Faculty Details proforma



Dr. Aditi Khanna

Title Dr.	First Name	Aditi	Last Name	Khanna	Photograph
Designation	Assistant Pro	fessor			
Address	Department				
	-	aculty of Mathematical Sciences			
	New Academic Block				
	University of	Delhi			
	Delhi – 110 007				
Phone No Office	+9111-27666672				
Mobile	099111007707				
Email	dr.aditikhanna.or@gmail.com				
	akhanna@or	.du.ac.in			
Educational Qualification	ons				
Degree	Institution				Year
Ph. D.	_	of Operation	al Research,		2010
	University of Delhi Department of Operational Research,				
M.Phil.	University of	-	iai Kesearcii,		2004
PG	Hans Raj Col	lege, Universi	ity of Delhi		2002
UG	Hans Raj Col	ege, Universi	ity 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 Maha	vidyalaya,			
	University of	Delhi, Delhi,	India		
August 2005 -Nov. 2005					
	Sri Guru Gob	ind Singh Col	lege of		
	Commerce, l	Iniversity of I	Delhi, Delhi, In	dia	
Administrative Assignm	ients				
2017-2019	Member, Anti ragging committee				
	Department of	Operational	Research, Univ	versity of Delhi,	, Delhi – 110 007
	Member, Anti Sexual Harassment committee Department of Operational Research, University of Delhi, Delhi – 110 007				
	Member, Holi Hooliganism Prevention committee,				
		-		•	, Delhi – 110 007
2017-2019	Member, Boar	d of Research	n studies (Matl	hematical Scien	ices)
	Faculty of Matl				-

2017-2020	Member, Faculty of Mathematical Sciences Faculty of Mathematical Sciences, University of Delhi, Delhi – 110 007			
2013-2018	Deputy Superintendent (M.ScOR-Sem I and III) Department of Operational Research, University of Delhi, Delhi – 110 007			
2014-2018	Member, Departmental Research Committee Department of Operational Research, University of Delhi, Delhi – 110 007			
2014-2016	Member, Board of Research studies (Mathematical Sciences) Faculty of Mathematical Sciences, University of Delhi, Delhi – 110 007			
2013 –2015	Member, Committee of Courses for Post – Graduate & Research Studies, Department of Operational Research, University of Delhi, Delhi – 110 007			
2016-2018	Member, Committee of Courses & Studies for Under – Graduate Studies, Department of Operational Research, University of Delhi, Delhi – 110 007			
2016-2017	Member, Academic Activities Committee, Department of Operational Research, University of Delhi, Delhi – 110 007			
2015-2016	Member, Committee for preparing Ad-hoc Panel Department of Operational Research, University of Delhi, Delhi – 110 007			
2015-2016	Member, Departmental Technical Committee, (XII Plan Allocation of funds under GDA "Non Recurring" Head), Department of Operational Research.			
2015-2016	Member, Internal Assessment Compilation Committee, Department of Operational Research, University of Delhi, Delhi – 110 007			
2016-2017	Member, Admission Committee, Department of Operational Research, University of Delhi, Delhi – 110 007			
2016-2017	Member, Student's Activities Committee, Department of Operational Research, University of Delhi, Delhi – 110 007			
2014- Till date	Member, Departmental Research Committee Department of Operational Research, University of Delhi, Delhi – 110 007			
2013 – 2015	Member, Committee of Courses for Post Graduate & Research Studies, Department of Operational Research, University of Delhi, Delhi – 110 007			
2013 – Till date	Member, M. Phil. Committee, Department of Operational Research, University of Delhi, Delhi – 110 007			
2015-2016	Member, Departmental Purchase Committee, Department of Operational Research, University of Delhi, Delhi – 110 007			
2015-2016	Member, Departmental Hooliganism Committee, Department of Operational Research, University of Delhi, Delhi – 110 007			
2013-Till date	Member, Admission Committee, Department of Operational Research, University of Delhi, Delhi – 110 007			
2014-2015	Member, Antardhwani 2015, Department of Operational Research, University of Delhi, Delhi – 110 007			
2014-2015	Member, Internal Assessment Compilation Committee, Department of Operational Research, University of Delhi, Delhi – 110 007			
2014-2015	Member, Departmental Sexual Harassment Committee, Department of Operational Research, University of Delhi, Delhi – 110 007			

Areas of Interest / Specialization

Inventory And Production Management, Supply Chain Management

Subjects Taught

Teaching Experience: 12 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: 4
- 2. Supervision of M. Phil dissertations:

Awarded: 2

Ms. Prerna Gautam

(Title of the Dissertation: Inventory Modeling for Imperfect Quality Items)

