

Department of Industrial & Systems Engineering,  
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**Dr Jitendra Kumar Jha**  
Professor

### Education

**PhD** Industrial and Management Engineering, Indian Institute of Technology Kanpur  
**MTech** Industrial Management, Indian Institute of Technology (BHU) Varanasi  
**BSc Engineering** Production Engineering, Birsa Institute of Technology (BIT) Sindri

### Experience

- Professor, Industrial & Systems Engineering, Indian Institute of Technology Kharagpur, November 2025 – Contd.
- Associate Professor, Industrial & Systems Engineering, Indian Institute of Technology Kharagpur, April 2018 – November 2025.
- Assistant Professor, Industrial & Systems Engineering, Indian Institute of Technology Kharagpur, July 2010 – April 2018.

### Administrative Experience

#### Institute-Level

- Vice-Chairperson, Career Development Centre, IIT Kharagpur, June 2023-July 2025
- Warden: BCR Hall of Residence, IIT Kharagpur, January 2020-December 2022.
- Assistant Warden: BCR Hall of Residence, IIT Kharagpur, November 2015 to December 2019  
VS Hall of Residence, IIT Kharagpur, October 2011 to October 2013
- Rector's Nominee (Technology related activities), Technology Students' Gymkhana, IIT Kharagpur, September 2017-October 2020.
- Treasurer, Technology Club, IIT Kharagpur, April 2016-March 2017

#### Department-level

- Head, Industrial and Systems Engineering, April 2025- Contd.
- UGPEC Departmental Representative, Industrial and Systems Engineering, July 2019- March 2025.
- Examination In-charge, Industrial and Systems Engineering, IIT Kharagpur, July 2016- June 2024.
- Faculty Advisor: MTech (2012-2020), BTech and Dual (July 2020-June 2025)
- Member, Purchase Committee, Industrial and Systems Engineering Department, IIT Kharagpur, August 2013- December, 2018.
- Time Table In-charge, Industrial and Systems Engineering, IIT Kharagpur, April 2012 to September 2016.
- Faculty-coordinator, IEM Society, Industrial and Systems Engineering, IIT Kharagpur, July 2011-June 2015.
- Chairman, OPTIMA-2012, Industrial and Systems Engineering, IIT Kharagpur, March 23-25, 2012.

### Scholarships/Awards/Achievement

- Jury Member, SME- Empowering India Awards – 2025, Manufacturing/ Service Sector category
- Member of the Supply Chain Management Sectional Committee, Bureau of Indian Standards, New Delhi, August 2025 to till date
- Member of Board of Studies, Jharkhand University of Technology, Ranchi, 2024
- Member of sub-committee to design curriculum & Regulations of Management courses, Rajiv Gandhi National Aviation University, Amethi, 2024
- Member of the AICTE Expert Visit committee, AICTE, New Delhi, July 2023-till date
- Faculty Excellence Award (Associate Professor) for the year 2021, IIT Kharagpur
- Best paper award in XVII Annual International Conference of the Society of Operations Management, December 20-22, 2013, Indian Institute of Technology Madras, Chennai.
- Best paper award in XVI Annual International Conference of the Society of Operations Management, December 21-23, 2012, Indian Institute of Technology Delhi, New Delhi.

- Reviewed the Course “Six Sigma by Prof T P Bagchi” prepared by NPTEL.
- NTU Singapore Post-Doctoral Fellowship 2010-11 (*Declined*).
- Seoul National University, South Korea, Post-Doctoral Fellowship 2010-11 (*Declined*).
- Biography selected and included in Marquis Who's Who in the World (28th Edition) USA 2011.
- Received cash award twice from the Dean Resource Planning and Generation IIT Kanpur for publishing two papers in the journals listed in ISI Web of Science during PhD.
- Selected for the post of Lecturer in Mechanical Engineering at BIT Sindri through Jharkhand Public Service Commission in 2006 (*Declined*).
- Deshpande-Atkinson Scholarship 1997 from BITSAA of North America for being branch topper in the first year of engineering.
- Recipient of S J Jindal Trust Scholarship 1998 New Delhi during engineering.
- Ranked 2nd in the branch based on the performance of four years of engineering, and secured 1st position in the first year and the final year of engineering.

