## **BIO-DATA**

Official Address
Dr. S. C. Malik
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### **Research Specialization**

• Reliability Theory and Modeling, Sampling Theory and Applied Statistics

### **Teaching Interests**

- Statistical Methods, Probability Theory and Applied Statistics
- Optimization Techniques
- Real & Complex Analysis and Measure Theory
- Stochastic Processes- Reliability Theory & Modeling

# **Experience**

• Teaching : **30 Years** (Working as Professor since Nov. 2008)

• Research : 31 Years

 Administrative: 12 Years as (NSS Coordinator, Proctor & Chief Warden Boys Hostels, HOD Statistics, M.D. University, Rohtak)

# **Research Supervision**

Ph.D. Thesis Guided : 45
Ph.D. Thesis in Progress : 06
M. Phil Dissertations : 30

# **Research Publications**

Research Papers Published :206Book Authored : 03

# Participation at the Conferences/ Workshops

Total: 108 (National Level: 34 and International Level: 74)

# **Country Visited**

• USA, Portugal, U.K, Germany, , Singapore, Canada Hong Kong, Italy, Vatican City, Austria, Liechtenstein, Switzerland, Netherland, Belgium, France, Spain, Nepal, Phuket (Thailand), Russia and Japan.

### **Member of Academic Bodies**

- PG Board of Studies, Dept. of Statistics, Central University of Haryana for a period of three years w.e.f. 16/01/2019.
- Member Expert Committee for the SC/ST R&D Scheme under NRDMS Programme of DST for a Period of Three Years w.e.f. 11-10-2018.
- Member University Court, Chaudhary Devi Lal University, Sirsa.
- Academic Council & University Court, M.D. University, Rohtak
- Elected Member Executive Council (EC), M.D. University, Rohtak
- Elected Member University Court (2 Times), M.D. University, Rohtak
- UGC Advisory Committee for SAP Programs
- UG/PG Board of Studies, Dept. of Statistics, M.D. University, Rohtak
- Member Selection Committees at Various Universities in India

- Reviewer of Various Research Journals
- Member Expert Committee Nominated by UGC for SAP & Travel Grants
- Coordinator UGC SAP (DRS-II), Dept. of Statistics, M.D. University, Rohtak

# **Research Project Completed**

• UGC Major Research Project on "Reliability Modeling and Analysis of Computer Systems with H/w and S/w Failures" of Amount Rs. 9.02 Lakhs for a Period of Three Years w.e.f. 01-02-2011.(F.No. 39-68/2010(SR))

#### **Research Publications**

# A. Research Papers Published in Journals

- 1. Reliability Characteristics of a Parallel-Cold Standby System of Pairwise Identical Four Units with Provision of Priority. International Journal of Agricultural and Statistical Sciences, Vol. 17(2), pp.563-572, 2021 (with Puran Rathi and N. Nandal, ISSN: 0973-1903, Indexed: Scopus).
- 2. Fuzzy soft information measures and their applications in dimension reduction and pattern recognition. Life Cycle Reliability and Safety Engineering, Vol. 10, pp. 333–340, 2021 (with Seema Singh, D.S. Hooda, ISSN 2520-1352, Springer).
- 3. Profit Analysis of a 1-out-of-2:G System with Priority to Repair and Conditional Failure of Service Facility. International Journal of Statistics and Reliability Engineering, Vol. 8(2), pp 264-271, 2021 (with Anuradha and P.C. Jha, ISSN: 2350-0174, UGC CARE List)
- 4. Generalized reliability measures of a complex non-series parallel system (CNSPS) with Rayleigh failure laws. International Journal of System Assurance Engineering and Management, DOI: 10.1007/s13198-021-01230-8, 2021 (with Nitika Ahlawat, Indexed: Scopus)
- 5. Profit Analysis of a Standby Repairable System with Priority to Preventive Maintenance and Rest of Server Between Repairs. Journal of Reliability and Statistical Studies, Vol. 14(1), pp 57–80, 2021 (with Chhama Aggarwal and Nitika Ahlawat, Indexed: Web of Science & ESCI)
- 6. Regression Modelling on Reliability Variation of a Parallel Series System of (m, n<sub>i</sub>) Order with Addition and Removal of Parallel Paths. Journal of Statistical Theory and Practice (JSTP), Vol. 15(2), 28, 2021 (with Nitika, Indexed: Scopus)
- 7. Stochastic Analysis of a Computer System with Unit Wise Cold Standby Redundancy and Priority to Hardware Repair Subject to Failure of Service Facility. International Journal of Reliability, Quality and Safety Engineering, Vol. 28(2), 2150013, 2021 (with R.K. Yadav, Indexed: Scopus)
- 8. Application of Fuzzy Soft and Interval Valued Fuzzy Soft Matrices in Dimension Reduction and Medical Diagnosis by Geometric Mean Approach. Journal of Information and Optimization Sciences, DOI: 10.1080/02522667.2020.1823684, 2021 (with Seema Singh and D.S. Hooda, ISSN: 2169-0103, Indexed: Web of Science ESCI)
- 9. Unknown Values Estimation in Incomplete Fuzzy Soft and Interval Valued Fuzzy Soft Matrices. Asian Journal of Fuzzy and Applied Mathematics, Vol. 9(1), 2021(with Seema Singh and D.S. Hooda, ISSN: 2321-564X,)

- Stochastic Analysis of a Three-Unit Non-Identical Repairable System with Priority to Main Unit for Operation and Repair. International Journal of Reliability and Safety, Vol. 14, Nos. 2/3, pp. 182-198, 2020 (with S. Kadyan and Gitanjali, ISSN: 1479-3903, Indexed: Scopus)
- 11. Stochastic Analysis of a Unit Wise Redundant Computer System with Priority to Hardware Repair and Failure of Service Facility during Software Up-gradation. International Journal of Statistics and Reliability Engineering, Vol. 7(3), pp 342-349, 2020 (with R.K. Yadav and M.S. Barak, ISSN: 2350-0174, UGC CARE List)
- 12. Stochastic Analysis of a Three-Unit Non-identical Repairable System with Simultaneous Working of Cold Standby Units. Journal of Reliability and Statistical Studies, Vol. 13(2-4), pp. 385-400, 2020 (with S. Kadyan and Gitanjali, ISSN: 0974-8024, Indexed: Web of Science & ESCI)
- 13. Reliability Analysis of a Computer System with Unit Wise Cold Standby Redundancy Subject to Failure of Service Facility during Software Up-gradation. International Journal of Agricultural and Statistical Sciences, Vol. 16(2), pp.797-806, 2020 (with R.K. Yadav, ISSN: 0973-1903, Indexed: Scopus).
- 14. Generalized Reliability Measures of a Non-Series Parallel System of (m, n<sub>c</sub>,l) Order with Exponential Failure Laws. International Journal of Statistics and Reliability Engineering, Vol. 7(1), pp 77-85, 2020 (with Nitika Ahlawat, ISSN: 2350-0174, UGC CARE List)
- 15. Stochastic Analysis of a Computer System with Software Redundancy and Failure of Service Facility. International Journal of Advanced Science and Technology, Vol. 29(04), pp. 7279 –7288, 2020 (with Amit Kumar and R.K. Yadav, Indexed: Scopus)
- 16. On Soft and Fuzzy Soft Relations with their Applications. Jñānābha (Vijñāna Parishad of India), Vol. 50 (1), pp. 102-114, 2020 (with Seema Singh and D.S. Hooda, UGC Care List Journal)
- 17. Reliability Analysis of a Redundant System with 'FCFS' Repair Policy Subject to Weather Conditions. International Journal of Advanced Science and Technology, Vol. 29(3), pp. 7568-7578, 2020 (with Ashok Kumar and D. Pawar, Indexed: Scopus)
- 18. Reliability analysis of a non series—parallel system of seven components with Weibull failure laws. International Journal of System Assurance Engineering and Management, DOI: 10.1007/s13198-020-00944-5, March, 2020 (with S.K. Chauhan and N. Ahlawat, Indexed: Scopus)
- 19. A standby repairable system with rest of server between repairs. Journal of Statistics and Management Systems, Vol. 23(8), pp. 1485-1496, 2020 (with Chhama Aggarwal, Indexed: Web of Science, Taylor & Francis)
- 20. Stochastic Analysis of a Computer System with Unit Wise Cold Standby Redundancy and Failure of Service Facility. International Journal of Mathematical, Engineering and Management Sciences, Vol. 5(3), pp.529-543, 2020 (with R.K. Yadav, Indexed: Scopus)
- 21. On Use of Lindley Distribution for Profit Analysis of a Three Unit Cold Standby System Subject to Arrival Time of the Server. International Journal of Statistics and Reliability Engineering, Vol. 6(2), pp 145-151, 2019 (with N. Nandal, ISSN: 2350-0174, UGC CARE List).

- 22. Cost-Benefit Evaluation of a Repairable System with Alternate Repair and Weibull Distribution. International Journal of Agricultural and Statistical Sciences, Vol. 15(2), pp.741-749, 2019 (with Gitanjali, ISSN: 0973-1903, Indexed: Scopus).
- 23. Availability Analysis of a Three Unit Cold Standby System Using Lindley Failure and Repair Laws. International Journal of Agricultural and Statistical Sciences, Vol. 15(2), pp.543-548, 2019 (with N. Nandal, ISSN: 0973-1903, Indexed: Scopus).
- 24. An Integrated DEMATEL Six Sigma Hybrid Framework for Manufacturing Process Improvement. Annals of Operations Research, DOI.org/10.1007/s10479-019-03341-9 (with Anshu Gupta, Pallavi Sharma, Akansha Jain, Hongbo Xue and P. C. Jha, Indexed: Scopus, SCIE, IF: 2.583)
- 25. Quality Improvement in Manufacturing Process through Six Sigma: A Case Study of Indian MSME Firm. Yugoslav Journal of Operations Research, Vol. 29(4), pp. 519-537, 2019 (with Pallavi Sharma, Anshu Gupta and P.C. Jha, Indexed: Scopus)
- 26. On Use of Gamma Distribution for Evaluation of Reliability and Availability of a Single Unit System Subject to Arrival Time of the Server. Journal of Reliability and Statistical Studies, Vol. 12 (2), pp.93-102, 2019 (with N. Nandal, ISSN: 0974-8024, Indexed: Web of Science & ESCI).
- 27. Weathering Server System with Non-Identical Units and Priority to Repair of Main Unit. International Journal of Advanced Research in Dynamical and Control system, Vol. 11(10) Special Issue, pp-352-358, 2019. (with Ashok Kumar and D. Pawar, ISSN: 1943-023X, Indexed: Scopus ).
- 28. Profit Analysis of a Warm Standby Non-Identical Units System with Single Server Subject to Preventive Maintenance. International Journal of Agricultural and Statistical Sciences, Vol. 15(1), pp.261-269, 2019. (with Ashok Kumar & Dheeraj Pawar, ISSN: 0973-1903, Indexed: Scopus).
- 29. Stochastic Analysis of a Computer System with Hardware Redundancy and Failure of Service Facility during Repair. International Journal of Computer Applications, Vol. 178(19), pp. 19-26, 2019 (with Amit Kumar, ISSN: 0975 8887)
- 30. Profit Analysis of a Warm Standby Non-Identical Unit System With Single Server Performing in Normal/Abnormal Environment. Life Cycle Reliability and Safety Engineering, Vol. 8, pp. 219–226, 2019 (with Ashok Kumar, Dheeraj Pawar, ISSN 2520-1352).
- 31. Reliability Evaluation of a Non Series–Parallel System of Six Components with Weibull Failure Laws. Life Cycle Reliability and Safety Engineering, Vol.8, pp. 91-97, 2019 (with Nitika, S.K. Chauhan ISSN 2520-1352)
- 32. Stochastic Modeling of a System of Non-Identical Units with Conditional Failure of Repairman. International Journal of Statistics and Reliability Engineering, Vol. 5(2), pp. 112-120, 2018 (with Naveen Kumar, ISSN: 2350-0174, UGC CARE List).
- 33. A DMAIC Six Sigma Approach to Quality Improvement in the Anodising Stage of the Amplifier Production Process. International Journal of Quality & Reliability Management, Vol. 35(9), pp.1868-1880, 2018 (with Pallavi Sharma, Anshu Gupta & P.C. Jha, ISSN: 0265-671X, Indexed: Scopus)
- 34. Reliability Analsis of a Non Series-Parallel System with Different Flow of Information and Weibull Failure Laws. International Journal of Statistics and Reliability