Ms. Shikha Yadav

(Title of the Dissertation: Imapact of Integrated Strategies on Vendor-Buyer

Inventory Systems)

Publications Profile

Gautam, P., Kishore, A., Khanna, A*, & Jaggi, C. (2019). Strategic defect management for a sustainable green supply chain. *Journal of Cleaner Production*, 233, 226-241.
 (Indexing: SCIE, *Impact Factor: 5.651, SNIP:2.308*) - ISSN 0959-6526

- Khanna, A., Gautam, P., Sarkar, B., & Jaggi, C. K. (2019). Integrated Vendor-Buyer Strategies for Imperfect Production Systems with Maintenance and Warranty Policy. RAIRO OPERATIONS RESEARCH (Indexing: SCIE, Impact Factor: 0.562, H Index: 22, SJR: 0.3) ISSN 1290-3868 (Online) ISSN 0399-0559 (Print)
 DOI: https://doi.org/10.1051/ro/2019029
- **3.** Khanna, A., Kishore, A., Sarkar, B., & Jaggi, C. (2018). Supply Chain with Customer-Based Two-Level Credit Policies under an Imperfect Quality Environment. *Mathematics*, *6*(12), 299. (Indexing: SCIE) ISSN: 2227-7390
- 4. Khanna, A., Kishore, A., Sarkar, B., & Jaggi, C. K. (2018) Inventory and pricing decisions for imperfect quality items with inspection errors, sales returns, and partial backorders under inflation. RAIRO OPERATIONS RESEARCH (Indexing: SCIE, Impact Factor: 0.562, H Index: 22, SJR: 0.3) ISSN 1290-3868 (Online) ISSN 0399-0559 (Print)
 DOI: https://doi.org/10.1051/ro/2018102
- 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 Indexed) ISSN: 2291-6830, 2291-6822
- **6.** 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
- 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
- 8. 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
- 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
- 10. 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. (Impact Factor: , H Index 30, SJR: 0.17, SNIP:) ISSN: 03248569
- 11. 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.(*Impact Factor: 2.752, H Index 100, SJR: 2.786, SNIP: 2.475*)ISSN: 09255273.
- 12. 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.(H Index 34 SJR: 0.15) ISSN: 0094-243X
- **13.** 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. (H Index 34, SJR: 0.15) ISSN: 0094-243X
- 14. 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
- **15.** 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. (*H Index 2, SJR: 0.2, SNIP: 0.402*)ISSN: 19295812, 19295804.
- 16. 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. ISSN: 0354-0243 EISSN: 2334-6043, 25(2).
- 17. 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.(*Impact Factor: 0.131, H Index 8, SJR: 0.8, SNIP: 0.994*) ISSN: 19232926, 19232934
- 18. 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. (Impact Factor: 2.251, 5-Year Impact Factor: 2.326, H Index 55, SNIP: 1.816, SJR:1.283) ISSN: 0307-904X
- **19.** 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. *(Impact Factor: 2.1, H Index 46, SJR: 1.06, SNIP: 1.546)* ISSN: 14645319, 00207721
- **20.** 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, ISSN: 1947-8569**
- **21.** 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. (*H Index: 7, SJR 0.18, SNIP: 0.304*)ISSN: **17415403**, **1741539X**.
- 22. 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.(*Impact Factor: 2.1, H Index 46, SJR: 1.06, SNIP: 1.546*) ISSN: 14645319, 00207721
- 23. 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.(*H Index: 10, SJR: 0.51*) ISSN: 17575850, 17575869
- **24.** 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.(*H Index: 12, SJR: 0.25*) ISSN: 17538432, 17538440
- **25.** 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.(*H Index: 14, SJR:0.41, SNIP: 0.75*) ISSN: 17457645
- **26.** 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.(*H Index: 7, SJR: 0.29, SNIP: 0.600*)ISSN: **17558077, 17558085**

- 27. 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
- 28. 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. (*H Index: 6, SJR: 0.26, SNIP: 0.317*)ISSN: 09750320, 00303887
- 29. 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)

 Chapters in Book
- **30.** Jaggi, C. K., Gautam, P., & **Khanna, A.** (2017). 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.*

(Release Date: December, 2017

ISBN13: 9781522532323, ISBN10: 1522532323, EISBN13: 9781522532330, DOI: 10.4018/978-1-5225-3232-3)

31. Jaggi, C. K., Gautam, P., & **Khanna, A.** (2017). 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.*

(Release Date: December, 2017

ISBN13: 9781522532323, ISBN10: 1522532323, EISBN13: 9781522532330,

DOI: 10.4018/978-1-5225-3232-3)