## Journal Publications

### *International Journal*

- [1] Patra, T.D.P. and Jha, J.K., 2025. Prepositioning of relief supplies jointly by a risk-averse humanitarian organisation and risk-neutral suppliers through an option contract. *Socio-Economic Planning Sciences*, 102, 102348.
- [2] Ranjan A., Ranjan A. and Jha, J.K., 2025. Pricing and greening strategies in a dual-channel supply chain with government tariffs and cannibalisation under demand uncertainty. *European Journal of Industrial Engineering*, 19(2), 237-271.
- [3] Nadar, R.A., Jha, J.K. and Thakkar, J.J., 2024. Performance evaluation of emergency medical service systems with multiple ambulance types and patient types. *International Journal of Industrial Engineering: Theory, Applications and Practice*, 31(4), 685-708.
- [4] Gaula, A. and Jha, J.K., 2024. Pricing strategy with quality improvement in a dual collection channel closed-loop supply chain under return uncertainty. *Operational Research*, 24(2), 27.
- [5] Ranjan A. and Jha, J.K., 2024. Continuous dynamic pricing strategy under competition for deteriorating products in a dual-channel supply chain. *Sadhana*, 49(2), 132.
- [6] Gaula, A. and Jha, J.K., 2023. Pricing and quality improvement strategies in a closed-loop supply chain with dual collection channel. *International Journal of Systems Science: Operations & Logistics*, 10(1), 2244416.
- [7] Nadar, R.A., Jha, J.K. and Thakkar, J.J., 2023. Adaptive variable neighbourhood search approach for time-dependent joint location and dispatching problem in a multi-tier ambulance system. *Computers and Operations Research*, 159, 106355.
- [8] Rathore, R., Thakkar, J.J. and Jha, J.K., 2023. A Weighted Fuzzy Petri-Net analysis for Indian foodgrains supply chain. *International Journal of Productivity and Performance Management*, 73(5), 1326-1356.
- [9] Ranjan A. and Jha, J.K., 2022. Multi-period dynamic pricing model for deteriorating products in a supply chain with preservation technology investment and carbon emission. *Computers & Industrial Engineering*. 174, 108817.
- [10] Nadar, R.A., Jha, J.K. and Thakkar, J.J., 2022. Ambulance location under temporal variation in demand using a mixed coded memetic algorithm. *RAIRO-Operations Research*. 56, 2967-2997.
- [11] Mahapatra, M.S., Pradhan, P.C. and Jha, J.K., 2021. Sourcing decisions with order allocation under supply disruption risk considering quantitative and qualitative criteria. *Operational Research*, 22, 3291-3333.
- [12] Patra, T.D.P. and Jha, J.K., 2022. Bidirectional option contract for prepositioning of relief supplies under demand uncertainty. *Computers & Industrial Engineering*, 163, 107861.
- [13] Patra, T.D.P. and Jha, J.K., 2021. A two-period newsvendor model for prepositioning with a post-disaster replenishment using Bayesian demand update. *Socio-Economic Planning Sciences*, 78, 101080.
- [14] Nadar, R.A., Jha, J.K. and Thakkar, J.J., 2021. Strategic location of ambulances under temporal variation in demand and travel time using variable neighbourhood search based approach. *Computers & Industrial Engineering*, 162, 107780.
- [15] Rathore, R., Thakkar, J.J. and Jha, J.K., 2021. Impact of risks in foodgrains transportation system: a system dynamics approach. *International Journal of Production Research*, 59(6), 1814-1833.

