

Bahman Rostami-Tabar

Curriculum Vitae
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Education and qualifications

FHEA – Fellow of the Higher Education Academy	Higher Education Academy	2017
Post Graduate Certificate of Higher Education	Coventry University	2016
Ph.D. in Industrial Engineering	University of Bordeaux, France	2014
M.Sc. in Information Systems	ECE Paris , France	2010
M.Sc. in Industrial Engineering	Tarbiat Modares University, Iran	2008
B.Sc.(Hons) in Industrial Engineering	K.N.Toosi University of Technology, Iran	2004

Fellowships

- The Montpellier Advanced Knowledge Institute on Transitions, France, 2024.
- Associate Fellow of NHS-R community, UK, 2021.
- Public Value Fellow, Cardiff Business School, UK, 2020.

Employment history

2023	Professor, Cardiff Business School, Cardiff University, Cardiff, UK
2021 – 2023	Reader, Cardiff Business School, Cardiff University, Cardiff, UK
2019 – 2021	Senior Lecturer, Cardiff Business School, Cardiff University, Cardiff, UK
2016 – 2019	Lecturer, Cardiff Business School, Cardiff University, Cardiff, UK
2015 – 2016	Lecturer, School of strategy and Leadership, Coventry University, Coventry, UK
2014 – 2015	Post-doc, Industrial Engineering Lab, Ecole Central-Supelec, Paris, France

Academic and leadership roles

- **Theme Lead**, Uncertainty and the Future, Digital Transformation Innovation Institute - Cardiff University 2024– Present.
- **Founder & Director**, Data Lab for Social Good Research Group, Cardiff University 2023– Present.
- **Founder & Chair**, Forecasting for Social Good, International Institute of Forecasters 2020– Present.
- **Program Committee Board**, Wales Modelling Collaborative , NHS Wales, 2019 – Present.
- **Director**, Logistics and Systems Dynamics Research Group, Cardiff Business School 2021– 2023
- **Member**, Shadow Management Board, Cardiff Business School 2020–2021.

Awards and honours

2024	Fellowship, The Montpellier Advanced Knowledge Institute on Transitions
2021	Leaders Innovation and Engagemen, Cardiff Business School
2020	Innovation in Teaching and Learning award, Cardiff Business School
2020	Scholarship for the Mini-Certificate in Real World Risk, Real World Risk Institute
2018	Excellence in International Activities, Cardiff University
2017	Best Paper Award, Industrial Engineering and Operations Management Society, International Symposium
2017	Nomination for Enriching Student Life, Cardiff University
2013	Best Paper Award, IFAC, Manufacturing Modelling, Management and Control conference.

Journal editorial roles

- Associate Editor, Journal of Operations Research Society (JORS), 2023 — Present.
- Area Editor, Health Systems, 2023 — Present.
- Guest editor of special issue on Forecasting for Social Good, International Journal of Forecasting, 2021—2022.
- Guest editor of special issue on Forecasting for Social Good, International Journal of Forecasting, 2019—2020.

Advisory boards

- Scientific adviser, Intelligent Forecasting Competition, United States Agency for International Development (USAID), 2021 – 2022.
- OCHA Centre for Humanitarian Data, peer review of predictive models, 2022–Present.
- Scientific and Cultural Committee, Kurdish Institute of Paris, 2021 – Present.

Grants

I have acquired (in most cases jointly) \$1.4 million in research & engagement grants since 2018.

