Curriculum vitae (CV)

Prof. Abdulbaset Alemam
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Nationality: Libyan
Date of birth: 1968
Place of birth: Tripoli, Libya

Education

PhD in Mechanical Engineering, Concordia University, Montreal, Canada, January 2011- June 2015.
Thesis Title: Eco-Design Improvement at the Conceptual Design Stage: Methodology and Applications.
MSc in Computer Aided Engineering Design, Department of Design Manufacturing and Engineering Management, University of Strathclyde, Glasgow, UK, 2000-2002.
Thesis Title: Structure and Cost Models of Design Re-Use Systems for Electronic Chips.
Bachelor in Mechanical and Industrial Engineering, University of Tripoli, Tripoli, Libya, 1992.

Research Specialization

Eco-Design, Life Cycle Assessment, Sustainable Manufacturing, Manufacturing Processes and Concurrent Engineering.

Career Related Experience

Professor, Department of Mechanical and Industrial Engineering, University of Tripoli, December 2023.
Associate Professor, Department of Mechanical and Industrial Engineering, University of Tripoli, December 2019- 2023.
Assistant Professor, Department of Mechanical and Industrial Engineering, University of Tripoli, June 2010- 2019.
Research Assistant (PhD study), MIE Concordia University, Montreal, Canada, January 2011- June 2015.
Manager of Training Office (Main Founder) at University of Tripoli, January 2009- September 2010.
Lecturer, Department of Mechanical and Industrial Engineering, Tripoli University, 2009-2010.
Researcher, Advanced Center of Technology, Abesalem, Tripoli, Libya, January 2006- July 2008.
Assistant Lecturer, Department of Mechanical Engineering, College of Engineering Technology, Tripoli, Libya, 2003-2007.
Master study, Department of Design Manufacturing and Engineering Management, University of Strathclyde, Glasgow, UK, 2000-2002.
Instructor, Department of Mechanical Engineering, College of Engineering Technology, Tripoli, 1996-1999.
Mechanical Engineer (Part Time), Department of Operations and Maintenance, Tripoli Medical Center. Tripoli, Libya, 1996-1999.
Mechanical Engineer, Waha Oil Company, Tripoli, Libya, 1993-1995.
Member of Assembly of Libyan Academics & Experts, 2017 till now.

Taught Courses

Principles of Manufacturing Engineering
Manufacturing Processes
Methods of Plastics Forming
Metrology
Quality Control
Factory Planning
Product Design and Development (Master Degree)

Prizes and Awards

Libyan Innovation Prize. First winner of the Best Master Thesis in the Field of Mechanical and Industrial Engineering. Thesis Title: Integration of Eco-Design Tools into CAD System for Impact Assessment, (Thesis Supervisor), December 2022.
Libya Ministry of Education and Canadian Bureau for International Educations (CBIE), Canada Program for Graduate Study Funding, PhD Research Study, 2011- 2015.
Concordia Accelerator Award, Concordia University, Montreal, Canada, 2015.

Patents Registered Nationally

Alemam, A, Altheni, A, Alkoni, M. Design and Manufacturing of Centrifugal Casting Machine. Department of Patents and Knowledge, Industrial and Research Center, Tajora, Tripoli- Libya. January 2008, Reference (2008/3553).
Alemam, A, Deep, Y, Jafari, E. Design and Manufacturing of Centrifugal Casting Machine. Department of Patents and Knowledge, Industrial and Research Center, Tajora, Tripoli- Libya. July 2008, Reference (2008/3553).

Funded Projects

Design and Manufacturing of Pressure Tester Machine. The Project was Funded by the Higher Institute of Mechanical Professionals. Finished December, 2007.
Design and Manufacturing of Selective Laser Sintering Machine. The Project was Funded by the Advanced Center of Technology, Abesalem, Tripoli- Libya, 2006-2008.

Peer Reviewer

International Journal of Sustainable Engineering. UK.
International Journal of Concurrent Engineering: Research and Applications. USA.
Journal of Engineering Research, Faculty of Engineering, University of Tripoli, Libya.

Master thesis (Supervisor)

Mohamed Benhusein, Integration of Eco-Design Tools into CAD System for Impact Assessment. Department of Mechanical and Industrial Engineering, Faculty of Engineering, University of Tripoli, December 2021, (Student graduated).

Tasnem Showehdi, Managing Environmental Impacts of a Car Engine through the Integration of a Multi-Criteria Decision Making Technique and Mathematical Modeling. Department of Mechanical and Industrial Engineering, Faculty of Engineering, University of Tripoli, August 2023, (Student graduated).

Hasan Algornazy, Implementation of Sustainable Analysis Tools in Manufacturing Processes: A Case Study. Department of Mechanical and Industrial Engineering, Faculty of Engineering, University of Tripoli, (Research under progress).