- [16] Rathore, R., Thakkar, J.J. and Jha, J.K., 2021. Evaluation of risks in foodgrains supply chain using failure mode effect analysis and fuzzy VIKOR. *International Journal of Quality & Reliability Management*, 38(2), 551-580.
- [17] Mawandiya, B.K., Jha, J.K. and Thakkar, J.J., 2020. Optimal production-inventory policy for closed-loop supply chain with remanufacturing under random demand and return. *Operational Research*, 20(3), 1623-1664.
- [18] Ghosh, A., Jha, J.K. and Sarmah S.P., 2020. An integrated supply chain with uncertain demand and random defect rate under carbon cap-and-trade policy. *International Journal of Industrial Engineering: Theory, Applications and Practice*, 27(2), 209-228.
- [19] Tanksale, A. and Jha, J.K., 2020. A hybrid fix-and-optimize heuristic for integrated inventory-transportation problem in a multi-region multi-facility supply chain. *RAIRO-Operations Research*, 54, 749-782.
- [20] Saha, M., Jha, J.K. and Maiti, J., 2020. Modelling management responses and online reviews for improved financial performance of hospitals. *JBIEvidence Implementation*, 18(1), 138-154.
- [21] Tanksale, A. and Jha, J.K., 2020. Benders decomposition approach with heuristic improvements for the robust foodgrain supply network design problem. *Journal of the Operational Research Society*, 71(1), 16-36.
- [22] Ghosh, A., Jha, J.K. and Sarmah, S.P., 2020. Production-Inventory models considering different carbon policies: A review. *International Journal of Productivity and Quality Management*, 30(1), 1-27.
- [23] Jha, S.B., Jha, J.K. and Tiwari, M.K., 2019. A multi-objective meta-heuristic approach for transit network design and frequency setting problem in a bus transit system. *Computers & Industrial Engineering*, 130, 166-186.
- [24] Ranjan, A. and Jha, J.K., 2019. Pricing and coordination strategies of a dual-channel supply chain considering green quality and sales effort. *Journal of Cleaner Production*, 218, 409-424.
- [25] Sakhala, N.K., Tanksale, A. and Jha, J.K., 2019. Path anticipation and prioritized conflict-free train re-scheduling on a linear network. *International Journal of Operational Research*, 36(4), 496-517.
- [26] Ghosh, A., Sarmah, S.P. and Jha, J.K., 2018. Collaborative model for a two-echelon supply chain with uncertain demand under carbon tax policy. *Sadhana*, 43(9), 144.
- [27] Gutgutia, A. and Jha, J.K., 2018. A closed-form solution for the distribution free continuous review integrated inventory model. *Operational Research*, 18(1), 159-186.
- [28] Rathore, R., Thakkar, J.J. and Jha, J.K., 2017. A quantitative risk assessment methodology and evaluation of food supply chain. *International Journal of Logistics Management*, 28(4), 1272-1293.
- [29] Tanksale, A. and Jha, J.K., 2017. Solving multi-region multi-facility inventory allocation and transportation problem: A case of Indian public distribution system. *Computers & Industrial Engineering*, 110, 175-190.
- [30] Ghosh, A., Jha, J.K. and Sarmah, S.P., 2017. Optimal lot-sizing under strict carbon cap policy considering stochastic demand. *Applied Mathematical Modelling*, 44, 688-704.
- [31] Raut, S., Ganesan, V.K. and Jha, J.K., 2017. A novel constraint propagation approach for airline schedule design problem. *International Journal of Mathematics in Operational Research*, 10(4), 485-501.
- [32] Mawandiya, B.K., Jha, J.K. and Thakkar, J., 2017. Production-inventory model for two-echelon closed-loop supply chain with finite manufacturing and remanufacturing rates. *International Journal of Systems Science: Operations & Logistics*, 4(3), 199-218.
- [33] Sakhala, N.K. and Jha, J.K., 2017. Developing decision support system for heterogeneous fleet vehicle routing problem using hybrid heuristic. *International Journal of Logistics Systems and Management*, 26(2), 253-276.
- [34] Tanksale, A. and Jha, J.K., 2016. An effective heuristic for multi-period multi-foodgrain inventory transportation problem in India. *INFOR: Information Systems and Operational Research*, 54(4), 355-379.
- [35] Ghosh, A., Jha, J.K. and Sarmah, S.P., 2016. Optimizing a two-echelon serial supply chain with different carbon policies. *International Journal of Sustainable Engineering*, 9(6), 363-377.
- [36] Mawandiya, B.K., Jha, J.K. and Thakkar, J., 2016. Two-echelon closed-loop supply chain deterministic inventory models in a batch production environment. *International Journal of Sustainable Engineering*, 9(5), 315-328.
- [37] Tanksale, A. and Jha, J.K., 2015. Implementing national food security act in India: issues and challenges. *British Food Journal*, 117(4), 1315-1335.
- [38] Jha, J.K. and Shanker, K., 2014. An integrated inventory problem with transportation in a divergent supply chain under service level constraint. *Journal of Manufacturing Systems*, 33(4), 462-475.

