




Faculty Details proforma

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| Title | Dr. | First Name | Aditi | Last Name | Khanna |  |
| Designation | | Assistant Professor | | | | |
| Address | | Department of Operational Research Faculty of Mathematical Sciences New Academic Block University of Delhi Delhi – 110 007 | | | | |
| Phone No | Office | +9111-27666672 | | | | |
| Mobile | | 099111007707 | | | | |
| Email | | <u>dr.aditikhanna.or@gmail.com</u> <u>akhanna@or.du.ac.in</u> | | | | |
| Educational Qualifications | | | | | | |
| Degree | Institution | | | | Year | |
| Ph. D. | Department of Operational Research, University of Delhi | | | | 2010 | |
| M.Phil. | Department of Operational Research, University of Delhi | | | | 2004 | |
| PG | Hans Raj College, University of Delhi | | | | 2002 | |
| UG | Hans Raj College, University of Delhi | | | | 2000 | |
| Career Profile | | | | | | |
| April 2013 – Till Date | Assistant Professor, Department of Operational Research, University of Delhi, Delhi, India | | | | | |
| July 2007 –March 2013 | Assistant Professor, Department of Mathematics, Keshav Mahavidyalaya, University of Delhi, Delhi, India | | | | | |
| August 2005 –Nov. 2005 | Lecturer, Department of Mathematics, Sri Guru Gobind Singh College of Commerce, University of Delhi, Delhi, India | | | | | |
| Administrative Assignments | | | | | | |
| 2017-2018 | Member, Admission Committee, Department of Operational Research. University of Delhi, Delhi – 110 007 | | | | | |
| 2016-17 | Member, Academic Activities Committee, Department of Operational Research. University of Delhi, Delhi – 110 007 | | | | | |
| 2017 | Organizing Secretary for the Workshop on “Business Analytics and Intelligence” held on 25th February 2017, at Department of Operational Research, University of Delhi, Delhi – 110 007 | | | | | |

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| 2015-2016 | Member, Committee for preparing Ad-hoc Panel Department of Operational Research, University of Delhi, Delhi – 110 007 |
| 2015-16 | Member, Departmental Technical Committee, (XII Plan Allocation of funds under GDA “Non Recurring” Head), Department of Operational Research, University of Delhi, Delhi – 110 007 |
| 2015-16 | Member, Internal Assessment Compilation Committee, Department of Operational Research, University of Delhi, Delhi – 110 007 |
| 2016-2017 | Member, Admission Committee, Department of Operational Research. |
| 2016-2017 | Member, Student’s Activities Committee, Department of Operational Research. |
| 2014- Till date | Member, Departmental Research Committee Department of Operational Research. |
| 2013 – 2015 | Member, Committee of Courses for Post Graduate & Research Studies, Department of Operational Research. |
| 2013 – Till date | Member, M. Phil. Committee, Department of Operational Research. |
| 2015-2016 | Member, Departmental Purchase Committee, Department of Operational Research. |
| 2015-2016 | Member, Departmental Hooliganism Committee, Department of Operational Research. |
| 2015-2016 | Member, Admission Committee, Department of Operational Research. |
| 2014-2015 | Member, Antardhwani 2015, Department of Operational Research. |
| 2014-2015 | Member, Internal Assessment Compilation Committee, Department of Operational Research. |
| 2014-2015 | Member, Departmental Sexual Harassment Committee, Department of Operational Research. |
| 2014-2015 | Member, Admission Committee, Department of Operational Research. |
| 2013-2014 | Member, Admission Committee, Department of Operational Research. |
| 2013 | Member, Organizing Committee for Departmental Seminar cum Workshop on “Operational Research: Application, Challenges & Opportunities in Industry” during September 6-7, 2013. |
| Areas of Interest / Specialization | |
| Inventory And Production Management, Supply Chain Management | |
| Subjects Taught | |
| Teaching Experience: 10 years | |

M. Sc. Operational Research (Main Campus) (Lectures/Guidance)

1. Inventory management
2. Queuing System
3. Scheduling Techniques
4. C++ and UNIX
5. Project Work

M.A./M.Sc. Applied Operational Research(South Campus)(Lectures/Guidance)

1. Advanced Inventory Management
2. Scheduling Techniques
3. C++ and UNIX
4. Project Work

B. Sc. Mathematical Sciences (Lectures/Guidance)

1. Inventory Management
2. Marketing Management
3. Linear Programming
4. Mathematical Programming
5. Optimization I
6. Optimization II
7. Project Management
8. Statistical Quality Control
9. Case Studies