2024–2028	Rostami-Tabar and Willis. “Enhancing discharge care coordination in mental health and social care: A probabilistic data-driven modelling approach”. <i>Funding from WGSSS</i>	\$195,001
2024–2028	Rostami-Tabar, Goltos, Palmer, Wang. “Enhancing global immunisation supply chains: integrating hybrid AI models into inventory optimisation considering non-monetary welfare metrics”. <i>Funding from EPSRC</i>	\$195,000
2023–2027	Lotfi, Rostami-Tabar, Koenig-Lewis, Zhigljavsky.. “Understanding and modelling the impact of consumer purchasing behaviour on the global supply chains’ decisions in adapting anti-slavery practices”. <i>Funding from ESRC Doctoral Training Partnerships</i>	\$184,232
2023–2024	Rostami-Tabar. “Probabilistic forecasting of inpatient and community admissions due to mental health conditions”. <i>Funding from Digital Transformation University Innovation Institute</i>	\$4,840
2023–2024	Rostami-Tabar. “Democratizing forecasting”. <i>Funding from International Institute of Forecasters</i>	\$14,280
2023–2024	Rostami-Tabar. “Demand forecasting for executives and professionals”. <i>Funding from Cardiff Business School</i>	\$1,815
2022–2026	Rostami-Tabar, Syntetos, Liberatore.. “Forecasting improvements for better reproductive health and family planning operations in global health supply chains”. <i>Funding from ESRC Doctoral Training Partnerships</i>	\$174,232
2022–2023	Rostami-Tabar. “Reproducibility in research”. <i>Funding from ASPECT Innovation Fellowship</i>	\$4,495
2022–2023	Rostami-Tabar, Raymond. “Identifying common typologies of harm in forecasting systems”. <i>Funding from University of Notre Dame-IBM</i>	\$15,000
2022–2022	Rostami-Tabar. “Developing new modelling and forecasting methodologies for Emergency Medical Services”. <i>Funding from Cardiff Business School</i>	\$6,405
2022–2022	Rostami-Tabar. “Modelling the Medium and Long Term Capacity Requirements in ICU”. <i>Funding from NHS Wales and Health foundation</i>	\$2,472
2022–2022	Rostami-Tabar, Goltos, Syntetos. “Forecasting for workforce scheduling”. <i>Funding from DSV: Global Transport and Logistics</i>	\$19,550
2022–2019	Rostami-Tabar. “A workshop on Epidemic Forecasting”. <i>Funding from Global Challenge Research Fund</i>	\$13,000
2021–2022	Rostami-Tabar, Ali. “Forecasting for social good”. <i>Funding from University of East London</i>	\$3,900
2019–2023	Rostami-Tabar et al.. “Promoting joint analytical problem-solving building on the Welsh Modelling Collaborative”. <i>Funding from Health Foundation</i>	\$391,000
2019–2020	Rostami-Tabar. “Flow management in the emergency care.”. <i>Funding from Global Challenge Research Fund</i>	\$32,200
2019–2020	Rostami-Tabar. “Public Value Fellowship”. <i>Funding from Cardiff Business School</i>	\$3,260
2019–2020	Rostami-Tabar. “Enhancing forecasting capabilities of the International Committee of the Red Cross”. <i>Funding from Cardiff Business School</i>	\$2,600
2018–2022	Rostami-Tabar. “Democratize forecasting”. <i>Funding from International Institute of Forecasters</i>	\$60,000
2018–2019	Rostami-Tabar, Syntetos. “Forecasting for social good in India”. <i>Funding from Global Challenge Research Fund</i>	\$10,800
2018–2018	Rostami-Tabar, Syntetos. “Agenda setting event on forecasting for social good”. <i>Funding from Cardiff Business School</i>	\$6,500
2018–2018	Rostami-Tabar. “Forecasting for social good”. <i>Funding from International Institute of Forecasters</i>	\$5,000

Research

- I have authored 39 papers, chapters or books on forecasting, analytics, healthcare operations and supply chain topics (listed in the following sections).
- My research interests include uncertainty & the future, modelling, machine learning, forecasting and their integration into policy & decision making, especially in healthcare operations, humanitarian and global health operations & supply chains, and sustainability transitions.
- My current research involves forecasting and modelling of large collections of data in various areas including vaccine distribution, supply chains of medical items, family planning, patient flow in emergency departments, trauma network, ambulance services, and mental and social health services.
- I have been working with various local, national and international organisations including the International Committee of the Red Cross (ICRC), United States Agency for International Development (USAID), various National Health Service (NHS) trusts in Wales and England, Welsh Ambulance Service Trust (WAST), John Snow, Inc (JSI), DSV (Global Transport and Logistics), Shropshire Council, InSupplyHealth (in Kenya), and Ethiopian Pharmaceuticals Supply Service (in Ethiopia).