- Engineering, Vol. 5, Issue 1(Jan. June), pp.22-30, 2018 (with Nitika & S.K. Chauhan, ISSN: 2350-0174, UGC CARE List).
- 35. Stochastic Analysis of a 2-out-of-2: G System with Single Cold Standby and Replacement Using Weibull Distribution. Journal of Statistics and Management Systems, Vol. 20(6), pp. 1051-1063, Nov. 2017 (with Permila, ISSN: 0972-0510 (P), Indexed: Web of Science, Taylor & Francis).
- 36. Reliability Measures of a Single-Unit System with Gamma Failure Laws. International Journal of Statistics and Reliability Engineering, Vol. 4(2), pp.122-127, 2017 (with N. Nandal & A.S. Grewal, ISSN: 2350-0174, UGC CARE List).
- 37. Reliability and MTSF Evaluation of Series-parallel Configuration using Weibull Failure Laws. International Journal of Agricultural and Statistical Sciences, Vol. 13(2), pp. 759-770,2017.( with S.K. Chauhan, ISSN: 0973-1903, Indexed: Scopus)
- 38. Reliability Indices of a Redundant System with Standby Failure and Arbitrary Distribution for Repair and Replacement Times. International Journal of System Assurance Engineering and Management, Vol. 8(2), pp. 423-431, 2017 (with R.K. Bhardwaj and Komaldeep Kaur, ISSN: 0975-6809, SCI, Springer)
- 39. Reliability Estimation of Photovoltaic System using Markov Process and Dynamic Programming Approach. International Journal of Reliability and Safety, Vol. 11(1/2), pp. 132-151, 2017 (with Sonal Sindhu and Vijay Nehra, Indexed: Scopus, Elsevier)
- 40. Stochastic Modeling of a Computer System with Software Redundancy and Priority to Hardware Repair. Indian Journal of Computer Science and Engineering (IJCSE), Vol. 8 (5), pp. 564-570, 2017(with V.J. Munday & Permila, ISSN: 0976-5166)
- 41. Reliability and MTSF Evaluation of a Parallel-Series System using Weibull Failure Laws. International Journal of Computer Applications, Vol., 172(2), pp.11-21, 2017 (with S.K. Chauhan, ISSN:0975-8887, Indexed)
- 42. Evaluation of Reliability and MTSF of a Parallel System with Weibull Failure Laws. Journal of Reliability and Statistical Studies, Vol. 10 (1), pp.137-148, 2017 (with S.K. Chauhan, ISSN: 0974-8024, Indexed)
- 43. Productivity Improvement in the Chassis Preparation Stage of the Amplifier Production Process: A DMAIC Six Sigma Methodology. International Journal of Reliability, Quality and Safety Engineering, Vol. 23(6),1640012,2016(Indexed: Scopus, with A. Gupta, P. Sharma, N. Agarwal, P.C. Jha, ISSN: 1793-6446)
- 44. Reliability Modelling of a Computer System with Hardware Redundancy Subject to Preventive Maintenance. International Journal of Statistics and Reliability Engineering, Vol. 3(2), pp.176-189, 2016 (with V.J. Munday & Permila, ISSN: 2350-0174, UGC CARE List).
- 45. Bayesian Methods in Determining the Disease Burden due to Tuberculosis in Indian States. International Journal of Pure and Applied Mathematics, Vol. 111(4), pp. 623-630, 2016(with Vinay Kumar, ISSN:1314-3395, Indexed: Scopus, Elsevier)
- 46. Cost Benefit Analysis of System of Non-identical units under Preventive Maintenance and Replacement. Journal of Reliability and Statistical Studies, Vol. 9(2), pp-17-27, 2016 (with Upma, ISSN: 0974-8024, Indexed).
- 47. Analysis of a 2-out-of-2:G System with Single Cold Standby unit with Priority to Repair and Arrival Time of the Server. International Journal of Agricultural and

- Statistical Sciences, Vol. 12(2), pp. 351-358, 2016 (with Permila, ISSN: 0973-1903, Indexed: Scopus)
- 48. Reliability Measures of a Cold Standby System with Arrival time of a Server Subject to Failure. International Journal of Statistics and Systems, Vol. 11(2), pp. 197-209, 2016 (with Jyoti Nandal, ISSN:0973-2675)
- 49. Reliability Measures of a Series System with Weibull Failure Laws. International Journal of Statistics and Systems, Vol. 11(2), pp. 173-186, 2016 (with S.K. Chauhan, ISSN:0973-2675)
- 50. Logistic Regression Approach for Prediction of Gender Bias in the Prevalence of Tuberculosis in India. Indian Journal of Science and Technology, Vol. 9(42), pp. 1-7, 2016(with Vinay Kumar, ISSN: 0974-5645, Indexed, Scopus)
- 51. Statistical Assessment of Risk Factors for the Prevalence of Tuberculosis in India. International Journal of Advanced Research, Vol. 4(10), pp. 291-298, 2016(with Vinay Kumar, ISSN: 2320-5407)
- 52. Exponential-Ratio Type Estimators for Population Mean under Ranked Set Sampling. International Journal of Applied Mathematics and Statistics, Vol. 55(3), pp. 51-62, 2016 (with Sarbjit S. Brar, ISSN 0973-7545)
- 53. Reliability Evaluation of Series-Parallel and Parallel-Series Systems for Arbitrary Values of the Parameters. International Journal of Statistics and Reliability Engineering, Vol. 3(1), pp. 10-19, 2016 (with S.K. Chauhan ISSN: 2350-0174, UGC CARE List).
- 54. Cost-Benefit Analysis of a Cold Standby System with Preventive Maintenance and Repair Subject to Inspection. Journal of Mathematics and Statistical Science, Vol. 2(5), pp. 274-285, 2016 (with Sudesh. K. Barak & M.S. Barak, ISSN: 2411-2518)
- 55. Analysis of a Single-Unit System with Degradation and Maintenance. Journal of Statistics & Management Systems, Vol. 19(2), pp. 151-161, 2016. DOI: 10.1080/09720510.2014.927609 (ISSN: 0972-0510,Indexed: Web of Science, Taylor & Francis, with Ashish Kumar and S.K. Chillar)
- 56. Cost-Benefit Analysis of a System of Non-Identical Units under Preventive Maintenance and Replacement Subject to Priority for Operation. International Journal of Statistics and Systems, Vol. 11(1), pp. 37-46, 2016 (with Upma, ISSN: 0973-2675)
- 57. A 2-out-of-2: G System with Single Cold Standby and Priority to Repair over Replacement. International Journal of Statistics and Systems, Vol. 11(1), pp. 27-36, 2016 (with Permila and V.J. Munday, ISSN: 0973-2675)
- 58. Reliability Modeling of a Parallel System with Maximum Operation and Repair Times. International Journal of Operational Research, Vol. 25(1), pp. 131-142, 2016 (with R. Rathee, ISSN online: 1745-7653, Indexed in Scopus (Elsevier)).
- 59. A 2-out-of-2: G System with Single Cold Standby and Arrival Time of the Server Using Weibull Distribution. International Journal of Statistics and Reliability Engineering, Vol. 2(2), pp. 103-116, 2015 (with Permila, ISSN:2350-0174, UGC CARE List).
- 60. Stochastic Analysis of a Parallel System with Failure of Service Facility. Journal of Reliability and Statistical Studies, Vol. 8(2), pp-97-106, 2015 (with Poonam, ISSN: 0974-8024, Indexed).

- 61. Stochastic Modelling of a Computer System with Hardware Redundancy Subject to Maximum Repair Time. International Journal of Computer Science Engineering, Vol. 4(5), pp.228-236, Sept. 2015 (with V.J. Munday and Permila, ISSN: 2319-7323, Indexed)
- 62. Reliability Measures of a Computer System with Priority for Repair and Hardware Redundancy. International Journal of Computer Applications, Vol. 125 (8), pp. 32-37, September 2015 (with V.J. Munday, ISSN: 0975-8887, Indexed, IF. 0.82).
- 63. Performance Analysis of Stochastic System with Standby Failure and Maintenance. International Journal of Computer Applications, Vol. 125 (1), pp. 6-11, September 2015 (with R.K. Bhardwaj and Komaldeep Kaur, ISSN: 0975-8887, Indexed, IF. 0.82).
- 64. Stochastic Modeling of a Computer System with Software Redundancy. International Journal of Engineering and Management Research, Vol. 5(1), pp.295-302, 2015 (with V.J. Munday, ISSN: 2394-6962, Indexed)
- 65. Stochastic Modeling of a System with Maintenance and Replacement of Standby Subject to Inspection. American Journal of Theoretical and Applied Statistics, Vol. 4(5), pp. 339-346, Aug. 2015 (with R.K. Bhardwaj and Komaldeep Kaur, ISSN: 2326-8999, Indexed)
- 66. Stochastic Analysis of a Redundant System with Server Failure and Conditional Arrival Time. International Journal of Statistics and Reliability Engineering (IJSRE), Vol.2(1), pp.94-102, 2015(with Jyoti Nandal and R.Rathee,ISSN:2350-0174, UGC CARE List)
- 67. Reliability and MTSF Evaluation of Series and Parallel Systems. International Journal of Statistics and Reliability Engineering (IJSRE), Vol.2(1), pp.74-80, 2015(with Jyoti Nandal and S.K. Chauhan, ISSN:2350-0174, UGC CARE List)
- 68. Reliability Measures of a system of Two Non-Identical Units with Priority Subject to Weather Conditions. Journal of Reliability and Statistical Studies (JRSS), Vol. 8(1), pp. 181-190, 2015 (with Savita Deswal, ISSN: 0974-8024, Indexed).
- 69. Stochastic Analysis of a System with Replacement of Unit and Server Subject to Inspection. *International Journal of Agricultural and Statistical Sciences*, Vol. 11(1), pp. 81-87, 2015. (SCI, Indexed: Scopus, NAAS Rating- 6.1, ISSN:0973-1903 )(with A.K. Dhankhar and J.K. Sureria)
- 70. Economic Analysis of a Computer System with Software Up-gradation and Priority to Hardware Repair over Hardware Replacement Subject to Maximum Operation and Repair Times. International Journal of Scientific and Engineering Research, Vol. 6(4), pp. 1661-1668, April, 2015 (ISSN: 2229-5518, Indexed in Copernicus, with Ashish Kumar and Monika S. Barak)
- 71. A Parallel System with Priority to Preventive Maintenance over Repair Subject to Maximum Operation and Repair Times. International Journal of Scientific and Engineering Research, Vol. 6(2), pp. 1651-1661, Feb. 2015 (ISSN: 2229-5518, Indexed: Copernicus, with R. Rathee)
- 72. Performance Analysis of a Computer System with Imperfect Fault Detection of Hardware. Procedia Computer Science, Vol. 45(c), pp. 602-610, 2015 (ISSN: 1877-0509, Indexed: Scopus, Elsevier, with Ashish Kumar and Monika Saini)

- 73. Reliability Measures of a Computer System with Priority to PM over the H/W Repair Activities Subject to MO and MRT. Management Science Letters, Vol. 5(1),pp.29-38,2015(ISSN:1923-9343, with Ashish Kumar)
- 74. A Parallel System with Priority to Preventive Maintenance over Replacement Subject to Maximum Operation and Repair Times. International Journal of Engineering Development and Research, Vol. 2(3), pp. 3199-3206, 2014 (ISSN: 2321-9939, Indexed: Copernicus, IF: 1.79, with R. Rathee)
- 75. Generalized Ratio Type Estimator of Population Mean Under Ranked Set Sampling. International Journal of Statistics and Reliability Engineering, Vol. 1(2), pp. 179-193, 2014 (with Sarbjit S. Barar, ISSN: 2350-0174, UGC CARE List)
- 76. Impact of HR Practices on Job Satisfaction Level of Managerial Employees in Textile Units. International Journal of Statistics and Reliability Engineering, Vol. 1(2), pp. 140-154, 2014 (with Harsh Purohit and Poonam Malik, ISSN: 2350-0174, UGC CARE List)
- 77. Statistical Modeling of a Computer System under Priority in Repair Disciplines of Components. International Journal of Mathematical Archive, Vol. 5(11), pp. 64-72, 2014 (ISSN: 2229-5046, with Jyoti Anand and Geeta)
- 78. A Single-Unit System with Preventive Maintenance and Repair Subject to Maximum Operation and Repair Times. International Journal of Applied Mathematics and Computation, Vol. 6(1), pp. 25-36, 2014 (ISSN: 0974-4665, with Ashish Kumar and Monika Saini)
- 79. Reliability modeling of a Computer System with Priority to H/W Repair over Replacement of H/W and Up-gradation of S/W Subject to MOT and MRT. Jordan Journal of Mechanical and Industrial Engineering, Vol. 8(4), pp. 233-241, August 2014, (ISSN: 1995-6665, Indexed: Scopus, with Ashish Kumar)
- 80. Improved Estimator of Population Mean using Auxiliary Information under Rank Set Sampling. International Journal of Statistics and Reliability Engineering, Vol. 1(1), pp. 1-11, April 2014, (with Sarbjit S. Brar, ISSN: 2350-0174, UGC CARE List)
- 81. Reliability Measures of a Computer System with Different Repair and Redundant Policies for Components. International Journal of Statistics and Reliability Engineering, Vol. 1(1), pp. 26-35, April 2014, (with V.J. Munday, ISSN: 2350-0174, UGC CARE List)
- 82. A Parallel System with Priority to Repair over Preventive Maintenance subject to Maximum Operation and Repair Times. International Journal of Statistics and Reliability Engineering, Vol. 1(1), pp. 57-68, April 2014, (with R. Rathee, ISSN: 2350-0174, UGC CARE List)
- 83. Cost-Benefit Analysis of a Computer system with Priority to S/W Replacement over H/W Repair Activities Subject to Maximum Operation and Repair Times. Journal of Scientific & Industrial Research, Vol. 73, pp. 653-655, October 2014. (ISSN: 0022-4456, Indexed: Scopus, IF-0.5, SJR-0.28, with A. Kumar)
- 84. Reliability Analysis of a Single-Unit System with Inspection subject to Different Weather Conditions. *Journal of Statistics and Management Systems*, Vol. 17, No. 2, pp. 195-206, August 2014, DOI: 10.1080/09720510.2014.914292. (ISSN: 0972-0510, Indexed, Taylor & Francis, with A.K. Barak and M.S. Barak)

