

BIO-DATA Dr. NEELAM KUMARI

1. **NAME** : Dr. NEELAM KUMARI
2. **DESIGNATION** :Associate Professor
3. **DEPARTMENT**: Statistics
4. **DATE OF BIRTH**: 8th March 1974
5. **CORRESPONDENCE ADDRESS**:



Dr. Neelam Kumari
Associate Professor
Department of Statistics, Faculty of Physical Sciences
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6. **RESEARCH AREA** : Operations Research (Queueing Theory)
7. **RESEARCH PROJECTS** :National level UGC funded CPRHE/NUERA project entitled "Financing of Public Higher Education Institutions in India: A Study of Flow of Funds and their Utilisation" (Associated as Co-PI) , Amount Sanctioned: Rs. 4,30,000/-, Project duration: April 2015 to Dec. 2017.

8. EDUCATIONAL QUALIFICATIONS:

S.No.	PROGRAMME	BOARD/UNIVERSITY	YEAR	DIVISION/POSITION
01	M.Sc.(Statistics)	Punjabi University Patiala	1996	1 st / 3 rd
02	P.G.D.C.A.	Punjabi University Patiala	1997	1 st / 1 st
03	N.E.T.	UGC-CSIR	2000	Qualified
04	Ph.D.	Punjabi University Patiala	2012	Awarded

9. Work Experience

S.No.	Institute/Department	University Affiliation/ Approved by	Designation	Duration/ Session
1.	Department of Statistics Punjabi University Patiala- 147002 (Punjab)	UGC New Delhi.	Associate Professor in Statistics	28 th April 2019 to till date
2.	Department of Statistics Punjabi University Patiala- 147002 (Punjab)	UGC New Delhi.	Assistant Professor in Statistics	28 th April 2005 to 27 th April 2019
3.	Department of Statistics Punjabi University Patiala- 147002 (Punjab)	UGC New Delhi.	Technical Assistant	19 th Dec. 2002 to 27 th April 2005
4.	Punjab College of Information Technology, Patiala	Punjabi University Patiala	Lecturer	2001-2002
5.	S.L.I.E.T. Longowal (Distt. Sangrur)	PTU Jalandhar	Lecturer	1999-2000
6.	S.L.I.E.T. Longowal (Distt. Sangrur)	PTU Jalandhar	Teaching Associate	1998-1999
7.	Dashmesh ,Badal Distt. Muktsar		Instructor for ITI Computer Diploma after 10+2 of DPCS Course	1997-1998

10. Research Publications:

1. "A Multiserver Queueing System With Feedback". Garg, P.C. and Singla, Neelam. *Journal of Indian Soc. Stat. Oper. Res.*, XXVI (1-4), 27-35, 2005.
2. "A Queueing Model Having Heterogeneous Servers And Feedback". Garg, P.C. and Singla, Neelam. *Journal Punjab Academy of Sciences*, 2(1-2), 5-10, 2005.

3. "A Note on a Feedback Queueing System With Intermittently Available Server". Garg, P.C. and Singla, Neelam. *The Proceeding of the National Seminar on Statistics and its Applications*, 42-47, January 2007.
4. "An Intermittently Available Server Queueing System With Feedback". Garg, P.C. and Singla, Neelam. *Int. J. Agricult. Stat. Sci.*, 3(2), 471-480, 2007.
5. "An Analysis of a Feedback Queueing System With Two Special Servers". Garg, P.C. and Singla, Neelam. *Int. J. Maths. Appl.*, 2(1-2), 37-48, 2009.
6. "An Intermittently Available Server System With Feedback Queueing System With Service in Batches of Random Size". Garg, P.C. and Singla, Neelam. *J. Rajasthan Acad. Physical Sci. (International Research Journal)*, 8(4), 397-422, 2009.
7. "A Feedback Queueing System With Correlated Departures". Garg, P.C. and Singla, Neelam. *Int. J. Agricult. Stat. Sci.*, 8(2), 459-467, 2012.
8. "A Single Server Queueing Model With Feedback And Balking". Jindia, Tanvi, Garg, P.C. and Singla, Neelam. *J. Rajasthan Acad. Physical Sci. (International Research Journal)*, 12(4), 373-384, 2013.
9. "Transient And Numerical Solution of A Feedback Queueing System With Correlated Departures ". Singla, Neelam and Garg, P.C. *American Journal of Numerical Analysis (International Research Journal)*, 2(1), 20-28, 2014.
10. "A Multi- Server Queueing Model With Feedback And Balking". Jindia, Tanvi, Garg, P.C. and Singla, Neelam. *J. Rajasthan Acad. Physical Sci. (International Research Journal)*, 13(1), 83-95, 2014.