Ph.D. Supervision

- Zihao Wang, 2020 - 2023, Lead supervisor, *Patient flow forecasting/modelling numbers in Major Trauma Network (MTN) Wales*, in collaboration with Major Trauma Network Wales.
- Mingzhi Shi, 2021 - 2024, Lead supervisor, *Improving the unscheduled planning in urgent and emergency care: Using predictive modeling to deliver quality care*, in collaboration with Welsh Ambulance Service Trust.
- Harsha Charma, 2022 - 2026, Lead supervisor, *Forecasting improvements for better reproductive health and family planning operations in global health supply chains*, in collaboration with United States Agency for International Development.
- Venessa Wells, 2020 - 2025, Third supervisor, *Valuing Value: how evaluative judgements are perceived, understood, and practised by multiple actors - people in not-for-profit leadership positions and information providers*.
- Arebu Issa, 2021 - 2025, Second supervisor, *Forecasting for Pharmaceutical supply chains*, in collaboration with Addis Ababa University, Ethiopia.
- TBC, 2024 - 2028, Lead supervisor, *Integrating hybrid AI models into inventory optimisation considering non-monetary welfare metrics in global immunisation supply chains*, in collaboration with JSI.
- TBC, 2024 - 2028, Lead supervisor, *Enhancing discharge care coordination in mental health and social care*, in collaboration with Health and Care Research Wales (HCRW), Welsh Government.

Books

1. Kolassa, S, Rostami-Tabar, B, & Siemsen, E. (2023). *Demand forecasting for executives and professionals* (1st ed). CRC Press. <https://dfep.netlify.app/>

Working papers (submitted)

1. Charma, H, & Rostami-Tabar, B. (2024). A long-term forecasting and simulation model for mental healthcare workforce planning. In *Under review in European Journal of the Operational Research*.
2. Hyndman, RJ, & Rostami-Tabar, B. (2024). Forecasting interrupted time series. In *Under review in Journal of the Operational Research Society*.
3. Rostami-Tabar, B, Wang, S, & Disney, S. (2024). Emergency department staffing policy: An integrated probabilistic forecasting and newsvendor solution. In *Under review in Manufacturing & Service Operations Management*.
4. Shi, M, Rostami-Tabar, B, & Gartner, D. (2024). Looking for the crystal ball in unscheduled care: A systematic literature review of the use of forecasting methods. In *Under review in Health Care Management Science*.

Refereed research papers

1. Rostami-Tabar, B, Arora, S, Rendon-Sanchez, JF, & Goltsos, TE. (2024). Probabilistic forecasting of daily COVID-19 admissions using machine learning. *IMA Journal of Management Mathematics*, 35(1), 21–43.
2. Wang, Z, Rostami-Tabar, B, Haider, J, Naim, M, & Haider, J. (2024). Investigating length of stay patterns and its predictors in the south wales trauma network. *Advances in Rehabilitation Science and Practice*.
3. Rostami-Tabar, B, & Hyndman, RJ. (2024). Hierarchical time series forecasting in emergency medical services. *Journal of Service Research*, 10946705241232169.
4. Hasni, M, Babai, MZ, & Rostami-Tabar, B. (2024). A hybrid LSTM method for forecasting demands of medical items in humanitarian operations. *International Journal of Production Research*, 1–18.
5. Abolghasemi, M, Rostami-Tabar, B, & Syntetos, A. (2023). The value of point of sales information in upstream supply chain forecasting: An empirical investigation. *International Journal of Production Research*, 61(7), 2162–2177.