- **32.** 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)
- 33. Jaggi, C. K., Pareek, S., Khanna, A., & Sharma, R. (2014). Ordering Policy in a Two-Warehouse Environment for Deteriorating Items under Inflationary Conditions. In *Analytical Approaches to Strategic Decision-Making: Interdisciplinary Considerations*, (pp. 320-338). IGI Global. (Indexed In: SCOPUS, Release Date: April, 2014,

ISBN13: 9781466659582 | ISBN10: 1466659580 | EISBN13: 9781466659599

DOI: 10.4018/978-1-4666-5958-2)

Publications in the Last one year

- Gautam, P., Kishore, A., Khanna, A*, & Jaggi, C. (2019). Strategic defect management for a sustainable green supply chain. *Journal of Cleaner Production*, 233, 226-241.
 (Indexing: SCIE, *Impact Factor: 5.651, SNIP:2.308*) ISSN 0959-6526
- Khanna, A., Gautam, P., Sarkar, B., & Jaggi, C. K. (2019). Integrated Vendor-Buyer Strategies for Imperfect Production Systems with Maintenance and Warranty Policy. RAIRO – OPERATIONS RESEARCH (Indexing: SCIE, Impact Factor: 0.562, H Index: 22, SJR: 0.3) ISSN 1290-3868 (Online) - ISSN 0399-0559 (Print)

DOI: https://doi.org/10.1051/ro/2019029

3. Khanna, A., Kishore, A., Sarkar, B., & Jaggi, C. (2018). Supply Chain with Customer-Based Two-Level Credit Policies under an Imperfect Quality Environment. *Mathematics*, 6(12), 299. (Indexing: SCIE) ISSN: 2227-7390

- Khanna, A., Kishore, A., Sarkar, B., & Jaggi, C. K. (2018) Inventory and pricing decisions for imperfect quality items with inspection errors, sales returns, and partial backorders under inflation. RAIRO OPERATIONS RESEARCH (Indexing: SCIE, Impact Factor: 0.562, H Index: 22, SJR: 0.3) ISSN 1290-3868 (Online) ISSN 0399-0559 (Print)
 DOI: https://doi.org/10.1051/ro/2018102
- 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 Indexed) ISSN: 2291-6830, 2291-6822 Chapters in Book
- 6. 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)

Conference Organization/ Presentations (in the last three years)

- 1. Conference Co-Chair in the Ist International Conference of "Emerging Trends in Inventory, Supply Chain & Reliability Modeling (ETISCRM 2018" held during December 21-23 2018 at Department of Operational research, University of Delhi, Delhi.
- 2. Conducted a Workshop on "How to Write a Research paper" organized by Association of Inventory Academicians and Practitioners, during December 17-20,2018, at Department of Operational research, University of Delhi, Delhi.
- 3. Delivered a talk on "Inventory management and control, Modelling and Optimization techniques" at Entrepreneurship Development Programme (EDP), sponsored by Department of Science and Technology, Govt of India during 11th June 2018 -13th July 20-18 at Amity School of Engineering and Technology, Bijwasan, Delhi.
- 4. 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.
- 5. Organizing Secretary, Workshop on Business Analytics and Intelligence, Dept. of Operational Research, February 24 -25, 2017.
- 6. 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.

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

- Life Member of Operational Research Society of India
- Life Member of Association of Inventory Academicians and Practitioners
- Member of Editorial Review Board, Amity Journal of Operations Management.
- Reviewer, Applied Mathematical Modeling (Elsevier)
- Reviewer, International Journal of Industrial Engineering: Theory, Applications and Practice [IJIETAP]
- Reviewer, OPSEARCH
- Reviewer, Journal of the Operational Research Society.
- Reviewer, American Journal of Mathematical and Management Sciences.
- Reviewer, International Journal of Supply Chain and Operations Resilience (Inderscience)
- Member, Board of Research studies (Mathematical Sciences), Faculty of Mathematical Sciences, University of Delhi.
- Member, Faculty of Mathematical Sciences, University of Delhi.
- Member, Committee to Review and Revise syllabus, for OR papers in UG courses (2013), University of Delhi, Delhi.
- Member, Committee to Review and Revise syllabus, for M.Sc. OR papers in PG courses (2018), University of Delhi, Delhi.
- Coordinator, Committee for Revision of UG courses of the Department of O.R. on the basis of LOCF (2019), University of Delhi, Delhi.

Other Activities

- ➤ Attended Short Term Course on MOOCs, E-Learning and ICT (15th June, 2019 to 21st June 2019) being organized by the CPDHE at University of Delhi
- ➤ Attended Refresher Course in Computational & Mathematical Studies (29th August 19th September 2018) at UGC HRDC, Jamia Millia Islamia, New Delhi.

- ➤ 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