B. Sc. (H) Mathematics (Lectures)

1. Optimization

B. Sc. (H) Computer Science (Lectures)

1. Operational Research Techniques

Research Guidance

1. Supervision of Doctoral Thesis, under progress: 3
2. Supervision of M. Phil dissertations: 2
Evaluated: Ms. Shikha Yadav (2018)
(Title of the Dissertation: *Impact of Integrated Strategies on Vendor-Buyer Inventory Systems*)
Awarded: Ms. Prerna Gautam (2015)
(Title of the Dissertation: *Inventory Modeling for Imperfect Quality Items*)

Publications Profile

1. *Gautam, P., & Khanna, A. (2018)*. An imperfect production inventory model with setup cost reduction and carbon emission for an integrated supply chain. *Uncertain Supply Chain Management*, 6(3), 271-286. (SCOPUS) ISSN: 2291-6830, 2291-6822
2. Mittal, M., Jaggi, C. K., & Khanna, A. (2017) Retailers ordering policy for deteriorating imperfect quality items when demand and price are time-dependent under inflationary conditions and permissible delay in payments. *International Journal of Procurement Management*. 10(4), 461-494. (SCOPUS) (H Index: 14, SJR: 0.38) ISSN: 17538432, 17538440

3. **Khanna, A.,** Kishore, A., and Jaggi, C.K. (2017). Strategic Production modeling for defective items with imperfect Inspection process, Rework, and Sales return under Two-level Trade Credit. *International Journal of Industrial Engineering Computations*. 8, 85-118. (SCOPUS) (H Index 14, SJR: 0.64, SNIP: 0.986) ISSN: 19232926, 19232934
4. **Khanna, A.,** Gautam, P., & Jaggi, C. K. (2017). Inventory Modeling for Deteriorating Imperfect Quality Items with Selling Price Dependent Demand and Shortage Backordering under Credit Financing. *International Journal of Mathematical, Engineering and Management Sciences*. 2(2), 110–124. ISSN: 2455-7749
5. **Khanna, A.,** Kishore, A., and Jaggi, C.K. (2017). Inventory Modeling for Imperfect Production Process with Inspection Errors, Sales Return, and Imperfect Rework Process. *International Journal of Mathematical, Engineering and Management Sciences*. 2(42), 242–258. ISSN: 2455-7749
6. **Khanna, A.,** Kishore, A., and Jaggi, C.K. (2016). Impact of inflation and trade credit policy on an inventory model for imperfect quality items with allowable shortages, accepted for publication in *Control and Cybernetics*. 45(1), 37-82. (SCOPUS) (Impact Factor: , H Index 30, SJR: 0.17, SNIP:) ISSN: 03248569
7. Tiwari, S., Cárdenas-Barrón, L. E., **Khanna, A.,** & Jaggi, C. K. (2016). Impact of trade credit and inflation on retailers ordering policies for non-instantaneous deteriorating items in a two-warehouse environment. *International Journal of Production Economics*, 176, 154-169.(SCIE)(Impact Factor: 2.752, H Index 100, SJR: 2.786, SNIP: 2.475)ISSN: 09255273.
8. **Khanna, A.,** Gautam, P., & Jaggi, C. K. (2016, March). Coordinating vendor-buyer decisions for imperfect quality items considering trade credit and fully backlogged shortages. In *ADVANCEMENT IN SCIENCE AND TECHNOLOGY: Proceedings of the 2nd International Conference on Communication Systems (ICCS-2015,)* (Vol. 1715, p. 020065). AIP Publishing.(SCOPUS) (H Index 34 SJR: 0.15) ISSN: 0094-243X
9. Jaggi, C. K., **Khanna, A.,** & Kishore, A. (2016, March). Production inventory policies for defective items with inspection errors, sales return, imperfect rework process and backorders. In *ADVANCEMENT IN SCIENCE AND TECHNOLOGY: Proceedings of the 2nd International Conference on Communication Systems (ICCS-2015),* (Vol. 1715, p. 020062). AIP Publishing. (SCOPUS) (H Index 34, SJR: 0.15) ISSN: 0094-243X
10. Jaggi, C., **Khanna, A.,** & Nidhi, N. (2016). Effects of inflation and time value of money on an inventory system with deteriorating items and partially backlogged shortages. *International Journal of Industrial Engineering Computations*, 7(2), 267-282.(Impact Factor: 0.131, H Index 8, SJR: 0.8, SNIP: 0.994) ISSN: 19232926, 19232934
11. **Khanna, A.,** Mittal, M., Gautam, P., & Jaggi, C. (2016). Credit financing for deteriorating imperfect quality items with allowable shortages. *Decision Science Letters*, 5(1), 45-60. (SCOPUS) (H Index 2, SJR: 0.2, SNIP: 0.402)ISSN: 19295812, 19295804.
12. Jaggi, C. K., Pareek, S., **Khanna, A.,** & Singhal, N. (2016). Optimal replenishment policy for fuzzy inventory model with deteriorating items and allowable shortages under inflationary conditions. *Yugoslav Journal of Operations Research*. (SCOPUS)ISSN: 0354-0243 EISSN: 2334-6043, 25(2).