6. Rostami-Tabar, B, & Disney, SM. (2023). On the order-up-to policy with intermittent integer demand and logically consistent forecasts. *International Journal of Production Economics*, 257, 108763.
7. Rostami-Tabar, B, Browell, J, & Svetunkov, I. (2023). Probabilistic forecasting of hourly emergency department arrivals. *Health Systems*, 1–17.
8. Rostami-Tabar, B, & Mircetic, D. (2023). Exploring the association between time series features and forecasting by temporal aggregation using machine learning. *Neurocomputing*, 126376.
9. Babaveisi, V, Teimoury, E, Gholamian, MR, & Rostami-Tabar, B. (2023). Integrated demand forecasting and planning model for repairable spare part: An empirical investigation. *International Journal of Production Research*, 61(20), 6791–6807.
10. Gartner, D, Viana, J, Tabar, BR, Pfürringer, D, & Edenharter, G. (2023). Challenging the throwaway culture in hospitals: Scheduling the mix of reusable and single-use bronchoscopes. *Journal of the Operational Research Society*, 74(10), 2215–2226.
11. Rostami-Tabar, B, Babai, MZ, & Syntetos, A. (2023). To aggregate or not to aggregate: Forecasting of finite autocorrelated demand. *Journal of the Operational Research Society*, 74(8), 1840–1859.
12. Rostami-Tabar, B, Goltsos, TE, & Wang, S. (2023). Forecasting for lead-time period by temporal aggregation: Whether to combine and how. *Computers in Industry*, 145, 103803.
13. Petropoulos, F, Apiletti, D, Assimakopoulos, V, Babai, MZ, Barrow, DK, Taieb, SB, Bergmeir, C, Bessa, RJ, Bijak, J, Boylan, JE, et al. (2022). Forecasting: Theory and practice. *International Journal of Forecasting*.
14. Rostami-Tabar, B, Ali, MM, Hong, T, Hyndman, RJ, Porter, MD, & Syntetos, A. (2021). Forecasting for social good. *International Journal of Forecasting*.
15. Rostami-Tabar, B, & Rendon-Sanchez, JF. (2021). Forecasting COVID-19 daily cases using phone call data. *Applied Soft Computing*, 100, 106932.
16. Mircetic, D, Rostami-Tabar, B, Nikolicic, S, & Maslaric, M. (2021). Forecasting hierarchical time series in supply chains: An empirical investigation. *International Journal of Production Research*, 1–20.
17. Babai, MZ, Boylan, JE, & Rostami-Tabar, B. (2021). Demand forecasting in supply chains: A review of aggregation and hierarchical approaches. *International Journal of Production Research*, 1–25.
18. Rostami-Tabar, B, & Ziel, F. (2020). Anticipating special events in emergency department forecasting. *International Journal of Forecasting*.
19. Rostami-Tabar, B, Babai, MZ, Ali, M, & Boylan, JE. (2019). The impact of temporal aggregation on supply chains with ARMA (1, 1) demand processes. *European Journal of Operational Research*, 273(3), 920–932.
20. Kourentzes, N, Rostami-Tabar, B, & Barrow, DK. (2017). Demand forecasting by temporal aggregation: Using optimal or multiple aggregation levels? *Journal of Business Research*, 78, 1–9.
21. Emrouznejad, A, Rostami-Tabar, B, & Petridis, K. (2016). A novel ranking procedure for forecasting approaches using data envelopment analysis. *Technological Forecasting and Social Change*, 111, 235–243.
22. Rostami-Tabar, B, Babai, MZ, Ducq, Y, & Syntetos, A. (2015). Non-stationary demand forecasting by cross-sectional aggregation. *International Journal of Production Economics*, 170, 297–309.
23. Bahman Rostami-Tabar, ASandYvesD, Mohamed Zied Babai. (2014). A note on the forecast performance of temporal aggregation. *Naval Research Logistics (NRL)*.
24. Rostami-Tabar, B, Babai, MZ, Syntetos, A, & Ducq, Y. (2013). Demand forecasting by temporal aggregation. *Naval Research Logistics (NRL)*, 60(6), 479–498.

Book chapters

1. Rostami-Tabar, B, & Boylan, JE. (2022). Forecasting and its beneficiaries. In *Handbook of operational research*.
2. Rostami-Tabar, B. (2021). Business forecasting in developing countries. In L Tashman, M Gilliland, & U Sglavo (Eds.), *Business forecasting: The emerging role of artificial intelligence and machine learning* (p. 382). John Wiley; Sons.

Papers in refereed conference proceedings

1. Rostami-Tabar, B, Babai, MZ, Ali, M, & Boylan, JE. (2016). On the performance of temporal demand aggregation when optimal forecasting is used. *International Conference on Information Systems, Logistics and Supply Chain*.
2. Rostami-Tabar, B, & Sahin, E. (2015). The impact of advance demand information on the performance of production/inventory systems. *IFAC-PapersOnLine*, 48, 1744–1749.
3. Rostami Tabar, B, Babai, MZ, Syntetos, A, & Ducq, Y. (2013). The impact of temporal aggregation on demand forecasting of ARMA(1, 1) process: Theoretical analysis. *Manufacturing Modelling, Management, and Control*, 1696–1701.