11. "Numerical Solution And Busy Period Analysis of A Feedback Queueing Model With Balking". Garg, P.C., Singla, Neelam and Jindia, Tanvi. J. International Research Journal of Mathematics, Engineering and IT, Vol. 2, Issue 8, 31-43, 2015. IF 2.868.
12. "Transient And Numerical Solution of A Balking Queueing Model With Feedback and Heterogeneous Servers". Garg, P.C., Singla, Neelam and Jindia, Tanvi. International Journal of Mathematical Archive, Vol. 7, Issue 12, 103-111, 2016.
13. "Busy Period Analysis of A Markovian Feedback Queueing Model With Servers Having Unequal Service Rate". Singla, Neelam. International Journal of Applied Mathematics and Statistical Sciences, Vol. 6, Issue 1, 55-64, 2017.
14. "Time Dependent Solution and Busy Period Analysis of a Balking Feedback Queueing Model with Intermittently Available Server". Garg, P.C., **Singla, Neelam** and Jindia, Tanvi. ANVESHNA's International Journal of Research in Engineering and Applied Sciences, Vol. 2, Issue 11, 291-301, Nov. 2017.
15. "Performance Analysis of a Two-State Queueing Model with Retrials". **Singla, Neelam** and Kalra, Sonia. J. Rajasthan Acad. Physical Sci. (International Research Journal), Vol. 17, Issue 1 & 2, 81-100, 2018.
16. "Explicit Time Dependent Solution of a Two-State Retrieval Queueing Model with Two Parallel Servers". **Singla, Neelam** and Kalra Sonia. *Int. J. Agricult. Stat. Sci.*, Vol. 14, Issue 1, ISSN 0973-1903, pp 419-429, June 2018.
17. "An Analysis of a Two-State Retrieval Queueing Model with Balking". **Singla, Neelam** and Kalra Sonia. *Int. Journal of Interdisciplinary Research and Innovations*, Vol. 6, Issue 3, pp 528-539, July-Sept. 2018.

18. "A Two-State Retrial Queue with Reneging Customers". **Singla, Neelam** and Kalra Sonia. *Int. Journal of Management, Technology and Engineering*, Vol. 8, Issue X, pp 2650-2663, October 2018.
19. "A Two-State Multiserver Queueing System with Retrials". **Singla, Neelam** and Kalra, Sonia. *Int. J. Open Problems Comput. Math.*, Vol. 12, No. 3, pp 62-75, ISSN 1998-6262, September 2019.
20. "A Two-State Retrial Queueing Model with Batch Departures". **Singla, Neelam** and Kalra, Sonia. *Journal of Gujarat Research Society*, Vol. 21, Issue 8, pp 1388-1396, ISSN 0374-8588, Nov. 2019.
21. "An Analysis of a Two-State Retrial Queue with Impatient Customers". **Singla, Neelam** and Kalra, Sonia. *Int. J. Agricult. Stat. Sci.*, Vol. 15, No. 2, pp 861-871, ISSN 0973-1903, Dec. 2019.
22. "A Two-State M/M/1 Retrial Queueing Model with Feedback". **Singla, Neelam** and Kalra Sonia. *Int. J. Advanced Science and Technology*, Vol. 29, Issue 5, pp 2608-2623, ISSN 2005-4238, 2020.
23. "A Two-State Multiserver Retrial Queueing Model with Balking". **Singla, Neelam** and Kalra Sonia. *RAFAS Journal of Physics: Conference Series*, pp 1-11, DOI: 10.1088/1742-6596/1531/1/012061, Vol. 1531
24. "A Two-State Retrial Queueing Model with Feedback having Two Identical Parallel Servers". **Singla, Neelam** and Kaur, Harwinder. *Indian Journal of Science and Technology*, Vol. 14(11), April 2021, pp 915-931, ISSN 0974-6846.
25. "Performance Analysis of a Two State MultiserverMarkovian Queueing Model with Reneging Customers". **Singla, Neelam** and Kalra Sonia. Book Title: *Recent Trends in Mathematical Modeling and High Performance Computing*. Springer Nature Switzerland AG Birkhäuser, Cham. https://doi.org/10.1007/978-3-030-68281-1_24 , Pages 313-330.
26. "A Two-Dimensional Multiserver Queueing System with Repeated Attempts and Impatience". **Singla, Neelam** and Kalra Sonia. *Indian Journal of*

Science and Technology, Vol. 14(17), 2021, pp 1379-1391, ISSN 0974-6846.