13. Jaggi, C., Pareek, S., Khanna, A., & Sharma, R. (2015). Two-warehouse inventory model for deteriorating items with price-sensitive demand and partially backlogged shortages under inflationary conditions. *International Journal of Industrial Engineering Computations*, 6(1), 59-80. (SCOPUS) (Impact Factor: 0.131, H Index 8, SJR: 0.8, SNIP: 0.994) ISSN: 19232926, 19232934
14. Jaggi, C. K., Pareek, S., Khanna, A., & Sharma, R. (2014 NOV). Credit financing in a two-warehouse environment for deteriorating items with price-sensitive demand and fully backlogged shortages. *Applied Mathematical Modelling*, 38 (21), 5315-5333. (SCIE) (Impact Factor: 2.251, 5-Year Impact Factor: 2.326, H Index 55, SNIP: 1.816, SJR:1.283) ISSN: 0307-904X
15. Jaggi, C. K., Mittal, M., & Khanna, A. (2013 Sept.). Effects of inspection on retailer's ordering policy for deteriorating items with time-dependent demand under inflationary conditions. *International Journal of Systems Science*, 44(9), 1774-1782.(SCIE) (Impact Factor: 2.1, H Index 46, SJR: 1.06, SNIP: 1.546) ISSN: 14645319, 00207721
16. Jaggi, C. K., Khanna, A., Pareek, S., & Sharma, R. (2013 April). Ordering Policy in a Two-Warehouse Environment for Deteriorating Items with Shortages under Inflationary Conditions. *International Journal of Strategic Decision Sciences*, 4(2), 27-47. IGI Global. (SCOPUS), ISSN: 1947-8569
17. Jaggi, C. K., Khanna, A., & Mittal, M. (2011). Credit financing for deteriorating imperfect-quality items under inflationary conditions. *International Journal of Services Operations and Informatics*, 6(4), 292-309. (SCOPUS) (H Index: 7, SJR 0.18, SNIP: 0.304)ISSN: 17415403, 1741539X.
18. Jaggi, C. K., Khanna, A., & Verma, P. (2011). Two-warehouse partial backlogging inventory model for deteriorating items with linear trend in demand under inflationary conditions. *International Journal of Systems Science*, 42(7), 1185-1196.(SCIE) (Impact Factor: 2.1, H Index 46, SJR: 1.06, SNIP: 1.546) ISSN: 14645319, 00207721
19. Jaggi, C. K., Khanna, A. (2010). Supply chain model for deteriorating items with stock-dependent consumption rate and shortages under inflation and permissible delay in payment. *International Journal of Mathematics in Operational Research*, 2(4), 491-514. (SCOPUS) (H Index: 10, SJR: 0.51) ISSN: 17575850, 17575869
20. Jaggi, C. K., Khanna, A. (2009). The retailer's procurement policy with credit-linked demand under inflationary conditions. *International Journal of Procurement Management*, 2(2), 163-179. (SCOPUS) (H Index: 12, SJR: 0.25) ISSN: 17538432, 17538440
21. Jaggi, C. K., Khanna, A. (2009). Retailer's ordering policy for deteriorating items with inflation-induced demand under trade credit policy. *International Journal of Operational Research*, 6(3), 360-379. (SCOPUS) (H Index: 14, SJR:0.41, SNIP: 0.75) ISSN: 17457645
22. Jaggi, C. K., Khanna, A. (2008). An integrated production-inventory-marketing model under inflationary conditions for deteriorating items. *International Journal of Applied Decision Sciences*, 1(4), 435-454. (SCOPUS) (H Index: 7, SJR: 0.29, SNIP: 0.600)ISSN: 17558077, 17558085
23. Jaggi, C. K., Khanna, A. (2008). Impact of inflation and credit policies on a production lot size model. *Canadian Journal of Pure and Applied Sciences*, 2(1), 243-249.(Global Impact Factor for 2012 =2.657) ISSN: 1920-3853