4. Rostami-Tabar, B, Babai, M, Syntetos, A, & Ducq, Y. (2013). Forecasting aggregate ARMA (1, 1) demands: Theoretical analysis of top-down versus bottom-up. *Proceedings of 2013 International Conference on Industrial Engineering and Systems Management (IESM)*, 1–8.
5. Tabar, BR, Ducq, Y, Babai, MZ, & Syntetos, A. (2012). FORECASTING AUTOREGRESSIVE DEMANDS WITH TEMPORAL AGGREGATION. *9th International Conference on Modeling, Optimization & SIMulation*.
6. Amin-Naseri, MR, & Tabar, BR. (2008). Neural network approach to lumpy demand forecasting for spare parts in process industries. *2008 International Conference on Computer and Communication Engineering*, 1378–1382.
7. Nasiri Pour, A, Rostami-Tabar, B, & Rahimzadeh, A. (2008). A hybrid neural network and traditional approach for forecasting lumpy demand. *Proceedings of the World Academy of Science, Engineering and Technology*, 2.

PhD thesis

1. Rostami-Tabar, B. (2014). *ARIMA demand forecasting by aggregation* [PhD thesis]. Bordeaux 1.

Selected presentations

- Probabilistic forecast reconciliation in global health supply chain operations, Kuhne Logistics University, Hamburg, Germany, October 2023.
- Probabilistic forecast reconciliation for health services, NHS-R conference, Birmingham, UK, October 2023.
- An overview of the most common forecasting methods and the mindset behind forecasting, Health and Care Analytics conference, Birmingham, UK, September 2023.
- Improving vaccine forecasts to Increase Coverage, Production and Operations Management Society (POMS), International Conference, Paris, July 2023.
- On performance of temporal aggregation in time series forecasting, Centre for Marketing Analytics and Forecasting, Lancaster University, UK, February 2022.
- Value of forecasting in healthcare planning, NHS Wales Modelling Collaborative, Online, June 2021.
- Forecasting for social good, International Symposium on Forecasting, Online, June 2021.
- Anticipating the impact of special events on the Emergency Department forecasting, 16-19 June 2019, ISF, Thessaloniki, Greece.

Workshop delivery

I established democratizing forecasting project in 2018 and have since conducted 24 three-day workshops in 17 different countries, trained over 800 people and traveled to 13 low and lower-middle income countries for in-person delivery. I also recently led the development of AFRICAST, a world-class online training program..

Online workshops

1. Project lead and Instructor, AFRICAST, Sub-Saharan Africa, Online, 23-27 October 2023.

International workshops

2. Instructor, Time series forecasting in R, University of Dar es Salaam, **Tanzania**, December 2023.
3. Instructor, Time series forecasting in R, inhealth supply, **Kenya**, January 2023.
4. Instructor, Time series forecasting in R, University of Rwanda, **Rwanda**, March 2023.
5. Instructor, Time series forecasting in R, Addis Ababa University, **Ethiopia**, June 2023.
6. Instructor, Time series forecasting in R, University of Malawi, **Malawi**, July ,2023.
7. Instructor, Data analytics & forecasting in R, University of Ankara, **Turkey**, January 2019.
8. Instructor, Data analytics & forecasting in R, Institute of Human Virology, **Nigeria**, April 2019.
9. Instructor, Data analytics & forecasting in R, Makerere University Business School, **Uganda**, April 2019.
10. Instructor, Time series forecasting in R, Binus University, **Indonesia**, August 2019.
11. Instructor, Time series forecasting in R, Caucasus University, **Georgia**, December 2019.
12. Instructor, Time series forecasting in R, Dakar Ecole de Management, **Senegal**, May 2018.
13. Instructor, Time series forecasting in R, Charmo University, **Iraq**, October 2018.
14. Instructor, Time series forecasting in R, Ecole Nationale des Sciences et Technologies Avancées de Borj Cédria, **Tunisia**, January 2018.
15. Instructor, Dataanalytics & forecasting in R, Salahaddin University, **Iraq**, August 2017.