- [39] Jha, J.K. and Shanker, K., 2013. Single-vendor multi-buyer integrated production-inventory model with controllable lead time and service level constraints. *Applied Mathematical Modelling*, 37(4), 1753-1767.
- [40] Jha, J.K. and Shanker, K., 2013. A coordinated two-phase approach for operational decisions with vehicle routing in a single-vendor multi-buyer system. *International Journal of Production Research*, 51(5), 1426-1450.
- [41] Jha, J.K. and Shanker, K., 2009. A single-vendor single-buyer production-inventory model with controllable lead time and service level constraint for decaying items. *International Journal of Production Research*, 47(24), 6875-6898.
- [42] Jha, J.K. and Shanker, K., 2009. Two-echelon supply chain inventory model with controllable lead time and service level constraint. *Computers & Industrial Engineering*, 57(3), 1096-1104.

#### *National Journal*

- [1] Tanksale, A.N. and **Jha, J.K.**, 2015. Developing a mathematical model to optimize foodgrains storage and transport for public distribution system in India. *Udyog Pragati: The Journal of Practising Managers*, 39(1), 34-42.

#### **Books**

- [1] Basu, B., Jha, J. K., Mukherjee, I., & Sengupta, R. N. (Eds.). (2025). *Data Analytics for Decision Making towards Business Excellence: Through the Lens of Retail and Financial Services*. Springer Nature.
- [2] Maiti, J., Jenamani, M., Jha, J. K., Kumar, A., Roychowdhury, S., & Sen G. (Eds.). 2025. *Operations Research and Data Analytics: Current Trends and Future Perspectives*. Springer Nature.

#### **Conferences/Workshops**

- [1] Ranjan, A. and Jha, J.K. Modelling and Analysis of government tariffs for substitute products in a dual-channel supply chain, The 2nd Indian International Conference on Industrial Engineering and Operations Management, National Institute of Technology, Warangal and Jawaharlal Nehru Technological University, Hyderabad, India, August 16-18, 2022.
- [2] Ranjan, A. and Jha, J.K. Optimal dynamic pricing and preservation technology investment for a centralised supply chain considering carbon emission, The POMS India International Conference, S.P. Jain Institute of Management & Research, Mumbai, India, December 22-24, 2021.
- [3] Ranjan, A. and Jha, J.K. Analysis of government tariffs for substitute products in a dual-channel supply chain, The POMS India International Conference, S.P. Jain Institute of Management & Research, Mumbai, India, December 22-24, 2021.
- [4] Patra, T.D.P. and Jha, J.K. A newsvendor approach with replenishment opportunity for prepositioning of relief items. *XXIV Annual International Conference of the Society of Operations Management*, XLRI Jamshedpur, Jamshedpur, India, November 12-15, 2021.
- [5] Nadar, R.A., Jha, J.K. and Thakkar J.J. VNS based approach for locating ambulances considering hourly variations in demand and travel time. *XXIV Annual International Conference of the Society of Operations Management*, XLRI Jamshedpur, Jamshedpur, India, November 12-15, 2021.
- [6] Ranjan, A. and Jha, J.K. Modelling and analysis of pricing strategies in dual-channel green supply chain. *XXIV Annual International Conference of the Society of Operations Management*, XLRI Jamshedpur, Jamshedpur, India, November 12-15, 2021.
- [7] Patra, T.D.P. and Jha, J.K. Bidirectional option contract for prepositioning of relief supplies considering uniform demand distribution. *Infirms Annual Meeting-2021*, Anaheim, California, USA, October 24-27, 2021.
- [8] Nadar, R.A., Jha, J.K. and Thakkar, J.J. Location of ambulances considering temporal demand variation using a genetic algorithm based approach. *The First Indian International Conference on Industrial Engineering and Operations Management*, Bangalore, India, August 16-18, 2021.
- [9] Mishra P.S. and Jha J.K. Customer visit segmentation in an online retail market, *5th International Conference on Industrial Engineering and Operations Management, IEOM Society*, Bangkok, Thailand, Mar 5-7, 2019.