24. Jaggi, C. K., Kausar, A., & Khanna, A. (2007). Joint Optimization of Retailer's unit selling price and Cycle length under Two-stage Credit Policy when the end demand is price sensitive as well as credit period sensitive. *Opsearch*, 44(2), 172-182. (SCOPUS) (H Index: 6, SJR: 0.26, SNIP: 0.317)ISSN: 09750320, 00303887
25. Jaggi, C. K., Khanna, A., & Goel, S.K. (2007). Progressive Credit Policy in a Supply Chain model under inflationary conditions. *Mathematics Today*, 23, 1-18. (ISSN: 0976-3228)
Chapter in Book
26. Jaggi, C. K., Gautam, P., & Khanna, A. (2018). Credit Policies for Deteriorating Imperfect Quality Items With Exponentially Increasing Demand and Partial Backlogging. In *Handbook of Research on Promoting Business Process Improvement Through Inventory Control Techniques (pp. 90-106)*. IGI Global.
27. Jaggi, C. K., Gautam, P., & Khanna, A. (2018). A Study on Imperfect Production System Under Maintenance Strategies and Warranty. In *Handbook of Research on Promoting Business Process Improvement Through Inventory Control Techniques (pp. 371-387)*. IGI Global.
28. Jaggi C.K., Gautam P., Khanna A. (2018). Inventory Decisions for Imperfect Quality Deteriorating Items with Exponential Declining Demand Under Trade Credit and Partially Backlogged Shortages. In *Quality, IT and Business Operations (pp. 213-229)*. Springer, Singapore. (Print ISBN: 978-981-10-5576-8, Online ISBN: 978-981-10-5577-5)
29. Jaggi, C. K., Pareek, S., Khanna, A., & Sharma, R. (2014/4/30). Ordering Policy in a Two-Warehouse Environment for Deteriorating Items under Inflationary Conditions. *Analytical Approaches to Strategic Decision-Making: Interdisciplinary Considerations*, 320.

Publications in the Last one year

1. Gautam, P., & Khanna, A. (2018). An imperfect production inventory model with setup cost reduction and carbon emission for an integrated supply chain. *Uncertain Supply Chain Management*, 6(3), 271-286. (SCOPUS) ISSN: 2291-6830, 2291-6822
2. Mittal, M., Jaggi, C. K., & Khanna, A. (2017) Retailers ordering policy for deteriorating imperfect quality items when demand and price are time-dependent under inflationary conditions and permissible delay in payments. *International Journal of Procurement Management*. 10(4), 461-494. (H Index: 14, SJR: 0.38) ISSN: 17538432, 17538440
3. Khanna, A., Kishore, A., and Jaggi, C.K. (2017). Strategic Production modeling for defective items with imperfect Inspection process, Rework, and Sales return under Two-level Trade Credit. *International Journal of Industrial Engineering Computations*. 8, 85-118. (H Index 14, SJR: 0.64, SNIP: 0.986) ISSN: 19232926, 19232934
4. Khanna, A., Gautam, P., & Jaggi, C. K. (2017). Inventory Modeling for Deteriorating Imperfect Quality Items with Selling Price Dependent Demand and Shortage Backordering under Credit Financing. *International Journal of Mathematical, Engineering and Management Sciences*. 2(2), 110–124. ISSN: 2455-7749
5. Khanna, A., Kishore, A., and Jaggi, C.K. (2017). Inventory Modeling for Imperfect Production Process with Inspection Errors, Sales Return, and Imperfect Rework Process. *International Journal of Mathematical, Engineering and Management Sciences*. 2(42), 242–258. ISSN: 2455-7749

Conference Organization/ Presentations (in the last three years)

