



ALİ BAŞTAŞ PhD MEng CQP DipQ

Assistant Professor of Industrial Engineering

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PROFILE

Assistant Professor of Industrial Engineering specializing in sustainable manufacturing, supply chain quality management, and Industry 4.0/5.0. Research integrates quality management, sustainability, and digital technologies, with contributions published in journals including the Journal of Intelligent Manufacturing, Journal of Manufacturing Technology Management, Journal of Cleaner Production, and Sustainable Production and Consumption. Combines hands-on supplier quality and supply chain leadership experience at JCB with academic expertise to deliver high-impact teaching and research, and to contribute to society through STEM outreach that promotes engineering education in schools and colleges across North Cyprus.

- Google Scholar citations: 967 (as of Jul. 2026)
- h-index: 8
- SCI-E/SSCI-indexed articles (WOS): 8
- ESCI-indexed articles (WOS): 1

EDUCATION

PhD in Engineering Management

University of Derby, College of Science and Engineering, UK – July 2019

Thesis area: Sustainable Supply Chain Quality Management

Examiners: Prof. Jose Arturo Garza-Reyes; Prof. Sameh Saad

MEng (Hons) in Mechanical Engineering with Manufacturing & Management (2:1)

University of Bath, UK – July 2014

PROFESSIONAL QUALIFICATIONS

- Chartered Quality Professional (CQP), Chartered Quality Institute – Feb. 2018
- Level 5 Diploma in Quality Management (DipQ), CQI – Dec. 2017
- ISO 9001 Quality Management Systems, Lead Auditor, BSI – Jul. 2015
- Lean Six Sigma Green Belt, Industry Forum – Feb. 2018

ACADEMIC APPOINTMENTS

Assistant Professor, Department of Industrial Engineering

Eastern Mediterranean University (EMU), Cyprus – Jul. 2021 to Present.

- Coordinate and deliver undergraduate and graduate courses in industrial engineering and quality management.
- Consistently achieve student evaluation scores of $\geq 3.5/4.0$ across courses.
- Lead and co-author research on sustainable manufacturing, Industry 4.0/5.0, sustainable APQP 4.0, and supply chain quality management.
- Contribute to departmental committees, curriculum development, and continuous improvement initiatives.
- Represent and promote the Industrial Engineering program through STEM outreach and community engagement, including school science festivals and national technology competition evaluation (e.g., TEKNOFEST).

Assistant Professor, Mechanical Engineering Program

Middle East Technical University – Northern Cyprus Campus, Cyprus – Sept. 2019 to Jul. 2021.

- Delivered core and elective courses in manufacturing, quality, and industrial engineering.
- Contributed to METU NCC's community and industry impact, building links with the Cyprus Turkish Chamber of Industry. Coordinated the Graduation Design Project module (Sep. 2020 – Jul. 2021), supervising [industry-based projects](#) with various local manufacturing firms.
- Actively contributed to ABET and PEC accreditation activities and program quality assurance.

JOURNAL ARTICLES & BOOK CHAPTERS

- Gholipour, E., & Bastas, A. (2024). State-of-the-art review of neural network applications in pharmaceutical manufacturing: Current state and future directions. *Journal of Intelligent Manufacturing*, 35, 3003–3035.
- Bastas, A., & Garza-Reyes, J. A. (2022). Impact of the COVID-19 pandemic on manufacturing operations and supply chain resilience: Effects and response strategies. *Journal of Manufacturing Technology Management*, 33(5), 962–985.
- Rizvi, S., Bastas, A., & Liyanage, K. (2022). Sustainability assessment of electricity generation technologies: A transition pathway for Pakistan. *International Journal of Sustainable Energy*, 41(9), 1215–1236.
- Bastas, A. (2021). Sustainable manufacturing technologies: A systematic review of latest trends and themes. *Sustainability*, 13(8), 4271.
- Bastas, A. (2020). Comparing the probing systems of coordinate measurement machine: Scanning probe versus touch-trigger probe. *Measurement*, 156, 107604.
- Bastas, A., & Liyanage, K. (2019). Setting a framework for organizational sustainable development. *Sustainable Production and Consumption*, 20, 207–229.
- Bastas, A., & Liyanage, K. (2019). Integrated quality and supply chain management business diagnostics for organizational sustainability improvement. *Sustainable Production and Consumption*, 17, 11–30.
- Bastas, A., & Liyanage, K. (2018). ISO 9001 and supply chain integration principles-based sustainable development: A Delphi study. *Sustainability*, 10(12), 4569.
- Bastas, A., & Liyanage, K. (2018). Sustainable supply chain quality management: A systematic review. *Journal of Cleaner Production*, 181, 726–744.

CONFERENCE CONTRIBUTIONS & PROCEEDINGS

- Bastas, A. (2026). Towards SPC 5.0: Synthesizing Industry 5.0 principles and SPC design into an integrated framework and research agenda. *16th Annual International Conference on Industrial Engineering and Operations Management*, IEOM Ankara 2026.
- Bastas, A., & Liyanage, K. (2021). Assessing the enablers and barriers to quality and supply chain management based approach to sustainable operations in the manufacturing context. *Advances in Manufacturing Technology XXXIV* (M. Shafik & K. Case, Eds.), Proceedings of the 18th International Conference on Manufacturing Research (ICMR 2021), University of Derby, UK. IOS Press, pp. 329–337.
- Bastas, A., & Liyanage, K. (2017). Improving supply chains through quality management and sustainability integration. International Conference on Environmental Sciences & Educational Studies (ICES 2017), Girne/Kyrenia, North Cyprus (abstract).