Workshops in the UK

16. Instructor, Time series forecasting in R, NHS-Rcommunity, UK, February 2020.
17. Instructor, Time series forecasting in R, NHS-Rcommunity, UK, June 2020.
18. Instructor, Time series forecasting in R, NHS-Rcommunity, UK, October 2020.
19. Instructor, Forecasting with Multiple Seasonality, NHS-Rcommunity, UK, November 2020.
20. Instructor, Time series forecasting in R, NHS Midlands and Lancashire Commissioning Support Unit UK, June 2021.
21. Instructor, Time series forecasting in R, NHS Midlands and Lancashire Commissioning Support Unit UK, November 2021.

22. Instructor, Time series forecasting in R, NHS Midlands and Lancashire Commissioning Support Unit UK, February 2022.
23. Instructor, Principles of forecasting using R, NHS-Rcommunity, UK, February 2023.
24. Instructor, Advanced topics in forecasting, NHS-Rcommunity, UK, April 2023.
25. Instructor, Time series forecasting in R, NHS-Rcommunity, July 2023.
26. Instructor, Time series forecasting in R, NHS Midlands and Lancashire Commissioning Support Unit UK, November 2023.

Teaching

- In every year since 2018, student evaluations for “Business Data Analytics” and “Forecasting” have given an average rating for my teaching above 4.47 out of 5.
- In 2017, I received highly commended in the “Innovation in teaching and learning” award from Cardiff Business School.

Executive Education, Diploma in Planning, National Health Service

- *Healthcare Planning Evidence and Analytics*: I have designed and deliver this course for 5 years, teaching over 100 managers across NHS Wales. Topics include Data collection, Explanatory Data Analysis, transformation, visualisation, predictive modeling, Regression, Correlation, Artificial Intelligence and Machine Learning, Barriers & Enablers of model implementation

MS.c. in Logistics and Operations Management, Cardiff University

- *Forecasting*: Forecasting & decision making, Time series graphics, Exponential Smoothing, ARIMA, Regression, Residual diagnostics, accuracy evaluation
- *Business Data Analytics*: Data wrangling, visualisation, transformation & communication

MS.c. in ISLI Global Supply Chain Management, Kedge Business School, France

- *Inventory Management*: Supply chain and inventory management, Inventory management concepts, inventory control policy, Economic Order Quantity, Inventory Management Under Uncertain Environment

MS.c. in Business Analytics, University of Exeter

- *Data Visualisation in R*: Tidy data, data transformation, data visualisation, ggplot2

Conference organization

- Organising Committee, Forecasting for Social Good workshop, 2022.
- Program Committee, Social media analysis for humanitarian and development challenges, GoodIT, 2022.
- Organising Committee, Forecasting for Social Good workshop, 2021.
- Program committee, UseR!2021 conference, 2021.
- Invited session, International Symposium of Forecasting, 2019.
- Organising Committee, Forecasting for Social Good workshop, 2018.
- Forecasting stream organiser, OR59 Annual Conference, 2017.
- Invites Session, International Symposium of Forecasting, 2017.
- Forecasting stream organiser, OR58 Annual Conference, 2016.
- Invites Session, INCOM2015, 2015.

Podcast interview

- August 2021, Forecasting Impact.
- November 2021, DataSkeptic, Time series for good.
- September 2023, Forecasting Impact.

Research evaluation

- The Austrian Science Fund, Austria, 2021 - 2022
- Global Challenge Research Fund, UK, 2024 - present.

Reviewing assignment

I have provide review service for many peer reviewed journal including: Computers & Operations Research, European Journal of Operational Research, IMA Journal of Management Mathematics, International Journal of Forecasting, International Journal of Production Economics, International Journal of Production Research, Journal of the Operations Research Society, OMEGA: International Journal of Management Science, Production and Operations Management, Supply Chain Management: An International Journal, Networks and Spatial Economics, Journal of Humanitarian Logistics and Supply Chain Management, Health Systems.

Society membership

- Member, International Institute of Forecasters
- Member, OR Society
- Member, Division of Population Medicine
- Member, Clinical Innovation MDT
- Member, South Wales Operational Research Discussion Society