Publications

Journal Papers:

Alemam, A., Ahmida, K., Benhusein, M. Eco-design and Mechanical Strength Analysis of A Brake Pad. The International Journal of Engineering and Information Technology, (University of Musrata), Vol. 11, No.1. 2023.

Alemam, A., Showehdi, T. Utilizing Life Cycle Robust Optimization to Assess the Environmental Impacts of Lightweight Materials for A Car Engine, Journal of Engineering Research, (University of Tripoli), Vol. 36. 2023.

Showehdi, T., Alemam, A. Using Life Cycle Assessment and Analytical Hierarchy Process to Evaluate the Design for Environmental Options: A Case Study on A Car Engine, Journal of Engineering Research, (University of Tripoli), Vol. 35. 2023.

Benhusein, M. Alemam, A. Environmental Design Methods and Tools: Overview and Applicability. International Science and Technology Journal, 2022.

Ahmida, K., Alemam, A., Allaboudi, E. Investigating Rotational Vibration Characteristics of A Centrifugal Casting Machine. International Science and Technology Journal, Vol. 20. 2019.

Shtewi, M., Zayed, A., Alemam, A. Investigation of Constrained Model Predictive Control Tuning Strategy for Multivariable Processes. Journal of Engineering Research, Faculty of Engineering, University of Tripoli, 2019.

Alemam, A., Cheng, X., and Li, S. Treating Design Uncertainty in the Application of Eco-Indicator 99 with Monte Carlo Simulation and Fuzzy Intervals. International Journal of Sustainable Engineering, 2017.

Alemam, A., and Li, S. Matrix-based Quality Tools for Concept Generation in Eco-design. International Journal of Concurrent Engineering: Research and Applications, 2016.

Alemam, A., and Li, S. Eco-design Improvement for the Diaphragm Forming Process. International Journal of Sustainable Engineering, 2016.

Alemam, A., and Li, S. Integration of Quality Function Deployment and Functional Analysis for Eco-design. International Journal of Mechanical Engineering and Mechatronics, Avestia Publisher, 2014.

Conference Papers:

Alemam, A., Benhusein, M. Integration of Environmental Quality Function Deployment into CAD Software for Impact Assessment, International Conference on Mechanical and Industrial Engineering (ICMIE), Tripoli-Libya, November 15-17, 2022.

Alemam, A., Atheni, A., Alkoni, M. Design and Manufacturing of Cylinder Head Inspection Machine by Using Air Pressure. The Second Conference for. Engineering Science and Technology, Sabrata, Libya, October 29-31, 2019.

Alemam, A., Li, S. “Trapezoidal Fuzzy Numbers for Eco-Design Assessments in Conceptual Design”. ASME International Design & Engineering Technical Conferences & Computers and Information in Engineering Conference, Buffalo, New York, USA, August 17-20, 2014.

Alemam, A., Li, S. “Integration of Quality Function Deployment and Functional Analysis for Eco-Design Improvement”. International Conference on Mechanical Engineering and Mechatronics, Toronto, Ontario, Canada, August 8-10, 2013.

Alemam, A., Li, S. “Fuzzy Environmental Impact Assessments for the Early Design Decisions”. International Conference on Mechanical Engineering and Mechatronics, Toronto, Ontario, Canada, August 8-10, 2013.

Alemam, A. “Eco-Design Methodology for the Early Design Stage: A Dependency Model for Impact Assessment and Decision Making”. The 12th Product Life Cycle Management Conference, Montreal, QC, Canada, July 2012.

Alemam, A., Zaid, A., Fandi, M. "Speed Control for Different Cylindrical Materials of Centrifugal Casting Machine". International Conference on Modelling and Simulation, Petra, Jordan, 18-20 November, 2008.

Alemam, A., Deeb, Y. "Design and manufacture of Centrifugal Casting Machine for Producing Aluminum Cylinder Piston ". National Conference General Program on Diversified Vocations, Towards Advanced Vocations. Janzour, Tripoli- Libya, 17-18 December 2007.

Alemam, A., Zaid, A., Fandi, M. "Speed Control for Different Cylindrical Materials of Centrifugal Casting Machine". National Conference General Program on Diversified Vocations, Towards Advanced Vocations. Janzour, Tripoli- Libya, 17-18 December 2007.

Benshebil, S., Alemam, A. "Prediction of Optimum Operating Conditions Based on Experimental Data for Thermoplastic Products (High Density Polyethylene) in Injection Molding." The Third International Conference on Thermal Engineering: Theory and Applications. Amman, Jordan, May, 2007.

Alemam, A., Dajan, A., Zayani, E., Sodani, A. "Effect of Mould Material on Plastic Products Shrinkage". The Quality Conference, To Create Quality Culture, Tripoli, Libya, May 2004.