Fehmina Malik, Ph.D.

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Research Interest

- Stochastic Modelling, Optimization, Game Theory and Decision Science, Network Economics, Inventory and Supply Chain Modelling, Explainable AI Algorithms.

Teaching Interest

- Decision Science, Business Mathematics, Business Statistics, Quantitative Methods, Business Analytics, Emerging Technologies in Business, Spreadsheet Application for Business, Artificial Intelligence, Operations Management, Supply Chain Management.

Employment History

October 2024 – September 2025	**Postdoctoral Fellow - Explainable AI Algorithms,** Laboratoire Informatique d'Avignon, Avignon University, Avignon, France
November 2022 – September 2024	**Assistant Professor - Artificial Intelligence and Data Science,** Lal Bahadur Shastri Institute of Management (LBSIM), New Delhi, India

Education

2017 – 2023	**Ph.D. Indian Institute of Technology Bombay, Mumbai, India** in Industrial Engineering and Operations Research. Thesis title: *The Net Neutrality Debate: The Role of Differential Pricing and Contracts between the Service Providers.*
2013 – 2015	**M.Phil. University of Delhi, New Delhi, India** in Operations Research. Thesis title: *Integrated Production- Inventory and Product Inspection Policies for Imperfect Production Systems.* Percentage: 84%
2011 – 2013	**M.Sc. University of Delhi, New Delhi, India** in Operations Research. Project title: *Demand and Procurement Analysis of Economically Important and Vital Items.* Percentage: 86.4%
2008 – 2011	**B.Sc.(Hons.) University of Delhi, New Delhi, India** in Mathematics. Percentage: 68.11%

Research Publications

Journal Articles

1. KK Aggarwal, Shuja Ahmed, and **F. Malik**. "An EOQ Model for Joint Ordering, Pricing, and Retrun Policy with Advance Booking Discount". In: *Opsearch* (2024), pp. 1–35.

2. KK Aggarwal, Shuja Ahmed, and **F. Malik**. "An Inventory Model for Coordinating Ordering, Pricing and Advertisement Policy for an Advance Sales System". In: *Yugoslav Journal of Operations Research* 30.3 (2020), pp. 325–338.

3 KK Aggarwal, Shuja Ahmed, and **F. Malik**. "Optimal Pricing and Advertisement Policy for an Advance Order Booking Inventory System with Order Cancellation under Inflationary Condition". In: *International Journal of Mathematical, Engineering and Management Sciences* 8.5 (2023), pp. 869–895.

4 **F. Malik**, Manjesh K Hanawal, and Yezekael Hayel. "Profit Sharing Contracts between Content and Service Providers for Enhanced Network Quality". In: *IEEE Transactions on Network and Service Management* (2022).

5 **F. Malik**, Manjesh K Hanawal, and Yezekael Hayel. "Zero-Rating of Content and Its Effect on the Quality of Service in the Internet". In: *IEEE/ACM Transactions on Networking* 28.6 (2020), pp. 2671–2684.

6 **F. Malik** et al. "Revenue sharing on the Internet: A case for going soft on neutrality regulations". In: *Performance Evaluation* 145 (2021), p. 102152.

Conference Proceedings and Presentations

1 KK Aggarwal, Shuja Ahmed, and **F. Malik**. "Optimizing ordering, pricing and return strategies in an advanced sales inventory system with product screening **(Best Paper Presentation)**". In: *International Conference on Sustainable Supply Chain Management under India's G20 Presidency (SSCM-G20)*. 2024.

2 **F. Malik** and Manjesh K Hanawal. "Revenue Sharing Between Service Providers in the Internet: A Moral Hazard Approach". In: *2019 11th International Conference on Communication Systems & Networks (COMSNETS)*. IEEE. 2019, pp. 420–423.

3 **F. Malik** et al. "Revenue Sharing in a Soft-Neutral Regime". In: *2020 International Conference on COMmunication Systems & NETworkS (COMSNETS)*. IEEE. 2020, pp. 900–902.

4 Manjesh K Hanawal, **F. Malik**, and Yezekael Hayel. "Differential pricing of traffic in the Internet". In: *2018 16th International Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt)*. IEEE. 2018, pp. 1–8.

Teaching Experience

PGDM-BA, Trim IV, 2024	Business Models and Simulations, LBSIM (4.8 out of 5)
PGDM-General, Finance, Trim III, 2024	Spreadsheet application for Business, LBSIM (4.7 out of 5)
PGDM-R&BA, Finance, Trim I, 2024	Basic Excel, LBSIM (Foundation coursework)
PGDM-AIDS, E-Business, Trim III, 2023	Artificial Intelligence, LBSIM (4 out of 5)
PGDM-AIDS, E-Business, Trim II, 2023	Management Science, LBSIM (4.3 out of 5)
PGDM-AIDS, Trim V, 2023	Forecasting Techniques, LBSIM (3.9 out of 5)
PGDM-AIDS, Trim III, 2023	Optimization Techniques, LBSIM (3.8 out of 5)
PGDM-Gen, Trim III, 2023, 2024	Emerging Technologies in Business, LBSIM (3.8 out of 5)
PGDM-BA, Trim I, 2023	Spreadsheet application for Business, LBSIM (4.8 out of 5)
PGDM-General, Finance, Trim I, 2023	Fundamentals of Python, LBSIM (Foundation coursework)
Autumn 2019,2020,2021	Engineering Statistics, IIT Bombay (TA)
Spring 2020,2021	Online Learning, IIT Bombay (TA)
Spring 2021	Decision Analysis and Game Theory, IIT Bombay (TA)
Spring 2021,2022	Introduction to Stochastic Processes, NPTEL (TA)

Fellowships & Awards

2023	**Best Paper Presentation** -International Conference on Sustainable Supply Chain Management under India's G20 Presidency (SSCM-G20). 2024.

Fellowships & Awards (continued)

2018	◪	Recipient of WiOPt travel grant for attending International Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt), IEEE, 2018.
2015	◪	UGC-MANF for MPhil/PhD
2012, 2013	◪	**College Topper**, during M.Sc. in Operational Research
2012	◪	**University Topper**, University of Delhi.

Skills

Languages	◪	Strong reading, writing and speaking competencies for English, Hindi and Urdu.
Coding	◪	C, C++, Java, Python, R, SQL, MATLAB, LaTeX, MS-Excel
Misc.	◪	Academic research, teaching, training, consultation, LaTeX typesetting and publishing.