JAIME MACIAS

Email: jmacias@mit.edu

EDUCATION

University of Cambridge, Cambridge, UK
Ph.D. Engineering, Concentration: The economic value of digitalization in supply chain operations (2020-2024)

University of Exeter, Exeter, UK
M.S. International Supply Chain Management (2014-2015)
Graduated with Distinction, ranked 1st in cohort

Escuela Superior Politécnica del Litoral (ESPOL), Guayaquil, Ecuador
B.S. Industrial Engineering (2005-2009)

ACADEMIC POSITIONS

Center for Transportation and Logistics, Massachusetts Institute of Technology, Cambridge, MA
Postdoctoral Research Associate (Oct. 2024 —)

Escuela Superior Politécnica del Litoral (ESPOL), Guayaquil, Ecuador
Senior Lecturer, Course coordinator - Supply Chain Management (2015-2020)

RESEARCH

JOB MARKET PAPER

Macias-Aguayo, J., McFarlane, D., & Dhada, M. "Valuing Real-Time Digital Monitoring for On-Time Operational Performance,"

Reviewed to Production and Operations Management

PEER-REVIEWED JOURNAL ARTICLES

Macias-Aguayo, J., Garcia-Castro, L., Barcia, K. F., McFarlane, D., & Abad-Moran, J. (2022). Industry 4.0 and Lean Six Sigma integration: A systematic review of barriers and enablers. *Applied Sciences*, 12(22), 11321

Ma, B. J., Jackson, I., Huang, M., Villegas, S., & **Macias-Aguayo, J.** (Accepted) "A data-driven and context-aware approach for demand forecasting in the beverage industry." *International Journal of Logistics Research and Applications.*

PRACTICE-ORIENTED PUBLICATIONS

Macias-Aguayo, J., Saenz, M. J., & McFarlane, D. (2025). How to Automate Operations Without Breaking the Bank. *MIT Sloan Management Review*.

SELECT RESEARCH IN PROGRESS

Macias-Aguayo, J., Jackson, I., Rocke, R., Zhang, L., & Saenz, M. J. "Integrating Exogenous variables into Demand Forecasting: A Value Quantification Approach" Preparing for submission to *Management Science/M&SOM* (Dec 2025)

Dhada, M., **Macias-Aguayo, J**., Giaretti, M., & McFarlane, D. "Collaborative Learning for Demand Forecasting in City Logistics" Preparing for submission to *International Journal of Production Research.*

CONFERENCE PROCEEDINGS (*equal author contribution)

Macias-Aguayo, J., Yilmaz, G., Mukherjee, A., & McFarlane, D. (2023). The Role of Low-Cost Digitalisation in Improving Operations Management. *In Service Oriented, Holonic and Multi-Agent Manufacturing Systems for Industry of the Future: Proceedings of SOHOMA 2022 (pp. 343-355). Cham: Springer International Publishing.*

Dhada, M.*, **Macias-Aguayo, J.*,** Mukherjee, A., & McFarlane, D. (2023). Low-cost very narrow aisle pallet racking vehicle utilisation monitoring solution. *In Low-Cost Digital Solutions for Industrial Automation (LoDISA 2023)*

Yilmaz, G., Mukherjee, A., **Macias-Aguayo, J.,** & McFarlane, D. (2022, November). Impact Assessment Model for Low Cost (Shoestring) Digitalisation in Small Construction Organizations. *In IOP Conference Series: Earth and Environmental Science (Vol. 1101, No. 9, p. 092043). IOP Publishing.*

Macias-Aguayo, J., McFarlane, D., Schönfuß, B., & Salter, L. (2022). A catalogue of digital solution areas for logistics SMEs. *IFAC-PapersOnLine, 55*(10), 1828-1833.

Macias-Aguayo, J., Abad-Moran, J., Barragan-Robles, C. (2019) Design of inventory replenishment policies: A Case in Hospital Sector. *In 17th LACCEI International Multi-Conference for Engineering, Education, and Technology. Latin American and Caribbean Consortium of Engineering Institutions*

TEACHING EXPERIENCE

Massachusetts Institute of Technology, Cambridge, MA

    Analytical Methods for Supply Chain Management II (Graduate, MS in SCM), Winter 2025
    Instructor Evaluation: 6.40 /7.00 | School Average: 6.00 /7.00

University of Cambridge, Cambridge, UK

    Data and Decision Science (DDS) (Graduate), Fall 2022 and 2023
    Lecturer at the Manufacturing Engineering Tripos (MET) program

    Data and Modelling (M3) (Graduate), Fall 2022 and 2023
    Lecturer at the M.Phil. program in Industrial Systems, Manufacture and Management (ISMM)

Escuela Superior Politécnica del Litoral (ESPOL), Guayaquil, Ecuador

    Methods Engineering (Undergraduate) – Instructor, 2016–2020 (5 Terms)
    Average Instructor Evaluation: 94.88 / 100 | School Average: 8.50 / 10.00

    Operations Research II (Undergraduate) – Instructor, 2016 (2 Terms)
    Average Instructor Evaluation: 95.20 / 100 | School Average: 8.50 / 10.00

    Introduction to Industrial Engineering (Undergraduate) – Instructor, 2016 (1 Term)
    Average Instructor Evaluation: 92.17 / 100 | School Average: 8.50 / 10.00

    Process Value Analysis (Undergraduate) – Instructor, 2017–2018 (2 Terms)
    Average Instructor Evaluation: 95.29 / 100 | School Average: 8.50 / 10.00

Sustainable Supply Chain Management (Undergraduate) – Instructor, 2017–2018 (4 Terms)
Average Instructor Evaluation: 93.53 / 100 | School Average: 8.50 / 10.00

Forecasting and Inventory Control (Undergraduate) – Instructor, 2018–2020 (4 Terms)
Average Instructor Evaluation: 93.90 / 100 | School Average: 8.50 / 10.00

Stochastic Models for Manufacturing and Services (Undergraduate) – Instructor, 2018–2019 (4 Terms)
Average Instructor Evaluation: 93.75 / 100 | School Average: 8.50 / 10.00

Product Value Analysis (Undergraduate) – Instructor, 2020 (1 Term)
Average Instructor Evaluation: 92.43 / 100 | School Average: 8.50 / 10.00

Operations Planning (Professional Master's) – Instructor, 2023 (1 Term)
Average Instructor Evaluation: 94.75 / 100 | School Average: 8.50 / 10.00

Fundamentals of Logistics and Supply Chains (Professional Master's) – Instructor, 2023 (1 Term)
Average Instructor Evaluation: 97.05 / 100 | School Average: 8.50 / 10.00

HONORS AND AWARDS

GS1 UK & Cambridge Engineering PhD Studentship, 2020
Full funding for doctoral studies at the University of Cambridge.

Fulbright Scholarship for Doctoral Studies, 2020 (Declined)
Offered full funding for PhD in the U.S.; declined in favor of Cambridge offer.

Ecuadorian National Government Scholarship for Postgraduate Studies, 2014
Full scholarship for MSc studies at the University of Exeter.

Best MSc Dissertation Award, 2015
Awarded by the University of Exeter's College of Engineering, Mathematics & Physical Sciences.

Edwin Leong Travel Grant, University of Cambridge
Funding to present research at international conferences.

Cambridge Engineering Department Travel Grant
Awarded for international research presentations.

INDUSTRY POSITIONS

DUFERCO IPAC - Ecuador (Regional Division of DUFERCO Group)
Head of Planning and Supply, Supply Chain Dept (2011 – 2014)
Manufacturing Analyst (2009 – 2011)
Led inventory management initiatives and optimized end-to-
end production and logistics planning processes.