- 85. Stochastic Analysis of a Cold Standby System with Priority to Preventive Maintenance over Repair. Advances in Industrial Engineering and Management, Vol. 3(2), pp. 31-36, August 2014 (ISSN: 2222-7059, with Sudesh K. Barak and M.S. Barak)
- 86. Comparison of Reliability Measures of a System under Different Failure and Repair Policies. American Journal of Mathematics and Statistics, Vol. 4(4), pp. 179-185, 2014 (ISSN: 2162-948X, DOI: 10.5923/j.ajms.20140404.01, Indexed, with Joginder, Akash Varshney and Lalit Kumar)
- 87. Stochastic Modeling of a Concrete Mixture Plant with Preventive Maintenance. Applications and Applied Mathematics: An International Journal (AAM), Vol. 9(1), pp. 13-27, June 2014 (ISSN: 1932-9466, Indexed in Mathematical Review, with Ashish Kumar and Monika Saini)
- 88. Reliability Measures of a Standby System with Arrival Time of the Server Subject to Maximum Operation and Repair Times. International Journal of Simulation: Systems, Science and Technology, UK (IJSSST), Vol. 14 (5), pp. 55-62, 2014 (ISSN: 1473-8031, Indexed: Scopus, H Index-3, SJR: 0.11, with A. Barak).
- 89. A Stochastic System with Possible Maintenance of Standby Unit and Replacement of the Failed Unit Subject to Inspection. International Journal of Computer Applications, Vol. 97 (8), pp. 26-30, July 2014 (ISSN: 0975-8887, Indexed, IF. 0.791, with Anju Dhall and V.J. Munday).
- 90. Cost-Benefit Analysis of a Single –Unit System Subject to Random Shocks. Journal of Reliability and Statistical Studies, Vol. 7(Special Issue),pp. 69-76,2014 (with A.K. Barak and S.K. Chhillar, ISSN: 0974-8024, Indexed: Web of Science).
- 91. Reliability Measures of a Single-unit System under Preventive Maintenance and Degradation with Arbitrary Distributions of Random Variables. Journal of Reliability and Statistical Studies, Vol. 7(Special Issue), pp. 77-78, 2014 (with Jitender Kumar, M.S. Kadyan and Chetan Jindal, ISSN: 0974-8024, Indexed: Web of Science).
- 92. A Parallel System with Arrival Time of Expert Server Subject to Maximum Repair and Inspection Times of Ordinary Server. Journal of Reliability and Statistical Studies, Vol. 7(1), pp.103-112, 2014 (with Gitanjali, ISSN: 0974-8024, Indexed: Web of Science).
- 93. Stochastic Analysis of Parallel System under Maintenance and Repair Subject to Random Shocks. Research Journal of Applied Sciences, Engineering and Technology, Vol. 7(16), pp. 3280-3285, 2014 (with A.K. Barak and S.K. Chhillar, ISSN: 2040-7459, Indexed: Scopus, ISI Thomson: Elsevier)
- 94. A Stochastic System with Different Maintenance Policies for Standby Unit. International Journal of Statistics and Analysis (IJSA), Vol. 4(1), pp. 71-81, 2014 (ISSN: 2248-9959, with Anju Dhall)
- 95. A Standby System with Priority to Repair over Preventive Maintenance. *International Journal of Engineering Research (IJER)*, Vol. 3(4), pp. 241-244, 2014 (ISSN: 2319-6890, with Sudesh K., Barak)
- 96. Stochastic Modeling of a Computer System with Hardware Redundancy. *International Journal of Computer Applications*, Vol. 89(7), pp. 26-30, 2014 (ISSN: 0975-8887, Indexed, IF. 0.835, with V.J. Munday).
- 97. Reliability Measures of a Parallel System with Repair by an Expert Server Subject to Maximum Repair and Inspection Times of Ordinary Server. *International Journal of*

- *Mathematical Archive*, Vol. 5(1), pp. 162-169, 2014 ((ISSN: 2229-5046, Indexed, ICV 5.09, with Gitanjali).
- 98. Reliability Measures of a Cold Standby System with Priority to Repair over Corrective Maintenance Subject to Random Shocks. *International Journal of Statistics and Economics*. Vol. 13(1), pp. 79-89, 2014 (ISSN 0975-556X, with A.K. Barak and S.K. Chhillar)
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- 149. Stochastic Modeling and Analysis of a System with Priority to PM at PFS over Repair Subject to MOT. *International Journal of Statistics and Systems*, Vol.6(2),pp.189-200,2011(ISSN: 0973-2675)( with Naveen Nandal & J. Khatkar).
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- 181. Reliability and cost benefit analysis of 2-out-of-3 redundant system with general distribution of repair and waiting time. *International Journal for Business and IT* (*DTR*), Vol.4, No.1, pp.28-35 (2007) (with R.K. Bhardwaj).
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- 188. Profit and reliability analysis of an electric supply system. *Journal of Mathematics and System Sciences*, Vol. 1(2), pp. 30-41, 2005(ISSN: 0975-5454) (with Mukender Singh).
- 189. Reliability models with priority for operation and repair with arrival time of server. *Journal of Pure and Applied Mathematika Sciences*, Vol. LXI (1-2), pp. 9-22, 2005(ISSN: 0379-3168).
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# B. Research Papers Published in the Proceedings and Edited Books

- Stochastic Modeling of a Repairable System under Different Weather Conditions. Proc. Inc. Recent Advances in Mathematics, Statistics and Computer Science. CUS Patna, DOI:10.1142/9789814704830\_0014, pp.155-163, 2016 (World Scientific Publishing Company)
- 2. Reliability Measures of a Parallel-Unit System with Arbitrary Distributions of Random Variables. Proc. Inc. Recent Advances in Mathematics, Statistics and Computer Science. CUS Patna, DOI: 10.1142/9789814704830\_0032, pp.353-361, 2016 (World Scientific Publishing Company, with Jitender Kumar& M.S.Kadyan).
- 3. Reliability and Profit Analysis of a Computer System with Arrival Time at H/w Failure and Priority to H/w Repair over S/w Up-gradation. Frontiers of Statistics and its Applications, Edited Book (ISBN: 978-93-82338-78-9), Bonfring Publications, pp. 48-57, 2013 (with J.K. Sureria).
- 4. Profit Analysis of a Reliability Model with Priority to Repair Over PM at PFS Subject to MOT. *Proc. ICPQROM 2011, ISI Delhi, Vol.1, pp. 15-25, 2011(ISBN: 978-81-8424-708-4, Allied Publisher)(with Naveen Nandal).*
- 5. Probabilistic analysis of a parallel system with degradation and inspection. Proc. International Conference On Operations And Management Sciences (ICOMS-2010), *Edited Book, Excel India Publications, Delhi*, pp. 333-339 (with M.S.Kadyan and Jitender Kumar).
- 6. Cost-analysis of stochastic models with priority to repair over preventive maintenance subject to maximum operation time. *Learning Manual on Modeling, Optimization and Their Applications, Edited Book, Excel India Publishers*, pp 165-178, 17-21 August, 2010 (ISBN: 978-93-80697-08-6) (with P. Nandal).
- 7. On expected profit of a parallel-unit system subject to degradation and inspection with priority to repair the new unit. *Learning Manual on Modeling, Optimization and Their*

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- 8. Profit analysis of reliability models with priority in operation as well as in repair. Edited *Book on Statistical Techniques in Life Testing, Reliability, Sampling theory and Quality Control*, Narosa Publishing House, New Delhi, pp.153-162, 2007.(ISBN- 13: 978-81-7319-742-0)
- 9. Reliability modeling and analysis of 2-out-of-3 redundant system subject to conditional arrival time of server. *Proc.* 13<sup>th</sup> ISSAT International Conference on RQD, Seattle (USA), pp.206-210, 2007 (ISBN: 978-09763486-2-7)(with R.K. Bhardwaj).
- 10. Profit analysis of single-unit reliability models with repair at different failure modes. Proc. *International Conference on Reliability and Safety Engineering*, IIT Kharagpur (India), pp. 577-588, 2005(with R.K. Bansal).
- 11. Cost-benefit analysis of stochastic models with on-line repair and allowed arrival time of server. *Edited Book on Recent Advances in Information Theory, Statistics and Computer Applications*, pp.92-102, 1998 (with S. Ahlawat).
- 12. Comparison of profit of two single-unit shock models with different types of repair policies of a single repairman. *Proc. National Conference on ORMT, Regional Engg. College*, Kurukshetra (India), pp. B(1-9), 1996.
- 13. Stochastic analysis of a standby system with patience time and two types of repairmen who may work at the same time. *Proc. International Conference on Optimization and Statistics*, AMU, Aligarh (India), pp.146-151, 1995.
- 14. Two unit cold standby system with inspection and different types of repair strategy. *Proc. National Symposium on Modeling: Stochastic Processes and O.R.*, K.U.K. (India), pp. 340-349, 1991 (with R.K. Tuteja and Rajeev Kumar).

# **Published Books**

### (i) Authored Books

- 1. The Book "*Analysis*". Jeevansons Publications Daryaganj, New Delhi (India), 2005 (ISBN: 978-93-80896-32-8).
- 2. The Book "Real and Complex Analysis" Jeevansons Publications, Daryaganj, New Delhi (India), 2010 (ISBN: 978-93-80896-32-8).
- 3. The Book "Measure Theory and Integration". I. K. International Publishing House Pvt. Ltd., New Delhi, 2016 (ISBN: 978-93-85909-43-6, co- authored with A.K. Malik, S.K. Gupta and S. R. Singh)

### (ii) Edited Books

The Learning Manual on "Modeling, Optimization and Their Applications", Excel India Publishers, New Delhi (August 2010).

### **Participation in Orientation / Refresher Courses**

Name of the Course	Duration	Name of the Institution Where attended
	15-11-1994 to	
1. Refresher Course	05-12-1994	Indian Statistical Institute, Kolkata
	(Three weeks)	

2. Orientation Course	08-11-1995 to 05-12-1995 (Four weeks)	CPDHE University of Delhi, Delhi
3. Refresher Course	02-02-1999 to 26-02-1999 (Three weeks)	Indian Statistical Institute, Kolkata
4. Refresher Course	08-03-1999 to 28-03-1999 (Three weeks)	Department of Mathematics, M.D. University, Rohtak

# Conferences/Seminars/Workshops/Symposium attended and Research Papers presented

(i) National Level : 34
 (ii) International Level : 74
 TOTAL : 108
 (iii) Research papers presented : 98

1. International Conference (Virtual Mode) on "Emerging Trends in Statistics and Data Science" jointly organized by Department of Statistics in Conjunction with 40<sup>th</sup> Annual convention of ISPS and others during Sept. 07-10, 2021.

**Invited Talk**: Regression Approach for Reliability Analysis of a Transformed Parallel-Series System (Also Chaired a Session)

2. 23<sup>rd</sup> International Annual Conference of Vijnana Parishad of India on "Recent Development in Mathematics, Optimization and Computational Sciences (RDMOCS-2021)" organized by Department of Mathematical Sciences and Computer Applications, Bundelkhand University, Jhansi, Uttar Pradesh during Sept. 06-10,2021.

Plenary Talk: Reliability Analysis of a Transformed Parallel-Series System

3. International Symposium on "Computational Operations Research and Algorithmic Game Theory" organized Virtually by Indian Statistical Institute, New Delhi during March 29-31, 2021.

**Invited Talk:** A New Approach for Reliability Analysis of Transformed Systems with Different Structures

4. Online International Conference on "Recent Advances in Computational Mathematics and Engineering" organized by Department of Applied Sciences and Humanities, BKBIET, Pilani during March 19-21, 2021.

**Invited Talk:** Reliability Analysis of a Transformed Parallel-Series System (Also acted as Chief-Guest at the Valedictory Ceremony)

5. National Webinar on "Recent Innovations in Statistical Methods and Applications (RISMA-2021)" organized by Department of Statistics, Christ College (Autonomous) Irinjalakuda, Thrissur, Kerala on March 03, 2021.

**Invited Talk**: Reliability Analysis of Non-Repairable Systems

- 6. Sixth International Conference on "Statistics for Twenty-First Century-2020 (ICSTC-2020)" organized virtually by the Department of Statistics, University of Kerala, Trivandrum, Tamil Nadu, India during Dec. 16-19, 2020.
  - **Invited Talk**: Reliability Analysis of Transformed Systems with Different Configurations: A New Approach (Also Chaired a Plenary Session)
- 7. 28<sup>th</sup> International FIM Conference on "Synergies in Computational, Mathematical, Statistical and Physical Sciences (FIM 28: SCMSPS 2020 VIRTUAL)" organized by Stella Maris College & SSN College of Engineering, Tamil Nadu, India during Nov. 23-27, 2020.
  - **Plenary Talk:** Significance of Components Structure in the Improvement of Systems Reliability (Also Chaired Two Technical Sessions and Member in the Jury for the R S Verma Best Paper Award)
- 8. International Virtual Conference on "Prof. C.R. Rao's School of Thought on Statistical Sciences (ICON-CRRAO-STOSS-2020)" organized by Department of Statistics, Ramanujan School of Mathematical Sciences, Pondicherry University, Pondicherry during Nov. 21-22 & 28-29, 2020
  - **Invited Talk:** On Reliability Evaluation of a Transformed Parallel-Series System of (m, n<sub>i</sub>) Order (Also Chaired a Technical Session)
- 9. International Webinar on "Advances in Operational Research for Optimal Humanosphere" organized by ORSI Tirupati Chapter, Indian Society for Probability and Statistics (ISPS) and Statistics Alumni, Department of Statistics, S.V. University, Tirupati during 20-22 November, 2020
  - **Invited Talk:** Role of Components Configurations in Reliability Improvement (Also Chaired an Invited Talks Session)
- 10. Two day National Webinar on "Recent Advances in Theoretical and Applied Statistics" organized by Department of Statistics, Assam University, Silchar (India) during Nov. 20-21, 2020
  - **Invited Talk:** Reliability Analysis of Systems with Different Configurations (Also Chaired a Technical Session)
- 11. International Workshop on "New Trends in Fuzzy and Rough Set Theory and its Applications (FRSTA-2020)" organized online by the Department of Mathematics and Statistics, School of Basic Sciences, MU Jaipur (India) during Sept. 25-29, 2020.
- 12. International Webinar on "Advances in Statistics and Data Science for Sustainable Human Development" organized online by ISPS at Department of Statistics, S.V. University, Tirupati during Sept. 07-10, 2020.
  - **Invited Talk**: Reliability Analysis of Non Series-Parallel Systems (Also Chaired a Session)
- 13. International Conference on "Advancement in Interdisciplinary Research-2020"

organized online by Forum for Interdisciplinary Research in Mathematical Sciences and Beena Mahavidyalaya, Jaipur during July 24-26, 2020.

Invited Talk: An Overview of Reliability Analysis of Non Series-Parallel Systems

14. 1st International Conference of Indian Science Congress Association-Rohtak Chapter on "Science & Technology: Rural Development" organized by Department of Chemistry, M.D. University, Rohtak during March 04-05, 2020.