27. "A Two-State Retrial Queueing Model with Feedback having Two Non-Identical Parallel Servers". **Singla, Neelam** and Kaur, Harwinder. *Turkish Journal of Computer and Mathematics Education*, Vol. 12 No.11 (2021) pp 2149-2161, ISSN 1309-4653.
28. "A Two-State Retrial Queueing Model with Feedback and Balking". **Singla, Neelam** and Kaur, Harwinder. *Reliability: Theory and Applications* Vol 16 SI 2(64) Nov. 2021, pp 142-155, ISSN 1932-2321.
29. "An Analysis of Two-State Retrial Queueing Model with Feedback having Impatient Customers". **Singla, Neelam** and Kaur, Harwinder. *International Journal of Applied Mathematics and Statistics*, Vol: 61(2) Feb 2022, pp 23-38, ISSN: (0973-7545) .
30. "Explicit time-dependent solution of a two-state retrial queueing model with heterogeneous servers". **Singla, Neelam** and Kalra Sonia. *Reliability: Theory and Applications*. Vol 17 No. 1(67) , March 2022, pp 325-339, ISSN: 1932-2321.
31. "An Analysis of a Two-State Markovian Retrial Queueing Model with Priority Customers". **Singla, Neelam** and Kalra, Sonia. *Indian Journal of Science and Technology*, Vol: 15(10), March 2022, pp 428-441, ISSN: (0974-6846).
32. "Multiserver retrial queueing model with feedback". **Singla, Neelam** and Kaur, Harwinder. *International Journal of Statistics and Reliability Engineering*, Vol: 9(1), April 2022, pp 39-50, ISSN 2350-0174 .
33. "Single Server Retrial Queueing System with Catastrophe". **Singla, Neelam** and Garg, Ankita. *Reliability: Theory and Applications* Vol 17 No.3(69) Sept. 2022, pp 376-390, ISSN 1932-2321.
34. "Analysis of a Two-State Parallel Servers Retrial Queueing Model With Batch Departures". **Singla, Neelam** and Kalra, Sonia. *Reliability: Theory and Applications* Vol 17 No.3(69) Sept. 2022, pp 121-130, ISSN 1932-2321.
35. "A Two-State Feedback Retrial Queueing System Having Two Heterogeneous Parallel Servers And Impatient Customers". **Singla, Neelam** and Kaur, Harwinder. *Reliability: Theory and Applications* Vol 18 No. 2(73) Nov. 2023, pp 498-512, ISSN 1932-2321.

36. "A Balked Feedback Queueing Model with Two Special Server". **Singla, Neelam** and Jindia Tanvi. Int. J. Agricult. Stat. Sci., Vol 19 No. 1, 2023 pp 353-363. ISSN 0973-1903, e-ISSN: 0976-3392.

11. Conferences:

1. Presented a research paper entitled "A Queueing Model Having Heterogeneous Servers And Feedback" in the "8th Punjab Science Congress theme Science and Technology Excellence and Accountability" held at Department of Zoology, Punjabi University Patiala during February 7-9, 2005.
2. Presented a research paper entitled "An Intermittently Available Server Queueing System With Feedback" in the "National conference on Applications of Mathematics in Engineering and Technology" held at Malout Institute of Management and Information Technology, Malout in collaboration with Indian Society of Information Theory and Applications (ISTIA) during March 26-28, 2005.
3. Presented a research paper entitled "A Note on a Feedback Queueing System With Intermittently Available Server" in the "National Seminar on Statistics and its Applications (NSSA-07)" held at Department of Mathematics, SantLongowal Institute of Engineering and Technology, Longowal during January 19-20, 2007.
4. Presented a research paper entitled "An Analysis of a Feedback Queueing System With Two Special Servers" in the 11th Punjab Science Congress held at Thapar University Patiala during February 7-9, 2008.
5. Presented a research paper entitled "A study of a Feedback Queueing System With Correlated Departures" in the "National Seminar on

Challenges in Software Engineering Research and Practices” held at N.C.College of Engineering Israna, Panipat during March 30-31, 2010.