- [10] Rathore R., Thakkar, J.J. and Jha, J.K. System dynamics approach for risk assessment in foodgrains supply chain, *25th Annual Euroma conference*, Budapest, Hungary, June 24-26, 2018.
- [11] Rathore R., Thakkar, J. and Jha, J.K. Assessment of risks for transportation of foodgrain in India: A Grey-DEMATEL approach, *POMS Annual Conference*, Seattle, Washington, USA, May 5-8, 2017.
- [12] Tanksale A. and Jha J.K. A fix & optimize heuristic for capacitated foodgrain inventory multi-modal transportation problem in Indian public distribution system, *INFORMS Annual Meeting 2016*, Nashville, USA, Nov 13-16, 2016.
- [13] Ghosh A, Jha J.K. and Sarmah S.P. Optimal production and lot-sizing under carbon tax policy considering stochastic demand, *46th International Conference on Computers & Industrial Engineering*, Chinese Industrial Engineering Institution, CMES, China, Engineering and Management Institute, SMSE, China, College of Management and Economics, Tianjin University, China, Tianjin, China, Oct 29-31, 2016.
- [14] Jha, S.B., Jha, J.K., and Tiwari M.K. A multi-criteria round-based algorithm for public transit routing – RAPTOR, International Conference on E-Business and Supply Chain Competitiveness, *POMS-IIT Kharagpur Conference*, Indian Institute of Technology Kharagpur, Kharagpur, India Feb 14-16, 2016.
- [15] Tanksale, A. and Jha J.K. Modeling the inter-state foodgrain inventory transportation problem in Indian PDS. *XIX Annual International Conference of the Society of Operations Management*, IIM Calcutta, Kolkata, India, Dec 11-13, 2015.
- [16] Ghosh A, Jha J.K. and Sarmah S.P. Production-Inventory Policy for a Supply Chain under Strict Carbon Cap with Defective Items and Demand Uncertainty. *XIX Annual International Conference of the Society of Operations Management*, IIM Calcutta, Kolkata, India, Dec 11-13, 2015.
- [17] Rathore R., Jha, J.K. and Thakkar, J. Integrated inventory transportation model with configurable vehicle capacity: a case of Indian food grain supply chain. *XIX Annual International Conference of the Society of Operations Management*, IIM Calcutta, Kolkata, India, Dec 11-13, 2015.
- [18] Mawandiya B.K., Jha J.K. and Thakkar, J. Optimizing policy variables for a closed-loop supply chain in a manufacturer, remanufacturer and retailer. *XIX Annual International Conference of the Society of Operations Management*, IIM Calcutta, Kolkata, India, Dec 11-13, 2015.
- [19] Tanksale, A. and Jha J.K. A MIP model for multi-period multi-item capacitated inventory transportation problem of foodgrains for Indian PDS. *45th International Conference on Computers & Industrial Engineering*, Metz, France, Oct 28-30, 2015.
- [20] Ghosh A, Jha J.K. and Sarmah S.P. Optimal production-inventory policy under strict carbon cap in a supply chain with backorders and lost sales. *5th International Conference on Industrial Engineering and Operations Management*, IEOM Society, Dubai, Mar 3-5, 2015.
- [21] Tanksale, A. and Jha J.K. Developing a mathematical model to optimize foodgrains storage and transport for public distribution system in India. *NITIE-POMS Conference*, NITIE, Mumbai, India, Dec 18-21, 2014.
- [22] Ghosh, A., Jha, J.K., and Sarmah S. P. Optimal production-inventory policy under strict carbon cap in a supply chain. *XVII Annual International Conference of the Society of Operations Management*, Indian Institute of Technology Madras, Chennai, Dec 20-22, 2013. (*Best paper award*)
- [23] Gutgutia, A. and Jha, J.K. Vendor-buyer model for distribution free demand under imperfect production process and service level constraint. *XVI Annual International Conference of the Society of Operations Management*, December 21-23, 2012, Indian Institute of Technology Delhi. (*Best Paper award*)
- [24] Jha, J.K. and Shanker, K. Integrating the supply chain functions in a single-vendor multi-buyer system under controllable lead time. *VIII Triennial Conference of Association of Asia Pacific Operational Research Societies*, December 06-09, 2009, Jaipur, India.
- [25] Jha, J.K. and Shanker, K. An integrated single-vendor multi-buyer model with variable lead time and service constraint. *XII Annual International Conference of the Society of Operations Management*, December 19-21, 2008, Indian Institute of Technology Kanpur.
- [26] Jha, J.K. and Shanker, K. A single-vendor single-buyer production-inventory model with controllable lead time and service level constraint for decaying items. *2nd Joint Workshop in Mechanical, Aerospace and Industrial Engineering*, April 05-06, 2008, Indian Institute of Technology Kanpur.
- [27] Sivakumar, I.A., Shanker, K., Mittal, A., Mehta, P., Jha, J.K., and Pal, R. Developing responsive supply chains involving special economic zones and industrial zones in India with Singapore transshipments. *2nd Joint Workshop in Mechanical, Aerospace and Industrial Engineering*, April 05-06, 2008, Indian Institute of Technology Kanpur.