### **Chaired a Technical Session**

15. International Conference on "Importance of Statistics in Emerging Global Scenario (ISEGS 2020)" Organized by Department of Statistics, Savitribai Phule Pune University, Pune, in Conjuction with 22<sup>nd</sup> Annual Conference of the Society of Statistics, Computer and Applications during January 02-04, 2020.

**Invited Talk:** On Bounds of Duplication Paths for High Reliability Structure of a Non-Series Parallel System of  $(m, n_c, l)$  Order.

16. International Conference on "Advances in Operations Research, Statistics and Mathematics (AOSM 2019)" Organized by Department of Mathematics, BITS Pilani in Association with 22<sup>nd</sup> Annual Convention of Vijnana Parishad of India during Dec. 28-30, 2019.

**Invited Talk:** Effect of Components Structure on System Reliability Measures: A Case Study

17. IISA 2019 International Conference on "Innovations in Data and Statistical Sciences (INDSTATS 2019)" Organized by Indian Institute of Technology Bombay during Dec. 27-30, 2019

**Paper Presented:** Reliability Analysis of a Non Series-Parallel System of (m, n<sub>c</sub>, l) Order with Weibull Failure Laws.

18. International Conference on "Recent Advances in Statistics and Data Science for Sustainable Development" organized in Conjunction with 39<sup>th</sup> Annual Convention of ISPS by PG Department of Statistics, Utkal University, Bhubaneswar, Odisha during Dec. 21-23, 2019.

**Plenary Talk:** On Use of Lindley Distribution for Profit Analysis of a Cold Standby Systems of Three Units with Arrival Time of the Server (Also chaired a Session)

19. National Seminar on "High Dimensional Data Analysis-Stochastic and Optimization Methods (HDASOM-2019)" Organized by Department of Statistics, Pondicherry University, Puducherry during Dec. 9-10, 2019.

Invited Talk: Systems with Different Configurations: Reliability Data

20. UGC Sponsored National Conference on "Emerging Trends in Statistics and Data Sciences (ETSDS-2019)" Organized by Department of Statistics, Ramanujan College, University of Delhi, Delhi during September 06-07, 2019.

- **Invited Talk:** On Use of Weibull Failure Laws for Reliability Evaluation of Non-Series Parallel Systems (Also Chaired a Session)
- 21. 24<sup>th</sup> International Conference on Innovations in Physical Sciences (CONIAPS-XXIV) Organized by CCS University, Meerut, Uttar Pradesh, India in collaboration with International Academy of Physical Sciences during August 09-11, 2019.
  - **Invited Talk:** Reliability Analysis of Non Series-Parallel Systems: A Case Study. (Also Chaired a Session)
- 22. 10<sup>th</sup> International Conference on Quality, Reliability, Infocom Technology & Business Operations (ICQRIT-2019) held at Hotel Himalaya, Kathamandu jointly organized by Institute of Engineering Tribhuvan University, Nepal; SREQOM, India & University of Saskantchewan, Canada during June 18-21, 2019.
  - **Keynote Address:** Cost-Benefit Analysis of a System of Non-Identical Units with Conditional Failure of Server. (Also Chaired a Session)
- 23. National Conference on Recent Advances in Statistics and Statistical Practice held at Department of Statistics, SP University, Vallabh Vidyanagar, Gujarat during March 01-02, 2019.
  - **Invited Talk:** On Reliability Measures of a Non-Series Parallel System of Six Components.
- 24. 1<sup>st</sup> International Conference of Association of Inventory Academicians and Practitioners on Emerging Trends in Inventory, Supply Chain & Reliability Modeling organized by Department of Operational Research, University of Delhi, Delhi (India) during December 21-23, 2018.
  - **Invited Talk**: Reliability Measures of a Non Series-Parallel System of five Components with Weibull Failure Laws. (Also Chaired a Session)
- 25. 27<sup>th</sup> International Conference of FIM in Conjunction with 3<sup>rd</sup> Convention of IARS on Interdisciplinary Mathematics, Statistics and Computational Techniques (IMSCT 2018- FIM XXVII) Organized by Department of Statistics, University of Jammu, Jammu (India) during November 02-04, 2018.
  - **Invited Talk**: Reliability Analysis of a Non Series- Parallel System with Maximum Flow of Information and Weibull Failure Laws.
- 26. One Day Workshop on "Syllabus Revision Based on Earning for Livelihood" Organized by Haryana State Higher Education Council at Deen Bandhu Chhotu Ram University of Science & Technology (DCRUST), Murthal on June 1, 2018.
- 27. National Seminar on Recent Trends in Science & Technology: A Computational Approach organized by Faculty of Physical Sciences, Ch. Bansi Lal University, Bhiwani on March 22, 2018.
  - **Invited Talk:** System Reliability Modeling: A Computational Approach
- 28. National Level Seminar on Recent Advances in Statistics for Industries and Corporate

- Organized by Department of Statistics, Sardar Patel University, Vallabh Vidhyanagar, Anand, Gujarat during Feb.10-11,2018.
- Invited Talk: Reliability Modeling of a 2-out-of-2:G System: An Overview
- 29. International Conference on Changing Paradigms and Emerging Challenges in Statistical Sciences organized by Department of Statistics, Pondicherry Central University, Puducherry in conjunction with Bi- Decennial Convention of Society of Statistics, Computer and Applications during January 29-31,2018.
  - <u>Invited Talk:</u> Reliability Measures of a System with Parallel- Series Configuration and Weibull Failure Laws.
- 30. International Conference on Theory and Applications of Statistics and Information Sciences (TASIS-2018) organized by Department of Statistics, Bharathiar University, Coimbatore 641046 during January 5-7, 2018.
  - <u>Invited Talk:</u> Reliability Analysis of a Series-Parallel System using Weibull Failure Laws (Also chaired a session)
- 31. 2017 IISA International Conference on Statistics and Data Science for Better Life, Society and Science held at Hyderabad International Convention Centre (HICC), Hyderabad, Telangana (India) during December 27-30, 2017.
  - <u>Paper Presented</u>: Weibull Failure Laws for Reliability Analysis of a Parallel- Series System.
- 32. 26<sup>th</sup> International Conference of FIM & ISME on Interdisciplinary Mathematics, Statistics and Computational Techniques (IMSCT) organized by Shimonoseki City University, Japan at Kitakyushu International Convention Centre Kokura, Kitakyushu City, Fukuoka, Japan during August 25-28, 2017
  - <u>Invited Talk</u>: Reliability Analysis of a System with Series-Parallel Configuration using Weibull Failure Laws (Also Chaired a Session).
- 33. National Level Seminar on Recent Advances in Statistics and Their Applications organized by Department of Statistics, Sardar Patel University, Vallabh Vidyanagar, Anand Gujarat (India) during Mar. 17-18, 2017.
  - <u>Invited Talk:</u> Reliability Analysis of System Under Series-Parallel and Parallel-Series Configurations (Also chaired a session).
- 34. 25<sup>th</sup> International Conference of FIM on Interdisciplinary Mathematics, Statistics and Computational Techniques (IMSCT) organized by Department of Mathematics & Statistics, Manipal University Jaipur (India) during Dec. 22-24, 2016.
  - <u>Invited Talk</u>: Reliability Measuers of Series-Parallel and Parallel-Series Systems-A Statistical (Also chaired a session)
- 35. VIII International Symposium on Statistics and Optimization in Conjunction with XXXVI Annual Convention of Indian Society for Probability & Statistics (ISPS) organized by Department of Statistics & Operations Research, Aligarh Muslim

University, Aligarh (India) during Dec. 17-19, 2016.

<u>Invited Talk:</u> Reliability Measures of a Parallel System with Weibull Failure Laws (Also chaired a session)

36. National Conference on Computational Mathematics & Operations Research organised by B.K. Birla Institute of Engineering & Technology, Pilani during October 15-16, 2016.

<u>Invited Talk</u>: Reliability Measures of a 2-out-of-2:G System with Single Standby(Also chaired a session)

37. 103<sup>rd</sup> Indian Science Congress held at University of Mysore, Mysore during Jan. 03-07, 2016.

**Invited Lecture**: Statistical Approach for Reliability Evaluation of Systems.

38. 7<sup>th</sup> International Conference on Quality, Reliability, Infocom Technology& Business Operations (ICQRITBO'2015) organised by Department of Operational Research, University of Delhi & SREQOM during Dec. 28-30, 2015.

**Session Chaired**: Reliability and Maintenance.

39. International Conference on Celebrating Statistical Innovation and Impact in a World of Big & Small Data organized by Department of Statistics & Centre for Advanced Studies, Savitribai Phule Pune University, Ganeshkhind, Pune (India) in conjunction with International Indian Statistical Association (IISA) during Dec. 20-24, 2015.

<u>Invited Talk</u>: Reliability Measures of a Parallel System with Priority and Arbitrary Distributions for Repair Activities (Also chaired a session).

40. 24<sup>th</sup> International Conference on Interdisciplinary Mathematical and Statistical Techniques (IMST 2015-FIM XXIV) organized jointly by the Forum for Interdisciplinary Mathematics (FIM) & The Spanish Royal Academy of Economic and Financial Sciences at University of Barcelona, Spain during Nov. 18-20, 2015.

**<u>Plenary Talk</u>**: System Reliability Modelling under Preventive Maintenance and Priority.

41. International Conference on Communication Systems organised by B.K. Birla Institute of Engineering & Technology, Pilani during October 18-20, 2015.

**Invited Talk:** An Overview of Reliability Modeling of a Parallel System

42. International Conference on Soft Computing Techniques and Implementations organised by Department of Electronics and Communication Engineering, Manav Rachna International University, Faridabad during October 8-10, 2015.

<u>Invited Talk:</u> Probabilistic Analysis of a System of two Non-Identical Units using Regenerative Point Technique (Also chaired a session on Communication)

43. International Conference on Recent Advances in Mathematics, Statistics and Computer Science held at School of Mathematics, Statistics and Computer Science, Central University of South Bihar, Patna during May 29-31, 2015.

- <u>Invited Talk</u>: Stochastic Modeling of Repairable Systems under Different weather Conditions (Also chaired a session).
- 44. National Conference on Advances in Theoretical and Applied Statistics held at Department of Statistics, Panjab University, Chandigarh during Feb. 12-13, 2015.
  - <u>Invited Talk</u>: Stochastic Modeling of a System with Possible Maintenance of Standby Unit Subject to Inspection.
- 45. 102<sup>nd</sup> Indian Science Congress held at University of Mumbai, Mumbai during Jan. 03-07, 2015.
  - **Paper Presented**: Stochastic Analysis of a System Reliability Model with Priority to Preventive Maintenance over Repair.
- 46. 23<sup>rd</sup> International Conference of Forum for Interdisciplinary Mathematics (FIM) on Interdisciplinary Mathematical, Statistical and Computational Technique (IMSCT 2014) organized by Department of Mathematical and Computational Sciences, NIT Karnataka, Surathkal during December 18-20, 2014.
  - <u>Paper Presented:</u> Reliability Measures of a Stochastic System with Possible Maintenance of Standby.
- 47. International Conference on Statistics & Information Technology for a Growing Nation organized by Department of Statistics, SV University, Tirupati (A.P.) during November 30 December 02, 2014 along with XXXIV Annual Convention of ISPS.
  - <u>Invited Talk</u>: System Reliability Modelling under Preventive Maintenance and Repair (Also chaired a session).
- 48. 32<sup>nd</sup> Annual National Conference of Indian Society for Medical Statistics on Recent Advances in Statistical Methods and Their Applications in Health Sciences organized by Department of Statistics, University of Jammu, Jammu during Nov. 1-3, 2014.
  - <u>Invited Talk:</u> Stochastic Modeling of a System with Preventive Maintenance and Repair (Also chaired a session).
- 49. National Conference on Advances in Mathematical Sciences & Their Applications organized by Department of Mathematics, Hindu Girl College, Sonepat sponsored by DGHE, Haryana during March 28-30, 2014.
  - <u>Invited Talk</u>: An Overview of System Reliability Models with Different Failure and Maintenance Policies (Also chaired a session).
- 50. National Conference on Recent Trends and Developments in Operations Research organized by Department of Mathematics, BITS, Pilani-333031, Rajasthan during Feb. 22-23, 2014.
  - <u>Invited Talk:</u> Reliability Measures of a Cold Standby System with Preventive Maintenance and Repair.
- 51. 101<sup>st</sup> Indian Science Congress held at University of Jammu, Jammu during Feb. 3-7, 2014.