1. Attended and presented a paper titled ***“An Integrated model for Deteriorating Items with Price-Sensitive Demand and Preservation Technology under Partial Backlogging”*** in **Vivekananda International Conference VINC’17** on **“Building Research Analytics in Sciences, Technology, Operations Research & Management- BRAINSTORM”** held at **School of Business Studies, Vivekananda Institute of Professional Studies, Delhi, on 16-17 March, 2017.**
2. ***Organizing Secretary, Workshop on Business Analytics and Intelligence, Dept. of Operational Research, February 24 -25, 2017.***
3. Attended and presented a paper titled ***“Economic Production Quantity model with Defectives, Inspection errors and Imperfect Rework Process”*** at the **National Conference on and Optimization Techniques (NCSOT) organized by Department of Statistics, M.D. University, Rohtak, India, on 11-13 February, 2017.**
4. Attended International Conference on Recent Advances in Optimization Theory and Applications (RAOTA) at University of Delhi, during **January 30-31, 2016.**
5. Chaired a session at **7th International Conference on Quality, Reliability and Infocom Technology and Business Operations (ICQRITBO-2015)** at University of Delhi, during **28-30 December 2015.**
6. Attended and presented a paper titled ***“Optimizing inventory and pricing decisions for imperfect production with inspection errors, sales returns and backorders under inflationary conditions”*** in the **International Conference on Communication Systems (ICCS-2015)** at BK-BIET, Pillani during **18-20 October 2015.**
7. Attended and presented a paper titled ***“Inventory modeling for deteriorating imperfect quality items with price dependent demand and shortage backordering under credit financing”*** in the **International Conference on Communication Systems (ICCS-2015)** at BK-BIET, Pillani during **18-20 October 2015.**
8. Attended and presented a paper titled ***“Pricing and Credit decisions for Non-Instantaneous Deteriorating items in a Two Warehouse Environment”*** in the **V National Conference on Statistical Inference, Sampling Techniques and Related Areas** held at Aligarh Muslim University, Aligarh, India, held during **24-25 March, 2015.**
9. Attended and presented a paper titled ***“Credit financing policies for deteriorating imperfect quality items with allowable shortages”*** in the **National Conference on Recent Trends and Developments in Statistics** held at Maharshi Dayanand University, Rohtak, Haryana, on **21-23 February, 2015.**
10. Attended and presented a paper titled ***“Retailer’s Ordering Policy For Defective And Deteriorating Items With Permissible Delay In Payments Under Inflationary Conditions ”*** in the **International Conference on Innovative Trends in Mechanical, Material, Manufacturing, Automotive, Automobile and Aeronautical Engineering” (ITMMMAAAE-2014)** held at Jawaharlal Nehru University, New Delhi, on **15th and 16th February, 2014.**
11. Attended and presented a paper titled ***“Optimal replenishment policy for deteriorating items with partially backlogged shortages under inflationary conditions”*** in the **National Conference on Recent Trends and Developments in Operations Research** held at Birla Institute of Technology & Science (BITS), Pillani on **22nd and 23rd February, 2014.**

Research Projects (Major Grants/Research Collaboration)

- **Principal Investigator, R&D project sanctioned by University of Delhi, Delhi, during 2015-2016. (Research Grant No.: RC/2015/9677)**
Project Title- Strategic Inventory Modelling for Imperfect Quality Items with Inspection Errors
- **Principal Investigator, R&D project sanctioned by University of Delhi, Delhi, during 2014-2015. (Research Grant No.: RC/2014/6820)**
Project Title- Inventory Management Of Imperfect Quality Deteriorating Items
- **Principal Investigator, R&D project sanctioned under a scheme for strengthening R & D Doctoral Programme of University of Delhi, Delhi. (DRCH/R&D/2013-14/4155).**
Project Title- Study of Inventory Models in the era of Globalization

Awards and Distinctions

- **Awarded “Kusum Aggarwal Memorial Merit Scholarship” for a period of one year [2001-2002]**
- **Secured IInd position in M.Sc. Operational Research, in Hans Raj College, University of Delhi**
- **Secured IInd position in B.Sc. (G) Computer Sc., in Hans Raj College, University of Delhi**

Association With Professional Bodies

- **Member of Editorial Review Board, Amity Journal of Operations Management.**
- **Reviewer, Applied Mathematical Modeling(Elsevier), ISSN: 0307-904X**
- **Reviewer, “ Promoting Business Process Improvement through Inventory Control Techniques”, IGI Global 2017, (ISBN: 978-1-5225-3232-3)**
- **Reviewer, International Journal of Supply Chain and Operations Resilience (Inderscience)**
- **Life Member of Association of Inventory Academicians and Practitioners**
- **Member, Board of Research studies (Mathematical Sciences), Faculty of Mathematical Sciences, University of Delhi.**
- **Member, Committee to Review and Revise syllabus, for OR papers in UG courses, University of Delhi, Delhi.**

Other Activities

- **Attended Refresher Course in Mathematical Sciences (24th November – 13th December 2014) UGC – Sponsored at CPDHE, University of Delhi, Delhi – 110007.**
- **Attended Orientation Programme OR-76 (9th June 2014 – 4th July 2014) UGC – Sponsored at CPDHE, University of Delhi, Delhi – 110007.**
- **Real life industrial project guidance to final year M .Sc. Operational Research and M. A./M .Sc. Applied Operational Research students jointly with other faculty member, Department of Operational Research on various specific fields of Operational Research**