- (iii). Coordinator, Short-term course on “Supply Chain Management and Logistics” for the Nominees of School of Logistics, Communication and Waterways SIPARD, Agartala, Tripura, March 29-31, 2024
- (iv). Coordinator, Self-financed short-Term course on "Supply Chain Analytics", September 22-24, 2023, IIT Kharagpur
- (v). Coordinator, QIP short term course on “Decision Modelling through CPLEX”, December 14-18, 2020, IIT Kharagpur
- (vi). Principal Coordinator, short-Term course for TEQIP-III Institutions on "Data Analytics with R", November 20-22, 2019, IIT Kharagpur
- (vii). Coordinator for a self-financed short-Term course on "Data Analytics with SAS", January 29-31, 2018, IIT Kharagpur
- (viii). Coordinator, short-Term course for TEQIP-II Institutions on "Data Analytics with SAS", March 22-24, 2017, IIT Kharagpur
- (ix). Principal coordinator, Workshop on “Decision Support Models in E-business and Supply Chain Management”, February 11-12, 2017
- (x). Coordinator, short term course for TEQIP-II Institution on “Applied Machine Learning”, September 12-16, 2016, IIT Kharagpur
- (xi). Principal Coordinator, QIP short term course on “Quantitative Decision Modeling”, July 4-8, 2016, IIT Kharagpur
- (xii). Coordinator for a self-financed short-Term course on "Data Analytics with SAS", July 1-4, 2015, IIT Kharagpur
- (xiii). Coordinator for a self-financed short-Term course on "Data Analytics with SAS", January 13-15, 2015, IIT Kharagpur
- (xiv). Coordinator for QIP short term course on “Service Science”, July 08-12, 2013, IIT Kharagpur
- (xv). Principal Coordinator for QIP short term course on “Decision Modeling in Facility Planning”, July 04-08, 2011, IIT Kharagpur

### ***Conferences***

- (i). Co-Convener, International Conference on Industrial Engineering & Analytics (ICONIEA 2024), February 16-18, 2024, Department of Industrial & Systems Engineering, IIT Kharagpur
- (ii). Organizing Secretary, International Conference on Management of Ergonomic Design, Industrial Safety and Healthcare Systems (MESH 2016), December 20-23, 2016, Department of Industrial & Systems Engineering, IIT Kharagpur
- (iii). Joint Secretary, International Conference on E-Business and Supply Chain Competitiveness (EBSCC 2016), February 12-14, 2016, Jointly organized by POMS India Chapter & E-Business Centre of Excellence, Department of Industrial & Systems Engineering, IIT Kharagpur

### **Courses Taught/Teaching to UG/PG/PhD Students**

- Operations Research
- Statistical Decision Modelling
- Facility Layout and Design
- Industrial Management
- Statistical Process Control

### **Professional Membership**

- Life membership of Indian Society for Technical Education, New Delhi
- Life membership of Indian Institution of Industrial Engineering, Navi Mumbai

(J K JHA)