- <u>Invited Lecture</u>: Reliability Measures of Parallel Systems using semi-Markov Approach (Also chaired a session and worked as recorder of the section of Mathematical Sciences).
- 52. International Conference on Recent Advances in Statistics and their Applications (ICRASTAT-2013) and 33<sup>rd</sup> Annual Convention of ISPS Organized by Department of Statistics, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad (M.S.), India during Dec. 26-28, 2013.
  - <u>Invited Talk</u>: Probabilistic Analysis of a Shock Model under Maintenance and Repair (Also chaired a session).
- 53. International Conference on Role of Statistics in the Advancement of Science & Technology organized by the Department of Statistics and Centre for Advanced Studies, University of Pune, Pune 411007 (India) during Dec. 16-18, 2013.
  - <u>Invited Talk:</u> A System of Non-identical Units with Priority and Repair Subject to Weather Conditions.
- 54. International Conference on Mathematical Techniques in Engineering Applications (ICMTEA 2013) Organized by the Department of Mathematics, Graphic Era University, Dehradun, India during October 24-25, 2013.
  - <u>Invited Talk:</u> Reliability Measures of Computer Systems with Cold Standby Redundancy (Also chaired a session)
- 55. The 59<sup>th</sup> World Statistics Congress (WSC) Organized by International Statistical Institute (ISI) in Hong Kong, China during Aug. 25-30, 2013.
  - **Research Paper:** Reliability and Profit Analysis of a Computer System with H/w Repair and S/w Replacement Subject to Conditional Arrival Time of Server.
- 56. International Statistical Institute Satellite Meeting on Statistics in Business, Industry and Risk Management Organized by Department of Systems Engineering and Engineering Management, City University of Hong Kong, China during Aug. 23-24, 2013.
- 57. National Conference on Contemporary Developments in Mathematical Sciences and Computing Organized by Dept. of Mathematics, Galgotias University (UP) during Feb. 2-3, 2013.
  - <u>Invited talk:</u> Reliability and Profit Analysis of a Computer System with Preventive Maintenance and Priority to H/w Repair over S/w Up-gradation (Also chaired a session).
- 58. International Symposium on Applied Optimization and Game Theory Models Organized by Indian Statistical Institute (ISI), Delhi Centre, Delhi during Jan. 9-11, 2013.
  - <u>Invited talk:</u> Reliability Modeling of an Integrated H/W and S/W System with Preventive Maintenance and Priority Subject to Maximum Operation and Repair Times.
- 59. International Conference on Frontiers of Statistics and Its Applications

- (ICONFROST-2012) and 32<sup>nd</sup> Annual Convention of ISPS Organized by Department of Statistics, Pondicherry University, Pondicherry during Dec. 21-23, 2012. (Also Chaired a Session)
- <u>Invited Talk:</u> Probabilistic Analysis\_of a Computer System with Arrival Time of the Server at H/W Failure and Priority for Replacement of the S/W over H/W Repair.
- 60. XXI<sup>st</sup> International Conference of FIM on Interdisciplinary Mathematics, Statistics and Computational Techniques (IMSCT-2012- FIM-XXI) Organized by Department of Statistics, Punjab University, Chandigarh during Dec. 15-17, 2012. (Also Chaired a Session)
  - Symposium Organized: System Reliability Models
  - <u>Invited Talk:</u> Reliability Modeling and Analysis of a Computer System with Priority to PM over H/W Repair Activities Subject to MOT and MRT.
- 61. 17<sup>th</sup> Annual Conference of GAMS and National Symposium on Computational Mathematics & Information Technology organized by Department of Mathematics & Department of CSE, JUET, Guna (MP) during Dec. 7-9, 2012.
  - <u>Invited Talk</u>: Analysis of an Integrated H/w and S/w System Using Some Effective Reliability Improvement Techniques.(Abstract Published on Page No.-14).
- 62. International Conference on Optimization Modeling and Applications "OPTIMA-2012" organized by Department of Operational Research, University of Delhi, Delhi and ORSI, Delhi Chapter during Nov. 29- Dec.1,2012.
  - <u>Invited Talk:</u> Analysis of an Integrated H/W and S/W System with Arrival Time of the Server and Priority to S/W Replacement over H/W Repair.
- 63. 6th International Conference on Quality, Reliability, Infocom Technology and Industrial Technology Management "ICQRITTM-2012" organized by SREQOM, Department of Operational Research, University of Delhi, Delhi and Lulea University of Technology Sweden during Nov. 26-28,2012.
  - <u>Invited Talk:</u> Reliability Modeling and Analysis of a Integrated H/W and S/W System.
- 64. National Seminar on "Official Statistics" jointly organized by Department of Statistics S.V. University, Tirupati (AP) and ISPS at Tirupati during 10-12 August, 2012.
  - <u>Invited Talk</u>: Stochastic Modeling of a Computer System with Priority to PM over H/W Repair Subject to MOT and MRT.
- 65. National Conference on Modeling, Computational Fluid Dynamics and Operations Research under UGC- SAP (DRS-I) Program held at Dept. of Mathematics, BITS, Pilani, Rajasthan during Feb. 4-5, 2012.
  - <u>Invited Talk:</u> Reliability Modeling and Analysis of a Computer System with Priority to PM over H/W Repair Subject to MOT and MRT (Also chaired a session).
- 66. Faculty Development Programme on "Research Methods, SPSS & Thesis Writing" held at Dwarka, New Delhi organized by Global Development Foundation on 24<sup>th</sup> Nov. 2011.
- 67. XXXI Annual Convention of ISPS & International Conference on Statistics, Probability and Related Areas held at Dept. of Statistics, Cochin University of Science & Technology, Cochin-682022, India during Dec. 19-22, 2011.
  - **Research Paper:** Reliability Modeling and Profit Analysis of a Computer System with Priority to Software Replacement over Hardware Repair Subject to Maximum

- Operation and Repair Times (Abstract published, pp.82) (Also chaired a session).
- 68. International Conference on Advances in Modeling, Optimization and Computing (AMOC-2011) held at Department of Mathematics, IIT Roorkee, Roorkee (India) during Dec. 5-7, 2011.
  - **Research Paper**: Reliability modeling and analysis of a system with server failure during repair activities (Abstract published, pp.90).
- 69. National Workshop on Reliability and Maintainability held at Holkar Science College, Indore (MP) during Oct. 31<sup>st</sup> to Nov.4<sup>th</sup>, 2011 sponsored by UGC, New Delhi.
- 70. 5<sup>th</sup> Canadian Conference in Applied Statistics/ IMST-2011- FIM XX organized by Department of Mathematics & Statistics, Concordia University, Montreal, Canada during July 1-4,2011.
  - <u>Invited Research Paper</u>: Reliability Modeling of a System with Preventive Maintenance at Partial Failure Stage Subject to Maximum Operation Time and Priority for Operation To New Unit (Abstract published-,pp.48)( Also conducted a session on Reliability Models)
- 71. International Congress on Productivity, Quality, Reliability, Optimization and Modeling jointly organized by Indian Statistical Institute, QCI and DRDO, Govt. of India during Feb.7-8, 2011at India Habitat centre, New Delhi. The Congress was inaugurated by Hon'ble Prime Minister of India, Dr. Manmohan Singh and Shri Pranab Mukherjee, Finance Minister of India at the DRDO Bhavan, New Delhi.
  - **Research Paper:** Profit Analysis of a Reliability Model with Priority to Repair over PM at PFS Subject to MOT(Abstract published-RLT 01,pp.175)(Also chaired a session).
- 72. International Conference on New Trends in Life Testing, Bayesian Inference, Sampling Theory, Bio-Statistics, Bio-Informatics and Computer Applications held at Department of Statistics, Banaras Hindu University, Varanasi (India) during Jan. 5-8, 2011.
  - <u>Invited Talk</u>: Stochastic Modeling and Analysis of a System with Priority to PM at PFS over Repair Subject to MOT(Also chaired a session).
- 73. 19<sup>th</sup> International Conference of FIM on Interdisciplinary Mathematical and Statistical Techniques held at Department of Statistics, Patna University Patna, Bihar (India) during Dec. 18-20, 2010.
  - <u>Invited Talk</u>: Profit Analysis of a Stochastic Model with PM at Partial Failure Stage Subject to MOT (Also chaired a session).
- 74. International Conference on Operational Research For Urban and Rural Development & 43<sup>rd</sup> Convention of ORSI held at Thiagarajar College of Engineering, Madurai (TN) during Dec. 15-17, 2010.
  - <u>Invited Talk</u>: Reliability Modeling and Analysis of Redundent Systems Under PM Subject to MOT(Also chaired a session).
- 75. International Conference on Development and Applications of Statistics in Emerging Areas of Science and Technology (ICDAEAST) and XXX Annual Convention of ISPS held at Department of Statistics, University of Jammu, Jammu (India), during Dec. 8-10, 2010.
  - <u>Invited Talk</u>: Stochastic Modeling and Analysis of a Computer System under Different Failure and Repair Mechanism(Also chaired a session).

- 76. National Workshop on "Modeling, Optimization and Their Applications" sponsored by Department of Science and Technology, Govt. of India held at Department of Statistics M.D. University, Rohtak during 17-21August, 2010.
- 77. The 4<sup>th</sup> National Statistics Day and Summer Training Program on Advanced Stochastic Models and Their Applications held at Department of Statistics, S.V. University, Tirupati (A.P.) during 29<sup>th</sup> June to 4<sup>th</sup> July, 2010.
- 78. International Conference on Statistics, Probability, Operations Research, Computer Science and Allied Areas in Conjunction with VIII IISA and XXIX Annual Convention of ISPS held at Department of Statistics, Andhra University, Visakhapatnam (India) during Jan. 4-8, 2010.
  - **Research Paper**: Reliability and Profit Evaluation of a System with Different Repair Policies Subject to Weather Conditions (Abstract Published, pp. L5 (a)-127 ) (Also chaired a session).
- 79. 4<sup>th</sup> International Conference on Quality, Reliability and Infocom Technology (ICQRIT) held at University of Delhi, Delhi during December 18-20, 2009.
  - **Research Paper**: Operational Analysis of a 2-out-of-3 Redundant System with Inspection subject to Degradation (Abstract Published, pp. 72) (Also chaired a session).
- 80. National Symposium on Recent Developments in Applicable Mathematics & Information Technology held at Jaypee Institute of Engineering and Technology, Guna (MP) during December 4-6, 2009.
  - **Research Paper**: Reliability and Economic Analysis of a Computer System with Independent Hardware and Software Failures (Abstract Published, pp. 03) (Also chaired a session).
- 81. 18<sup>th</sup> FIM International Conference on Interdisciplinary Mathematical and Statistical Techniques held at Deptt. of Mathematics, Jaypee University of Information Science & Technology, Vaknaghat, Shimla (India) during August 2-4, 2009..
  - **Reasearch Paper**: Profit analysis of reliability models with inspection at different levels of dameges subject to degradation and no operation in abnormal weather (Abstract Published, pp. 36) (Also chaired a session).
- 82. International Conference on Operations Research Applications in Engineering and Management (ICOREM) held at Anna University, Tiruchirappalli, Tiruchirappalli (India) during May 27-29, 2009.
  - **Research Paper**: Cost-Analysis of Stochastic Models with Priority to Repair over Preventive Maintenance Subject to Maximum Operation Time (Abstract published, pp.323-324) (Also chaired a session).
- 83. UGC sponsored National Seminar on Social Development under the Aegis of Operations Research organized by the Department of Mathematics, M.M. P.G. College, Fatehabad, Haryana (India) during March 21-22, 2009.
  - **Research Paper**: Reliability modeling and cost-benefit analysis of a system A Case Study (Abstract Published).
- 84. International Conference on New Trends in Statistics and Optimization held at Department of Statistics, University of Kashmir, Sri Nagar, J&K, India during Oct. 20-23, 2008.
  - **Research Paper**: Probabilistic analysis of a system with priority to preventive maintenance over repair subject to maximum operation time (Abstract published,

- pp.33)
- 85. 7<sup>th</sup> World Congress In Probability And Statistics Held At The Department Of Applied Probability And Statistics, National University, Singapore During July 14-19, 2008.
  - **Research Papers**: (1) Profit analysis of an electric supply system working under different weather conditions subject to inspection (Abstract published, pp.73)
  - (2) Probabilistic analysis of an electric supply system (Abstract published, pp.121).
  - (3) Stochastic modeling of 2-out-of-3 redundant system subject to degradation (Abstract published, pp.146).
- 86. The UK-India Education and Research Initiative CPD Pre-BID Workshop conducted by British Council Division, New Delhi on 1 July, 2008.
- 87. A Special Meeting on Official Statistics held at the Royal Statistical Society, London (UK) on12th June, 2008.
- 88. 16<sup>th</sup> FIM International Conference on Interdisciplinary Mathematical and Statistical Techniques held at Department of Mathematical Sciences, University of Memphis (USA) during May 15-18, 2008.
  - <u>Research Papers</u>: (1) Probabilistic analysis of 2-out-of-3 redundant system subject to degradation (Abstract published, pp.40).
  - (2) Analysis a system of two non-identical parallel units with priority to repair subject to inspection (Abstract published, pp.34).
- 89. Diamond Jubilee Workshop on Applied Statistical Techniques for Social Scientists held at the Department of Statistics, Panjab University, Chandigarh (India) on March 20, 2008.
- 90. National Conference on Emerging Trends in Statistics and Optimization Techniques held at Department Statistics, University of Jammu, Jammu (India) during Feb. 22-23, 2008.
  - **Research Papers**: (1) Analysis of 2-out-of-3 redundant system with inspection and priority subject to degradation (Abstract published, pp.45).
  - (2) Reliability and economic analysis of 2-out-of-3 redundant system with priority to repair (Abstract published, pp.62).
  - (3) Reliability and economic analysis of a system operating under different weather conditions (Abstract published, pp.63).
  - (4) Cost-benefit analysis of standby system with inspection subject to degradation (Abstract published, pp.63)
- 91. 13<sup>th</sup> ISSAT International Conference on Reliability and Quality in Design held at Seatle (USA) during August 2-4, 2007.
  - <u>Research Paper</u>: Reliability modeling and analysis of 2-out-of-3 redundant system subject to conditional arrival time of server (Published in the Proceedings).
- 92. 3<sup>rd</sup> International Conference on Quality, Reliability and Information Technology held at Department of Operational Research, University of Delhi, Delhi (India) during Dec. 2-4, 2006.
  - **Research Paper**: Reliability and cost-benefit analysis of 2-out-of-3 redundant system with general distribution of repair and waiting time (Abstract published, pp.125).