6. Presented a research paper entitled “ Analysis of Feedback Queueing Model with Two Heterogeneous Servers and Balking” in the “Conference on Exploring Basic and Applied Sciences for Next Generation Frontiers” held at Lovely Professional University during November 14-15, 2014.
7. Presented a research paper entitled “Numerical Solution and Busy Period Analysis of a Feedback Queueing Model with Balking” in the 18th Punjab Science Congress held at DeshBhagat University, MandiGobingarh during February 7-9, 2015.
8. Presented a research paper entitled “Busy Period Analysis for a Markovian Feedback Queueing System Having Heterogeneous Servers” in the International Conference on Modeling Simulation & Optimizing Techniques (ICMSOT-2015) held at D A V College, Jalandhar during February 12-14, 2015.
9. Presented a research paper entitled “Numerical Solution of a Multiserver Feedback Queueing Model with Poisson Arrivals & Departures” in the International Conference on Modeling Simulation & Optimizing Techniques (ICMSOT-2015) held at D A V College, Jalandhar during February 12-14, 2015.
10. Presented a research paper entitled “Busy Period Analysis of a Markovian Multiserver Queueing System with Feedback” in the International Conference on Advances in Mathematical Sciences-2015 held at GSSDGS Khalsa College, Patiala during March 19-21, 2015.

11. Presented a research paper “Progress of Financing Higher Education in Punjab” in the Analysis Framework workshop of the National Research Project titled “Financing of Public Higher Education Institutions in India : A study of Flow of Funds and their Utilisation” organized by CPRHE/NUEPA, on 18th and 19th April, 2016, in NUEPA, New Delhi.
12. Presented a research paper titled “Financing of Public Higher Education Institutions in Punjab: A study of Flow of Funds and their Utilisation” in the Third Research Methodology workshop of the National Research Project titled “Financing of Public Higher Education Institutions in India : A study of Flow of Funds and their Utilisation” organized by CPRHE/NUEPA, on 25th and 26th September, 2017, in NUEPA, New Delhi.
13. Presented a research paper entitled “An Analysis of a Two-State Queueing Model with Retrials” in the International Conference on Advances in Mathematical, Physical and Computer Sciences (ICAMPCS-2018) held at SGGGS Khalsa College, Mahilpur District Hoshiarpur during February 12-13, 2018.
14. Presented a research paper entitled “An Analysis of a Two-State Retrieval Queueing Model with Two Parallel Identical Servers” in the International Conference on Advances in Mathematical, Physical and Computer Sciences (ICAMPCS-2018) held at SGGGS Khalsa College, Mahilpur District Hoshiarpur during February 12-13, 2018.
15. Presented a research paper entitled “Bulk Service Feedback Queueing System with Intermittently Available Server and Balking” in the International Conference on Advances in Mathematical, Computer and Physical Sciences organized by IMRF in association with UNESCO and

the Ministry of Education and Science, Republic of Macedonia held at IMRF Chandigarh Academic Chapter, Chandigarh during February 22-24, 2018.

16. Presented a research paper entitled "A Two-State Retrial Queue with Reneging Customers" in the 3rd International Conference on Science, Technology and Management (ICSTM-2018) held at Institute of Engineers Chandigarh on October 28, 2018.
17. Presented a research paper entitled "A Two-State Retrial Queueing Model with Feedback Having Two Non Identical Parallel Servers and Impatient Customers" in the 2nd International Conference online on Mathematical Modeling and Simulation in Physical Sciences(MMSPS-2022) held at Sardar Vallabhbhai National Institute of Technology, Surat(Gujrat) during Feb.5-6, 2022.

12. RC/ OC/ Workshop/ Training Programs

1. Participated in the UGC sponsored Orientation Program from 01.12.2007 to 28.12.2007 organised by the UGC Academic Staff College, Panjab University, Chandigarh.
2. Participated in the UGC sponsored Refresher Course in Mathematics/Statistics from 26.11.2010 to 16.12.2010 organised by Department of Mathematics, under the auspices of the UGC Academic Staff College, Panjab University, Chandigarh.
3. Participated in the UGC sponsored Refresher Course in Environment Studies (ID) : Statistics from 14.05.2012 to 02.06.2012 organized by the UGC Academic Staff College, Punjabi University, Patiala.

4. Participated in the UGC sponsored Refresher Course in Mathematics & Statistics from 12.05.2014 to 31.05.2014 organized by the UGC Academic Staff College, Punjabi University, Patiala.
5. Participated in the UGC sponsored short term course in “Research Methodology” organized by the HRDC, Punjabi University, Patiala. during 24.09.2018 to 29.09.2018.
6. Participated in the UGC sponsored workshop on “Moocs, E-content development and open Educational Resources “ organized by the HRDC, Punjabi University, Patiala during 14.01.2019 to 19.01.2019.

12. Membership of Academic Societies

Indian Society for Information Theory and Applications (ISITA).
Punjab Academy of Sciences.
Indian Society for Probability and Statistics.

13. Ph.D. students guided / under guidance:

Ph. D. Awarded : 03
Thesis Submitted : -
Ph.D. under guidance: 02