Analysis and Recent Advances in Statistical modelling" during 24/08/2015-25/08/2015, Department of Statistics, Central University of Rajasthan, Bandarsindri-305802, Ajmer, Rajasthan, India.

– **2016**

– **Presented** a paper entitled "Inference for Poisson-Exponential distribution under progressive Type-II Censoring" national Conference on "Computational Mathematics and Operational Research(CMOR)" during 15/10/2016-16/10/2016, BK Birla Institute of Engineering and Technology, Pilani- 333031, Rajasthan, India.

– **2017**

– **Presented** a paper entitled "Model compatibility study for lifetime data by using different lifetime Models" national Conference on "Demographic Dimensions of Sustainable Development in India" during 18/01/2017-20/01/2017, Bhopal Seminar-2017, Shyam Institute, Bhopal, MP, India.

– **Presented** a paper entitled "Empirical Bayesian estimation of the Kumaraswamy parameter and reliability function under progressively type II censored samples with binomial removal", national conference on "Bayesian Statistics and Its Emerging Application" during 13/11/2017-15/11/2017, organized by Department of Statistics, B. H. U., Varanasi-221005.

– **2018**

- **Presented** a paper entitled "Bayesian estimation of the Kumaraswamy parameter and reliability function under progressively type II censored" national Conference on "Demographic Dimensions of Sustainable Development in India" during 10/01/2018-12/01/2018, Bhopal Seminar-2018, Shyam Institute, Bhopal, MP, India.

WORKSHOPS

- National:
 - **2009**
 - **Participated** in LATEX and other Open Source Software, 07/12/2009-12/012/2009, at DST-CIMS, Banaras Hindu University (BHU), Varanasi- 221005.
 - **Participated** in Advanced Training Program on Bayesian Statistics: Theory and Applications, 21/12/2009-27/12/2009, at DST-CIMS, Banaras Hindu University (BHU), Varanasi-221005.
 - **2011**
 - **Presented** a paper entitled "Estimation of Parameters of Exponentiated Pareto Model for Progressive Type-II Censored Data with Binomial Removals Using Markov Chain Monte Carlo Method", in Workshop on "Reliability Theory and Survival Analysis, 2011" during 23/11/2011-25/11/2011, organized by Indian Statistical Institute (ISI), Kolkata -700108
 - **Participated** in Multivariate Analysis: Matrix Methods workshop, 28/12/2011-02/12/2011, at DST-CIMS, Banaras Hindu University (BHU), Varanasi- 221005.
 - **2013**
 - **Participated** in the ISBA Regional meeting and international workshop/conference on Bayesian theory and applications (IWCBT), 6/01/2013-10/01/2013, Department of Statistics, Banaras Hindu University (BHU), Varanasi-221005.
 - **Participated** in Application in the workshop on Probability Fractional Calculus, 25/01/2013-02/02/2013, at DST-CIMS, Banaras Hindu University (BHU), Varanasi- 221005.
 - **2014**
 - **Participated** in Winter School on Bayesian Analysis, 24/02/2014-28/02/2014, at Applied Statistical Unit, ISI, Kolkata.
 - **Participated** in Summer School on Statistical Theory and Applications, 24/03/2014-28/03/2014, at BIRU Unit, ISI, Kolkata.
 - **2018**
 - **Participated** in National Workshop on Statistical Techniques and Data Analysis using R (STDAR) 2018, 19/03/2018-23/03/2018, at

Department of Statistics, Central University of Haryana, Haryana, India.

- **Participated** in National workshop on Teaching, Learning and Evaluation online with Moodle MOOC platform and open education Resources 2018, 14/05/2018-16/05/2018, at Department of Education, Central University of Haryana, Mahendergarh.
- **Participated** in Young Statistician's Meet : Data Science in action (YSM 2019), 04/01/2019-05/01/2019, at ISI, Kolkata.

BOOK
CHAPTERS

- **Kumar M.**, Singh S., Singh U., Estimation of parameters of Exponentiated Pareto Distribution, *Emerging Application of Bayesian and Stochastic Modeling*, ISBN 978-93-82359-60-9, Published by Mudranik Technologies Pvt. Ltd., 2012.

COMPUTER
SKILLS

- Programming
 - Operating System Windows 98/2000/Window vista.
 - Application Software MS office (Word, Excel, Power Point)
 - Math /Statistical Software R, SPSS
 - Computer language FORTRAN, C, C++, and visual basic
 - DBMS FoxPro, MS Access

PERFORMANCE
AREA

- Computation
 - Statistical Data Analysis
 - Computational Work in Research
 - Bayesian Computation
 - Quantitative & Qualitative Research
 - Computer Programming

PERSONAL
PROFILE

- Particular
 - Father's Name Shri Shrikumar Dubey
 - Date of Birth 29-01-1985
 - Gender Male
 - Nationality Indian
 - Marital Status Married
 - Languages Known English, Hindi, Bhojpuri.
 - Hobbies Reading books, Listening music.

- REFERENCES
- Dr. S. K. Singh
Professor,
Department of Statistics
BHU, varanasi-221005, U.P. India
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- Dr. U. Singh
Professor,
Coordinator DST-CIMS & Department of Statistics
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E-mail: kksingh@bhu.ac.in
- Dr. G. P. Singh
Associate Professor,
DCM, I.M.S
BHU, varanasi-221005, U.P. India
Contact No: +91-9475421080
E-mail: singhgpbbhu@gmail.com

FUTURE TARGET: To work in a dynamic and reputed organization, which can utilize the inherent talent of the incumbent to the maximum. A challenging, diverse and dynamic job with good amount of freedom and work responsibility.

DECLARATION

The information given above is true to the best of my knowledge.

Date:

Place: CUH

(Manoj Kumar)