- 93. International Conference on Inter-disciplinary Mathematical and Statistical Techniques held at Polytechnic Institute of Tomar (Lisbon), Portugal during Sept. 1-4, 2006.
  - **Research Paper**: Reliability modeling and profit analysis of single-unit system with inspection by a server who appears and disappears randomly (Abstract published, pp. 70/161).
- 94. 11<sup>th</sup> Annual Conference of GAMS and National Symposium on Applicable Mathematics to Engineering and Technology held at Jaypee Institute of Engineering and Technology, Raghogarh Road, Gunna (M.P.) (India) during April 22-23, 2006 (Also chaired a session).
  - <u>Research Papers</u>: (1) Reliability modeling and analysis of an electric transformer with inspection, on-line repair and replacement (Abstract published, pp.42).
  - (2) Stochastic analysis of a system of two-parallel units working under different weather conditions (Abstract published, pp. 43).
- 95. One Day Workshop on Information Technology held at the Department of Computer Science and Applications, M.D. University, Rohtak (India) On Jan. 7, 2006.
- 96. International Conference on Reliability and Safety Engineering held at IIT Kharagpur, Regional Centre Bhubneshwar (India) during Dec. 21-23, 2005.
  - <u>Research Paper</u>: Profit analysis of single-unit reliability models with repair at different failure modes (Published in the Proceedings).
- 97. International Conference on Recent Statistical Techniques in Life Testing, Reliability, Sampling Theory and Quality Control held at the Department of Statistics, BHU, Varanasi (India) during Dec.29-31, 2003
  - **Research Paper**: Profit analysis of reliability models with priority in operation as well as in repair (Published in the Proceedings).
- 98. The Vth International Symposium on Optimization and Statistics held at the Department of Statistics and Operations Research, Aligarh Muslim University, Aligarh (India) during Dec. 28-30, 2002.
  - **Research Paper**: Analysis of reliability models with priority for repair and arrival time of server (Abstract published, pp.33).
- 99. The XX Annual Conference of ISPS National Seminar on IUSR and Conference of Bayesion Society of India held at the School of Studies in Statistics, Pt. Ranishankar Shukla University, Raipur, Chhattisgarh (India) during Feb. 19-21, 2001.
  - **Research Papers**: (1) Reliability analysis of a system of non-identical units with priority of repair (Abstract published, pp.9).
  - (2) Stochastic analysis of two-unit parallel system with repair in non-working period (Abstract published, pp.8).
- 100. International Conference on Statistical Inference, Combinatorics and Related Areas held at the Department of Statistics, BHU, Varanasi (India) during Dec. 18-21, 1997.
  - **Research Paper**: Comparative study of two single-unit stochastic models with pre-inspection and on-line repair by server on contract basis (Abstract published, pp.29).
- 101. National Symposium in Statistics with Focus on Applications in Agriculture and Allied Sciences held at the Department of Mathematics and Statistics, CCS Haryana

- Agricultural University, Hisar (India) during Feb. 7-9, 1997. (Also chaired a session).
- **Research Papers**: (1) Cost-benefit analysis of stochastic models with on-line repair and allowed arrival time of server (Published in the Proceedings).
- (2) Stochastic analysis of an environment model (Abstract published, pp.4).
- 102. International Conference on Stochastic Processes held at the Department of Science and Technology, University of Cochin, Cochin (India) during Dec. 26-29, 1996.
  - <u>Research Paper</u>: Stochastic analysis of a system with on-line repair and allowed arrival time of repairman (Abstract published, pp.25).
- 103. National Conference on Operational Research in Modern Technology held at Regional Engineering College, Kurukshetra (India) during March 8-9, 1996.
  - **Research Paper**: Comparison of profit of two single-unit shock models with different types of repair policies of a single repairman (Published in the Proceedings)
- 104. First Annual Conference of ISITA held at the Department of Statistics, M.D. University, Rohtak (India) during Feb. 3-5, 1996.
  - **Research Paper**: Stochastic behaviour of a two-unit redundant system with simultaneous repair and degradation of unit after ordinary repair (Abstract published, pp.12).
- 105.3<sup>rd</sup> International Symposium on Optimization and Statistics held at Aligarh Muslim University, Aligarh (India) during Dec. 19-21, 1995.
  - **Research Paper**: Stochastic analysis of a standby system with patience time and two types of repairman who may work at the same time (Published in the Proceedings).
- 106. National Conference on Statistical Inference in Life Testing and Reliability using a Prior Information held at the Department of Statistics, BHU, Varanasi (India) during Sept. 28-29, 1995.
  - **Research Paper**: Cost-benefit analysis of a two-unit standby system with three modes and arrival time of repairman at partial failure mode (Abstract published, pp.22).
- 107.International Conference on Stochastic Modeling held at Delhi University, Delhi (India) during Jan. 10-12, 1994.
  - **Research Paper**: Profit analysis of a complex warranty system working under certain precautions (Abstract published, pp.24).
- 108.56<sup>th</sup> Annual Conference of Indian Mathematical Society held at South Gujarat University, Surat (India) during Dec. 27-30, 1990.
  - **Research Paper**: A single-unit system with three modes and different repair policies of repairman who appears and disappears randomly (Abstract published, pp.46).

### Lecturer (s) Delivered as a Resource Person

- 1. Extension Lecture on the topic "Emerging Trends in Statistics in the Era of Technological Advancement" delivered on 29<sup>th</sup> June, 2021 through online mode at the Department of Mathematics and Statistics, Manipal University, Jaipur on 15<sup>th</sup> National Statistics Day.
- 2. Extension Lecture on the topic "Career Guidance for Mathematics Graduates" delivered on 25<sup>th</sup> June, 2021 through online mode at the Department of Mathematics, Smt. Sushma Swaraj Govt. College for Girls, Ballabgarh.
- 3. Extension Lectures on the topics "An Overview of Reliability Theory" and

- "Reliability Modeling: A Case Study" delivered on 28-10-20 and 06-11-20 during Refresher Course in Mathematics/Statistics organized by UGC-HRDC of BPSMV, Khanpur Kalan (Sonipat) during 23-10-2020 to 06-11-2020.
- 4. An Extension lecture on the topic "Problem Formulation" delivered on 23<sup>rd</sup> October, 2020 at e-Workshop on "Synopsis Writing" conducted by IMSAR, M.D. University, Rohtak during October 23-24, 2020.
- 5. Extension lectures (04) on the topics "Probability Distributions and Applications" and "Large and Small Sample Tests" delivered Online through CISCO WEBEX Portal on June 23 & 24, 2020 in the Lecture Series conducted by IMSAR, M.D. University, Rohtak
- 6. An Extension Lecture on the topic "Role of Statistics in Modern Era" delivered on March 13, 2020 at Department of Statistics, Manonmaniam Sundaranar University, Tirunelveli, Tamil Nadu
- 7. An Extension Lecture on the topic "Statistics: Future of the Career" delivered on Feb. 14, 2020 at Pt. N.R.S. Govt. College, Rohtak.
- 8. An Extension Lecture on the topic "Career Guidance" delivered on Jan 29, 2020 at Government College, Matanhail, District Jhajjar (Haryana).
- 9. An Extension Lecture on the topic "Why Statistics" delivered on Nov. 20, 2019 at Department of Statistics, D.A.V. College, Muzaffarnagar, Uttar Pradesh.
- 10. An Extension Lecture on the topic "Career Counseling for Graduate Students" delivered on Aug. 21, 2019 at Department of Mathematics, M.K.J.K. College, Rohtak.
- 11. Two Sessions on the topic "Introductory Statistics for Hospitality and Tourism" delivered during one week Workshop Academic Research in Hospitality & Tourism Organized by IHTM under the aegis of CRSISEC, M.D. University, Rohtak during June 17-21, 2019
- 12. An Extension Lecture on the topic "Optimization Problems: Formulation and Solutions" delivered on Sep.28, 2018 at Department of Statistics, M.S. University of Baroda, Vadodara, Guiarat.
- 13. An Extension Lecture on the topic "Topology of Real Numbers" delivered on Sep. 25, 2018 at Department of Mathematics, M.K.J.K. College, Rohtak.
- 14. An Extension Lecture on the topic "Role of Statistics in Research" delivered on 08-09-2018 in two days Faculty Development Program on "Research Methodology & LaTex", during September 7-8, 2018 at B.K. Birla Institute of Engineering & Technology, Pilani.
- 15. An Extension Lecture on the topic "Career for Mathematics Graduates" delivered on 21-08-2018 at Department of Mathematics, Govt. College, Matanhail, Jhajjar.
- 16. Two Extension Lectures on the topics "Statistics: Fundamentals and Applications & Tests of Significance: Large and Small Samples" delivered during Two Days Workshop on the topic "Applications of Statistics and Uses of SPSS" organized by CRISEC, M.D. University, Rohtak during August 9-10, 2018.
- 17. An invited lecture on the topic "Optimization Techniques and its Applications" delivered on June 29<sup>th</sup>, 2018 in the National Workshop on Statistical and Optimization Learning in Multidisciplinary Arena in Conjunction with National Statistics Day Organized by the Department of Mathematics and Statistics, Manipal University Jaipur during June 25-29, 2018.

- 18. An Extension Lecture on the topic "An Introduction to Statistics" delivered on Feb. 20, 2018 at Department of Mathematics, Chaudhary Bansi Lal University (CBLU), Bhiwani, Haryana (India).
- 19. An Extension Lecture on the topic "Reliability Analysis and its Applications" under UGC Special Lecture Programme delivered on February 1,2018 at Department of Statistics Manonmaniam Sundaranar University, Tirunelveli (TN).
- 20. An Extension Lecture on the topic "Reliability Measures of Systems: An Overview" delivered during Participation in the Panel Discussion on Stochastic Modelling of the National Seminar on Stochastic Modelling and Optimization Methods conducted by Department of Statistics & Ramanujan School of Mathematical Sciences, Pondicherry Central University, Puducherry during January 30-31,2018.
- 21. Two Extension Lectures on the topic "A Statistical Approach for Reliability Evaluation of Systems" delivered on July 26, 2017 at Department of Statistics, University of Kashmir, Srinagar.
- 22. Two Extension Lectures on the topics "Reliability Measures of Systems: An Overview & Optimization Problems and Their Solutions" delivered during July 05-06, 2017 at the UGC Refresher Course for the teachers of Mathematical Sciences organized by Human Resource Development Centre (HRDC), Punjabi University, Patiala.
- 23. An Extension Lecture on the topic "Chi-Square Test and its Applications" delivered on June. 03, 2017 at the National Workshop on the topic "Statistical Applications in Physical Education and Sports" organized by Department of Physical Education, M.D. University, Rohtak during June, 1-3, 2017 (Also delivered a Key Note Address on the Inaugural Session of the Workshop).
- 24. An Extension Lecture on the topic "Statistics and Career Prospects" delivered on Sep. 22, 2016 at Department of Mathematics & Statistics, G.C.W. Rohtak.
- 25. An Extension Lecture on the topic "Topology of Real Numbers: An Overview" delivered on Sep. 02, 2016 at Department of Mathematics, M.K.J.K. College, Rohtak.
- 26. Two Extension Lectures on the topic "Reliability Theory and Modeling: An Overview" delivered on June 23, 2016 at the UGC Refresher Course for the teachers of Physical Sciences organized by Academic Staff College, Punjabi University, Patiala during June 23, 2016.
- 27. Two Extension Lectures on the topic "Some Fundamentals of Measure Theory" delivered on September 10, 2015 at Department of Mathematics, Hindu Girls P.G. College, Sonepat.
- 28. An Extension Lecture on the topic "Stochastic Processes and Its Applications" delivered at Department of Statistics, Central University of Haryana, Mahendergarh, Jant Pali on April 30, 2015.
- 29. One Lecture on the topic "Mathematical Approach for System Reliability Modeling: An Overview" delivered on 10/01/2015 at the UGC National Workshop on the topic Contribution of India in Mathematics organized by Holkar Science College, Indore (MP) during Jan. 10-12, 2015.
- 30. One lecture on the topic "System Reliability Modeling: An Overview" delivered on 24/12/2014 at the UGC Refresher Course for the teachers of Physical Sciences organized by Academic Staff College, Punjabi University, Patiala during Dec. 8-27, 2014.

- 31. Two Guest lectures on the topic "Mathematical Approach to System Reliability Modeling" delivered on 28/11/2014 at UGC Refresher Course organized by UGC-Academic Staff College, Bhagat Phool Singh Mahila Vishawavidyalaya, Khanpur Kalan, Sonipat, Haryana-131305 during 18/11/2014 to 08/12/2014.
- 32. One lecture on the topic "Fundamentals of Statistics" delivered on 30/06/2014 at the UGC Refresher Course in Research Methodology in Sciences (Interdisciplinary) organized by Academic Staff College, Kurukshetra University, Kurukshetra during June 11- July 1, 2014.
- 33. Two lectures on the topic "Development of Reliability Models Markov Process and RPT" delivered on 24/05/2014 at the UGC Refresher Course for the teachers of Mathematical Sciences organized by Academic Staff College, Punjabi University, Patiala during May 12-31, 2014.
- 34. Five lectures on the topics "Fundamentals of Reliability Theory, Development and Analysis of System Reliability Models and Linear Programming Problems" delivered during 29-11-2013 to 01-12-2013 at the 4<sup>th</sup> Refresher Course in Mathematical Modeling organized by Academic Staff College, Devi Ahilya Vishwavidyalaya, Indore (M.P.).
- 35. One lecture on "Importance of Sports for Rural Youth" on 22-06-2013 at Rajiv Gandhi Sports Stadium, V.P.O. Madina organized by Distt. Sports Office, Rohtak.
- 36. Two lectures on the topic "An overview of Statistics" on 27-04-2013 at the orientation course conducted by UGC- ASC, BPS Mahila Vishwavidyalaya, Khanpur Kalan (Sonepat) during 15<sup>th</sup> April to 14<sup>th</sup> May 2013.
- 37. One lecturer on the topic "Fundamentals of Reliability Theory" on 09-03-2-13 at the Department of Mathematics, Central University Tejpur, Assam.
- 38. Two lecturers on the topic "Linear Programming Problems and Their Solutions" on 19-11-2012 in the three week UGC refresher course for the faculty of Mathematical sciences organized by UGC-ASC, GJUS&T, Hisar during 02-11-2012 to 22-11-2012.
- 39. Two lectures on the topic "Analysis of Some Reliability Models Using Markovian Approach and RP Technique" at the National Workshop on Reliability and Maintainability held at Holkar Science College, Indore (MP) during Oct. 31<sup>st</sup> to Nov.4<sup>th</sup>, 2011 sponsored by UGC, New Delhi.
- 40. One lecture on the topic "Development and Analysis of System Reliability Models" at the National Workshop on "Modeling, Optimization and Their Applications" sponsored by Department of Science and Technology, Govt. of India held at Department of Statistics M.D. University, Rohtak during 17-21 August, 2010.
- 41. One lecture on the topic "Methodology to Develop Reliability Models-A Case Study" at the 4<sup>th</sup> National Statistics Day and Summer Training Program on Advanced Stochastic Models and Their Applications held at Department of Statistics, S.V. University, Tirupati (A.P.) during 29<sup>th</sup> June to 4<sup>th</sup> July, 2010.