RESEARCH INTERESTS

- Sustainable manufacturing and Industry 4.0/5.0
- Supply chain resilience and risk management
- Quality management and sustainable supply chain quality management
- Sustainable new product introduction, APQP and Sustainable APQP 4.0
- Data-driven quality engineering and SPC in smart factories

TEACHING EXPERIENCE AND COURSES TAUGHT

Quality Engineering and Operations Management courses taught include:

- IENG332 - Production Planning I
- IENG450 - Industrial Management
- IENG484 & IENG584 – Quality Engineering & Advanced Quality Engineering
- IENG486 - Recent Topics in Quality Management (including Lean Six Sigma Applications)
- MECH471 - Facility (Production Operations) Design

Manufacturing Engineering courses taught include:

- MECH202 - Manufacturing Technologies (including coordination of the Machine Shop Activities)
- IENG263 - Materials and Manufacturing Processes
- IENG447 – Computer Integrated Manufacturing

Other courses taught include:

- IENG598 and IENG698 - Master's and PhD Research Seminar

- IENG385 - Statistical Applications for Engineering
- MECH458 - Graduation Design Project (Course Coordinator, Sep 2020 – Jul 2021)
- IENG490 - Introduction to Manufacturing and Service Systems Design
- IENG492 - Manufacturing and Service Systems Design Project

SUPERVISION

MSc Theses Supervised:

- Rizvi, S. M. A. H. (2022). *An integrated decision-making model for sustainable management of end-of-life solar photovoltaics: A case study of Spain*, Middle East Technical University (METU NCC).

MSc and PhD supervision in progress in the domains of sustainability, quality, and supply chain management.

EDITORIAL AND REVIEWING ACTIVITIES

Served as *Guest Editor* for Special Issues below::

- “The Impact of Industry 4.0 on Sustainability and the Circular Economy” at Sustainability (*MDPI*).
- “Adopting New Technologies for Supply Chain Management for Sustainability” at Sustainability (*MDPI*).

Served as a *reviewer* for international journals including:

- Journal of Cleaner Production (Elsevier)
- Journal of Manufacturing Technology Management (Emerald)
- International Journal of Production Research (Taylor & Francis)
- International Journal of Quality and Reliability Management (Emerald)

COMMUNITY ENGAGEMENT & OUTREACH

- Evaluation Referee, TEKNOFEST 2026 “Technology for the Benefit of Humanity” Competition (Middle School Level) — Preliminary Evaluation Report (ÖDR) assessment, Apr. 2026
- Industrial Engineering promotion and additive manufacturing demonstrations, BEAL Science Festival — Bülent Ecevit Anadolu Lisesi, Apr. 2026
- ABET Advisory Board Member, Mechanical Engineering Program — METU NCC, Jun. 2025
- Industrial Engineering promotion, IETMK Science Festival — İskele Evkaf Türk Maarif Koleji, Apr. 2025
- Industrial Engineering promotion, NBC Science Exhibition — Necat British College, Mar. 2025
- Industrial Engineering career presentation, ESK Career Week — English School of Kyrenia, Mar. 2022

INDUSTRIAL EXPERIENCE

Supplier Development Engineer

JCB, Group Purchasing, UK – Mar. 2015 to Jun. 2018

- Managed supplier quality for Backhoe Loaders, Transmissions, and Telehandlers business units across UK and European supply base.
- Conducted supplier system and process audits (including paint, welding, casting, and cleanliness) across UK, Europe, and Asia.
- Developed and rolled out the JCB Global Supplier Welding Process Audit, adopted in UK, Europe, India, and China.
- Led APQP/NPI projects at key suppliers, reducing launch risk and improving process capability for critical components.
- Worked closely with cross-functional teams (design, manufacturing, purchasing) to resolve complex supplier quality issues.

Manufacturing Engineer – Graduate Scheme

JCB, Telehandlers Division and Hydraulic Business Unit, UK – Jul. 2014 to Mar. 2015

- Rotated across production planning and quality engineering roles within JCB plants (JCB Hydraulic Business Unit and Telehandlers Business Unit).
- Supported planning and quality improvement initiatives in high-volume manufacturing environment.

Design & Continuous Improvement Engineer (Professional Industrial Placement)

Parker Hannifin Ltd., Hydraulic Cartridge Systems Division, UK – Jul. 2011 to Jul. 2012

- Contributed to design and continuous improvement projects in a high-mix, engineering-to-order environment.
- Participated in lean and quality improvement initiatives focused on productivity and waste reduction.

PROFESSIONAL TRAINING AND TECHNICAL SKILLS

- IOSH Managing Safely; Level 2 Award in Risk Assessment
- 8D Problem Solving; Process and Design FMEA
- CSWIP Weld Inspection training
- MS Office; MATLAB; Simio; SolidWorks (CAD/CAM)

AWARDS AND HONORS

- Outstanding Contribution in Reviewing Award, *Journal of Cleaner Production*, Elsevier – 2017
- IET Best Student Graduating in Manufacturing Engineering Prize, University of Bath – 2014
- Academic Representation Achievement Award, University of Bath – 2013

PERSONAL DETAILS

- Nationality: British and Cypriot
 - Languages: English and Turkish (Native), Greek and French (Basic)
 - Military service: Completed (Aug. 2018, North Cyprus)
 - Interests: Fitness, football, guitars, specialty coffee and tea
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