# **Research Scholarship**

- (i) M.D. University, Rohtak Research Scholarship during 1990-91.
- (ii) Senior Fellowship of CSIR, New Delhi during 1991-92.

### Membership of Professional Bodies and Societies

i. Society of Statistics, Computer and Applications (SSCA): Life Member

- ii. International Indian Statistical Association (IISA): Life Member
- iii. Indian Association for Reliability and Statistics (IARS): Life Member (Founder President)
- iv. International Statistics Institute (ISI, 13852): Elected Member
- v. The Indian Society of Probability and Statistics (ISPS): *Life Member*
- vi. The Indian Science Congress Association: *Life Member*
- vii. The International Society for Business and Industrial Statistics (Netherlands): *Member*
- viii. The Forum for Interdisciplinary Mathematics (USA): *Life Member*
- ix. The Society for Reliability Engineering, Quality and Operations Management (New Delhi): *Life Member*
- x. The Institute of Mathematical Statistics (USA): *Member*
- xi. M. D. University Alumni Association: *Life Member*

### **Reviewer for the Journals**

- i. Microelectronics Reliability (Great Britain).
- ii. Combinatorics, Information and System Sciences (USA).
- iii. Applied Mathematics and Computing (Korea).
- iv. Aligarh Journal of Statistics, AMU, Aligarh (India)
- v. Mathematics and System Sciences (India)
- vi. Journal of Reliability and Statistical Studies (India)
- vii. Applied Mathematics and Computation, SCI Journal (AMC)
- viii. International Journal of Revenue Management (IJRM), USA
  - ix. International Journal of Science, Technology and Management (IJSTM)
  - x. International Journal of Computational Intelligence Studies (Inder Science Publication).
- xi. International Journal of Artificial Intelligence and Soft Computing (Inder Science Publication).
- xii. Memetic Computing (Springer).
- xiii. Mathematical Problems in Engineering
- xiv. Pakistan Journal of Statistics and Operation Research
- xv. Pakistan Journal of Statistics
- xvi. International Journal of Systems Science (T&F)
- xvii. Sankhya B- The Indian Journal of Statistics (Springer)
- xviii. Indian Association for Productivity, Quality and Reliability (IAPQR)
- xix. International Journal of Information and Management Sciences(IJIMS)
- xx. International Journal of Reliability, Quality and Safety Engineering (World Scientific)
- xxi. International Journal of Operational Research (Inder Science Publication)
- xxii. International Journal of Quality and Reliability Management (IJQRM)
- xxiii. Journal of Applied Mathematics (Hindawi)
- xxiv. International Journal of Systems Science (T&F): Operations & Logistics
- xxv. Applications and Applied Mathematics: An International Journal (AMM)
- xxvi. Journal of Applied Mathematics, Statistics and Informatics (JAMSI)
- xxvii. Journal of Applied Mathematics and Physics (JAMP)
- xxviii. IEEE Transactions on Systems, Man and Cybernetics: Systems
  - xxix. Computers and Industrial Engineering (Elsevier)
  - xxx. JUET Research Journal of Engineering and Technology
- xxxi. Journal of Advanced Statistics (JAS, Isaac Scientific Publishing)
- xxxii. Journal of Statistics Application and Probability (JSAP)

- xxxiii. International Journal of Mathematics in Operational Research(IJMOR)
- xxxiv. Mathematical Sciences Letters (MSL, Natural Sciences)
- xxxv. Proceedings of the National Academy of Sciences, Physical Sciences (NASA)
- xxxvi. Indian Journal of Industrial & Applied Mathematics (IJIAM)
- xxxvii. Journal of Statistics Applications & Probability (JSAP)
- xxxviii. Reliability Engineering and System Safety (Elsevier)

# Member of the Editorial Board of the Journals

- 1. International Journal of Science, Technology and Management (IJSTM)
- 2. Journal of Reliability and Statistical Studies (India)
- 3. Bulletin of Pure and Applied Sciences (Math & Stat)
- 4. International Journal of Statistics and Reliability Engineering (IJSRE)
- 5. International Journal of Statistics (IJS)
- 6. International Journal of System Assurance Engineering and Management (IJSAEM)

# **Research Supervision**

### Ph.D. Thesis Awarded

- 1. Mr. Satyawan (1998): Comparative study of single-unit reliability models with on-line repair.
- 2. Ms. Meena Kumari (2001): Profit analysis of reliability models with different repair policies of server who appears and disappears randomly.
- 3. Mr. Ajit Singh (2003): Comparative analysis of reliability models of non-identical units with different repair policies of server.
- 4. Ms. Anita Malik (2003): Development of statistical techniques for establishing the effect of the different feeds on milk production.
- 5. Mr. Randeep Kumar (2003): Profit analysis of parallel-units reliability models with different repair policies of server.
- 6. Mr. Mukender Singh (2004): Stochastic analysis of reliability models of non-identical units with inspection and priority for repair (worked under University Research Scholarship).
- 7. Mr. Ramesh Kumar Bansal (2006): Analysis of reliability models with different types of failure and repair policies.
- 8. Mr. Pradeep Kumar (2007): cost benefit analysis of reliability models with simultaneous working of non-identical units and priority to repair.
- 9. Mr. Rohtash Kumar Bhardwaj (2008): Stochastic analysis of repairable reliability models of 2-out-of-3 redundant systems (worked under University Research Scholarship).
- 10. Mr. Mahabir Barak (2008): Reliability modeling and analysis of one server single-unit systems operating under different weather conditions.
- 11. Mr. Puran Chand (2008): Data based reliability modeling and economic analysis of some industrial systems. (under co-supervision with Dr. Jai Singh, NIT, Kurukshetra)
- 12. Mr. Paramjit Nandal (2009): Analysis of reliability models with maximum operation time and a spare unit (worked under CSIR UGC Junior Research Fellowship).
- 13. Mr. Jitender Kumar (2009): Profit analysis of reliability models.

- 14. Mr. Parveen Kharab (2010): Development of statistical models relating to level of awareness about HIV/AIDS.
- 15. Mr. Naveen Nandal (2011): Profit analysis of some stochastic models with repair and preventive maintenance subject to maximum operating time.
- 16. Ms. Promila (2011): Economic analysis of operating systems with different types of failure and repair mechanism.
- 17. Ms. Jyoti Anand (2012): Reliability modeling and economic analysis of computer systems with hardware and software failures.
- 18. Mr. Anil Kumar (2012): MTSF and profit evaluation of stochastic models with the failure of server.
- 19. Mr. Ashish Kumar (2013): Reliability and cost-benefit analysis of computer systems subject to maximum operation and repair time (worked under DST INSPIRE Fellowship).
- 20. Mr. Joginder (2013): Reliability modeling and profit analysis of computer systems with different types of replacement and repair policies (worked under UGC Project Fellow).
- 21. Mr. Satish Kumar (2013): Analysis of system reliability models subject to degradation and random shocks.
- 22. Ms. Gitanjali (2014): Cost- benefit analysis of parallel-unit system reliability models with maximum repair time.
- 23. Ms. Poonam Malik (2014): Impact of SHE policies and other HR practices on job satisfaction & organization commitment of employees in select units of textile industry. (Co Supervisor, Thesis Awarded by Banasthali University, Rajasthan)
- 24. Ms. Sudesh Kumari (2015): Profit Analysis of System Reliability Models with Preventive Maintenance and Repair (Co-Supervisor Dr. P.C. Jha)
- 25. Ms. Savita Deswal (2015): Stochastic analysis of repairable systems of non-identical units operating under different weather conditions (worked under UGC Teacher Fellow).
- 26. Ms. Anju Dhall (2015): Reliability Modeling and Profit Analysis of Stochastic Systems Using Regenerative Point Technique (RPT).
- 27. Ms. Reetu (2015): Reliability Modeling and Analysis of Parallel Unit Systems Subject to Maximum Operation and Repair Times (worked under DST INSPIRE Fellowship)
- 28. Mr. Vikram (2016): Stochastic Modeling of Computer Systems with Component Wise Redundancy (worked under RGNF UGC Junior Research Fellowship).
- 29. Mr. Sarabjit Singh (2016): Modified Estimators for Population Parameters Under Ranked Set Sampling.
- 30. Ms. Permila (2016): Stochastic Analysis of 2-out-of-2: G Systems with Standby.
- 31. Mr. Vinay Kumar (2016): Statistical Modeling and Analysis of Disease Burden due to Tuberculoses.
- 32. Ms. Poonam (2017): Profit Analysis of Parallel System Reliability Models with Failure of Service Facility (worked under CSIR UGC SPM Fellowship)

- 33. Ms. Upma (2017): Cost-Benefit Analysis of Non-identical Redundant Systems with Different Repair Policies.
- 34. Ms. Jyoti (2017): Stochastic Analysis of Redundant Systems with Different Repair Policies of Server Subject to Failure (worked under CSIR UGC Junior Research Fellowship).
- 35. Mr. Satish Kumar (2018): Evaluation of Reliability Measures of Systems under Different Configurations (worked under URS).
- 36. Ms. Pallavi Sharma (2019): An Analysis of Six Sigma DMAIC Approach for Continuous Process Improvement in Sound Industry (under joint supervision with Prof. P.C. Jha).
- 37. Mr. Naveen Nandal (2020): Availability Analysis of Systems with Different Configurations and Repair Policies (worked under URS).
- 38. Mr. Naveen Kumar (2020): Stochastic Modelling of Non-Identical Redundant Systems with Repairman Failure.
- 39. Mr. Amit Kumar (2021): Stochastic Analysis of Computer Systems with Redundancy and Failure of Service Facility.
- 40. Mr. Ashok Kumar (2021): Reliability Measures of Redundant Systems with Different Repair Policies Subject to Weather Conditions (Co-Supervisor, Thesis Submitted to Amity Institute of Applied Sciences, Amity University).
- 41. Ms. Nitika (2021): Generalized Reliability Measures of Non Series-Parallel Systems with Arbitrary Failure Laws. (worked under DST INSPIRE Fellowship)
- 42. Mr. Ramesh Kumar (2021): Cost-Benefit Analysis of Computer Systems with Unit Wise Redundancy and Failure of Service Facility. (Worked under URS)
- 43. Ms. Chhama Agarwal (2021): Cost-Benefit Analysis of Repairable Systems with Rest of Server after Repair. (Worked under JRF CSIR)
- 44. Ms. Sweety (2021): Stochastic Analysis of Non-Identical Repairable Systems with Simultaneous Working of Cold Standby Units (Co-Supervisor Dr. Gitanjali) (Worked under URS)
- 45. Ms. Seema (2021): On Fuzzy Soft and Rough Sets with Their Applications (Co-Supervisor Prof. D.S. Hooda) (Worked under URS)

# **Ph.D.** Thesis in Progress

The research work of the following students is under progress:

- 1. Ms. Anuradha (2020): Profit Comparison of Arbitrary k-out-of-n Systems with Different Repair Mechanisms (Co-Supervisor Prof. P.C. Jha)
- 2. Mr. Puran Rathi (2020): Reliability Characteristics of Parallel Systems with Simultaneous Working of Cold-Standby Non-Identical Units (Co-Supervisor Prof. Priti Gupta)
- 3. Mr. Rajesh Kumar (2020): Reliability Variation Analysis of Series-Parallel Systems with Arbitrary Failure Laws.
- 4. Ms. Anju (2021): Reliability Measures of Parallel-Series Systems with Different Failure Laws.

- 5. Mr. Balram (2021): Reliability Analysis of Some Non- Repairable Systems using Path Tracing and Boolean Function Approaches.
- 6. Mr. Kuldeep (2021): Stochastic Analysis of Cold Standby Repairable Systems with Installation Time for the Unit.

# M.Phil. Dissertations Supervised

- 1. Satyawan (1996): Study of Reliability Models with Regenerative Point Technique.
- 2. Parmila (1999): Study of Basic Reliability Models with On-line Repair.
- 3. Ajit Grewal (2000): Reliability Models with Different Cause of Failure and Rest of the Server during On-line Repair.
- 4. Sangeeta (2001): Profit Analysis of Reliability Models with Different Repair Policies of Server.
- 5. Mukender Singh (2001): A Review of Reliability Models with Regenerative Point Technique.
- 6. Dheeraj Pawar (2002): A Review of Single-Unit Reliability Models with On-line Repair and Different Repair Policies of Server.
- 7. Sumeet (2003): A Review of the Single-Unit Reliability Models with Inspection for On-line repair.
- 8. Rohtash Kumar Bhardwaj (2004): Study of Reliability Models with Different Failure Modes and Repair Policies.
- 9. Seema (2007): Study of Some Linear Programming Problems.
- 10. Isha Hooda (2007): Profit Evaluation of Single-Unit Reliability Models with Different Repair Mechanism.
- 11. Pawan Sangwan (2007): Study of Some Industrial and Management Problems by using Linear Programming Techniques.
- 12. Manjeet Kumar (2007): Study of Single-Unit Reliability Models with Different Modes of Failure.
- 13. Kuldip Singh (2008): MTSF and Profit Evaluation of Reliability Models with Inspection and Priority by Using Regenerative Point-Technique.
- 14. Mukesh Kumar (2009): Study of Single-Unit Reliability Models.
- 15. Poonam Rani (2009): Comparative and Profit Analysis of Reliability Models with Random Appearance and Disappearance of the Server.
- 16. Ashish Kumar (2010): Reliability Modeling and Analysis of 2-Out-Of-3 Redundant System with Different Repair Policies.
- 17. Reetu (2012): Analysis of Standby System Reliability Models with Different Repair Policies of Server.
- 18. Sunil Kumar (2012): Stochastic Analysis of a Single- Unit System with Different Repair Policies of a Server Subject to Weather Conditions.
- 19. Vikram (2013): Reliability Measures of a Computer System with Cold Standby Redundancy.

- 20. Permila (2013): MTSF and Reliability Analysis of Single-Unit System Reliability Models with Server Failure.
- 21. Pallavi Sharma (2014): Reliability Measures of a Computer System under Different Repair Policies
- 22. Naveen Nandal (2015): Availability Analysis of System Model with Different Repair Policies.
- 23. Satish Kumar (2015): Reliability and MTSF Evaluation of System under Different Configurations.
- 24. Ramesh Kumar (2018): Reliability Models of Computer Systems.
- 25. Nitika (2018): Reliability Analysis of Non Series-Parallel Systems with Different Flow of Information and Weibull Failure Laws.
- 26. Anuradha (2019): Use of Different Methods for Reliability Evaluation of Parallel Series Systems.
- 27. Sunil Kumar (2019): Reliability Analysis of Non Series-Parallel Systems using Different Methods
- 28. Puran Rathi (2019): Renewal Theoretic Approach for Availability Analysis of a Repairable System using Arbitrary Distributions
- 29. Sushil Malik (2021): Reliability Evaluation of a Non-Series Parallel System with Different Components and Arbitrary Probability Distributions.
- 30. Amit Dev (2021): Reliability and Availability Analysis of a Repairable System Using Markov Approach.

### **Membership of Academic Bodies**

- 1. Member of Academic Council of CRSU, Jind for a period of two years w.e.f. 07-12-2016.
- 2. Member PG Board of Studies, Department of Statistics & O.R., Krukshetra University, Krukshetra for a period of two years w.e.f. 16-09-2016.
- 3. UGC Nominee for Advisory Committee of UGC-SAP (DRS-II) Program at Department of Statistics, Sardar Patel University, Vallabh Vidyanagar, Gujarat for a period of Five years w.e.f. 01-04-2016
- 4. UGC Nominee for Advisory Committee of UGC-SAP (DRS-II) Program at Department of Statistics, Manonmaniam Sundaranagar University, Tirunelveli for a period of Five years w.e.f. 01-04-2016.
- 5. Appointed as Vice Chancellor nominee for the meeting of the selection of the selection committee of various educational colleges affiliated with CRSU, Jind
- 6. Member PG Board of Studies, Department of Statistics, Punjabi University Patiala for a period of two years w.e.f 19-05-2016.
- 7. Member Admission Committee M.D. University, Rohtak for a period of two Sessions (2016-2017 &2017-2018)
- 8. Member Expert Committee Nominated by UGC for SAP.
- 9. UGC Nominee for Advisory Committee of UGC-SAP (DRS-1) Program at Dept. of Mathematics, BITS Pilani, Rajasthan and Department of Mathematics, Central

- University, Tezpur, Assam.
- 10. Elected Member of Executive Council (EC) of M.D. University, Rohtak from 23<sup>rd</sup> July 2005 to 22<sup>nd</sup> July, 2007.
- 11. Ex-officio Member of Academic Council (Since Nov., 2008), M.D. University, Rohtak.
- 12. Elected Member of Court, M.D. University, Rohtak for the period March 6, 1996 to March 5, 1999 and July 23, 2006 to July 22, 2009.
- 13. Member of Faculty of Physical Sciences, M.D. University, Rohtak.
- 14. Member of PG/UG Board of Studies, University Research Scholarship (URS) and Examinations Complaint Committees for the Department of Statistics, M.D. University, Rohtak.
- 15. Member of Unfair Means Committee (UMC), Tender Committee and Inquiry Committee, M.D. University, Rohtak.
- 16. Convener of Inspection Committee(s) for colleges, M.D. University, Rohtak.
- 17. University Nominee for Governing body of colleges (self financing)
- 18. Elected as Joint Secretary of the Society for Engineering, Quality and Operations Management (SREQOM), University of Delhi on Dec. 19, 2009 for a period of three years.
- 19. Elected as Member Executive Committee of MDUTA for a period of one year on Dec. 16, 2009.
- 20. Elected as Member Executive Committee (March 2, 2010 to Dec. 2010), Treasurer for two terms (Jan. 2010- Dec.2012 and Jan. 2013 Dec. 2014) and Secretary (Dec. 2020- Dec. 2022) of the Indian Society of Probability and Statistics (ISPS).
- 21. Elected as Vice President (since Dec. 2014), Secretary for two terms (Dec. 2010 to Dec. 2014) and Joint Secretary (Dec. 2008 to Dec.2010) of the Forum for Interdisciplinary Mathematics (FIM).
- 22. Elected as Member of the section of Mathematical Sciences (including Statistics) for three Consecutive Terms (years 2014,2015 and 2016) of the Indian Science Congress Association.

# **Administrative Assignments and Educational Administration**

- 1. Appointed as Examiner for Gujarat SET during Oct.8-11,2021.
- 2. Served as Head, Department of Statistics, M.D. University, Rohtak for a period of 03 Years (from 02-09-2018 to 01-09-2021).
- 3. Appointed as Member Interview Committee for Indian Statistical Services (ISS) by UPSC, New Delhi on April 19, 2021.
- 4. Appointed as Returning Officer by the Vice-Chancellor for conducting Non-Teaching Employee Association Election of M.D. University, Rohtak held during the Years 2015-20.
- 5. Appointed as Convener International Conference on "Emerging Innovations in Statistics and Operations Research (EISOR-2018)" organized by Department of Statistics, M.D. University, Rohtak during Dec. 27-30, 2018 in Conjunction with 38<sup>th</sup> Annual Convention of ISPS and 4<sup>th</sup> Convention of IARS.

- 6. Appointed as Organizing Secretary One Day Workshop on "Data Analysis Using R-Programming (Statistical Software)" organized by Department of Statistics, M.D. University, Rohtak on Dec. 26, 2018.
- 7. Acted as in-charge of the Students Educational/Field Tour(s) organized by the Department during March 18-21, 2015 to Himachal Pradesh (Dalhousie, etc.), Feb. 08, 2016 to Suraj Kund Mela, March 03-07, 2017 to Rajasthan(Mount Abu, etc.), March 15-18, 2018 to Himachal Pradesh(Mcleodganj, etc.) & March 14-18, 2019 to Uttarakhand (Mussoorie, etc.).
- 8. Appointed as Convener Accommodation Committee for 21<sup>st</sup> National Youth Festival, 2017 held at M.D. University, Rohtak during Jan. 12-16, 2017.
- 9. Worked as Chief Warden (Boys) M.D. University, Rohtak w.e.f. 01-01-2017 to 23-05-2017
- 10. Appointed as Proctor M.D. University, Rohtak w.e.f. 18-02-2016.
- 11. Appointed as Chairman of the conference organizing committee of the Forum for Interdisciplinary Mathematics (FIM) for a period of two years with effect from Nov. 2015.
- 12. Appointed as observer for conducting Governing body election of colleges (self Financing) affiliated to M. D. University, Rohtak.
- 13. Appointed as Coordinator UGC SAP (DRS-I) sanctioned to the Department of Statistics, M.D. University, Rohtak on 01/09/2014.
- 14. I have been co-operating the University in the successful conduct of various examinations/entrance tests in the capacity of Invigilator / Centre Superintendent / Observer / Convener Flying Squad, Secrecy Officer, etc. and examiner of various PG and M. Phil classes.
- 15. Worked as Exam Coordinator for conducting and compilation of the results of Statistics Talent Search Examination 2009 organized by the Department of Statistics, M.D. University, Rohtak on Nov. 22, 2009.
- 16. I have been actively engaged in guiding students for future academic plan and in updating their knowledge for the preparation of various competitive examinations like UGC/CSIR, NET, Indian Statistical Services, Bank's Probationary Officer and other Allied services.
- 17. Served as Program Coordinator (NSS), M.D. University, Rohtak from 18<sup>th</sup> August 2005 to 23<sup>rd</sup> Jan. 2009.
- 18. Worked as convener to conduct interviews for the selection of Best NSS Volunteers and Best NSS Program Officers of the University for the session 2005-06, 2006-07 and 2007-08.
- 19. Inspected 10 days NSS Special Camps organized by various NSS units working in the Colleges/Institutions affiliated to University during autumn and winter breaks for the sessions 2005-06, 2006-07, 2007-08 and 2008-09.
- 20. Convened the district level meetings of the Principals and Program Officers (NSS) of the Colleges/Institutions affiliated to the University during the month of Dec. 2005, 2006, 2007 and 2008 to discuss various issues and problems related to NSS programs

- 21. Convened University level NSS Advisory Committee meetings for the sessions 2006-07, 2007-08 and 2008-09 in which Program Coordinator (NSS) represented as a Member Secretary.
- 22. Participated in the State Level Seminar on Human Rights and Social Harmony" jointly organized by RGNIYD Sriperumbudur, Chennai and NSS Cell of Dr. B.R. Ambedkar University, Agra at St. John's College Agra during 30-31 Dec., 2008.
- 23. Conducted University level Prize Distribution Functions to honor Best NSS Volunteers and Best NSS Program Officers of the University for the session 2005-06, 2006-07 and 2007-08 held on 5<sup>th</sup> August, 2006; 24<sup>th</sup> Sept., 2007 and 24<sup>th</sup> Sept., 2008 respectively.
- 24. Participated in the 3 days orientation-cum-training workshop on Youth Leadership and Personality Development organized by Ministry of Youth Affairs and Sports, Govt. of India at Rajiv Gandhi National Institute for Youth Development (RGNIYD), Sri Perumbudur, Tamil Nadu during March 29-31, 2008.
- 25. Participated in one day YUVA program as Program Coordinator (NSS) organized by the Ministry of Sports and Youth Affairs, Govt. of India on 27-6-2006 held at Vigyan Bhawan, New Delhi.

# Academic/Extra Curricular Activities Organized

- International Conference (Virtual Mode) on "Emerging Trends in Statistics and Data Science" jointly organized by Department of Statistics, M.D. University, Rohtak in Conjunction with 40<sup>th</sup> Annual convention of ISPS and others during Sept. 07-10, 2021.
- 2. One day Workshop on "Reliability Theory and Modelling" organized by Department of Statistics, M.D. University, Rohtak on Feb. 26, 2021.
- 3. One Week National Workshop on "Statistical Techniques and Data Analysis using Software" organized by Department of Statistics, M.D. University, Rohtak during Feb. 25 to March 01, 2020.
- 4. Four Days International Conference on "Emerging Innovations in Statistics and Operations Research (EISOR-2018)" organized by Department of Statistics, M.D. University, Rohtak during Dec. 27-30, 2018 in Conjunction with 38<sup>th</sup> Annual Convention of ISPS and 4<sup>th</sup> Convention of IARS.
- 5. One Day Workshop on "Data Analysis Using R-Programming (Statistical Software)" organized by Department of Statistics, M.D. University, Rohtak on Dec. 26, 2018.
- 6. One day National Seminar on "Stochastic Processes and Applications" organized by Department of Statistics, M.D. University, Rohtak held on Nov. 11, 2017.
- 7. A three day National Conference on "Statistics and Optimization Techniques (NCSOT)" organized by the Department of Statistics, M.D. University, Rohtak in conjunction with 2<sup>nd</sup> Convention Indian Association for Reliability and Statistics (IARS) during Feb. 11-13, 2017.
- 8. A three day National Workshop on "Sample Surveys and Data Analysis (Using Software SPSS, MINITAB and R)" organized by the Department of Statistics, M.D. University, Rohtak in conjunction with Indian Association for Reliability and Statistics (IARS) during June 13-15, 2016.

- 9. A three day National Conference on "Recent Trends and Developments in Statistics (NCRTDS)" organized by the Department of Statistics, M.D. University, Rohtak in conjunction with 1<sup>st</sup> Convention of Indian Association for Reliability and Statistics (IARS) during Feb. 21-23, 2015.
- 10. One day National Workshop on "SPSS & R Software" jointly organized by the Department of Statistics, M.D. University, Rohtak and Indian Association for Reliability and Statistics (IARS) on Feb. 20, 2015.
- 11. Organized a Three Day National Workshop on "Applicable Statistics" held at Department of Statistics, M.D. University, Rohtak and sponsored by Department of Higher Education, Govt. of Haryana, Panchkula during March 28-30, 2010.
- 12. Organized a Five Day National Workshop on "Modeling, Optimization and Their Applications" sponsored by Department of Science and Technology, Govt. of India held at Department of Statistics, M. D. University, Rohtak during 17-21 Auguat, 2010.
- 13. Five Days Youth Leadership Training Camps (YLTC) for the NSS Volunteers during Sept. 20-24, 2005; Sept. 24-28, 2006; Sept. 25-29, 2007 and Sept. 16-20, 2008.
- 14. Organized one day HIV/AIDS Awareness Program for NSS Volunteers/Youth on the occasion of International Youth Day i.e. on 12<sup>th</sup> August, 2008 under the auspices of Haryana AIDS Control Society, Panchkula in which 370 persons participated.
- 15. A Ten-day Orientation Course for NSS Program Officers during March 17-26, 2006 with the collaboration of TORC, Chandigarh.
- 16. A 10-day pre-Republic Day Parade Camp organized during Nov. 2-11, 2006 for the NSS Volunteers of Northern Region of India under the aegis of Ministry of Youth Affairs and Sports, Govt. of India, New Delhi.
- 17. One day Legal Literacy Workshop for NSS Program Officers held on 26.11.2005 with the Collaboration of Department of Law, M.D. University, Rohtak.

(Prof. S.C. Malik)