



Name: Dr. Majed Al Sarheed

Rank: Assistant Professor for industrial Practice

Personal Information

Nationality: Kuwaiti

AU Joining Date: 04 Jan 2015

E-Mail Address: m.alsarheed@au.edu.kw

Professional Information

Education:

Qualification: Doctor of Philosophy (Ph.D.)

Major: Mechanical Engineering

College/University: Lehigh University (USA)

Year: 2014/2015

Qualification: Executive Leadership Training

Major: Leadership and Management

College/University: CORNELL UNIVERSITY, Johnson Graduate School of Management, Ithaca, NY (USA)

Year: 2011

Qualification: Master of Science in Engineering

Major: Mechanical Engineering

College/University: University of Pennsylvania (USA)

Year: 2001

Qualification: Bachelor of Science

Major: Mechanical Engineering

College/University: Widener University (USA)

Year: 1998

Specialization:

Engineering Specialization: Design, Manufacturing, Control System

Other Specialization: Entrepreneurship and Project Management

Research Area: Manufacturing and Polymer Processing

Current Academic Position:	Assistant Professor of Industrial Practice
Current Professional Positions:	Founder & CEO – Advanced Industrial Manufacturing (AIM)
Previous Administrative Position Held:	NA
Previous Academic Positions Held:	Lecturer
Fellowships And Honors:	SPE Excellence in Polymer Science & Engineering Award (November 2014) SPE ANTEC Award – PA chapter (April 2014) SPE ANTEC Award – PA chapter (March 2013)
Teaching Experience:	AU – January 2015 – current: - <i>A full-time faculty member, responsible for teaching of Engineering and Entrepreneurship courses. Duties included</i> • Developing more than 5 courses in Engineering and Entrepreneurship • Creating an Entrepreneurship program for all majors within the college • Facilitating individual, group-based and work-based learning • Teaching Engineering and Project –Based Learning courses to Degree and Diploma students. • Participating in curriculum development of Engineering Courses • Conduct research to maintain skills and knowledge. Lehigh University – Bethlehem, PA, USA - <i>Post-Doctoral Research Associate(12/2014 – 1/2015 & 5/2015 – 8/2015)</i> • Entrepreneurial Lead for the Innovation-Corps, a National Science Foundation (NSF) funded program, to advance research and to promote the translation of new ideas into the marketplace. • Investigated the commercial feasibility of the technical project. • Assisted in transitioning the technology from the lab into the marketplace. - <i>Teaching Assistant – Entrepreneurship Minor Program School of Business (1/2007–1/2009)</i> • Assisted in teaching an Entrepreneurship minor program at Lehigh University. Particular emphasis was placed on identifying and seizing entrepreneurial opportunities, creativity, innovation and vision - <i>Teaching Assistant – ME-245 Engineering Vibrations:</i>

	Physical modeling of vibrating systems. Free and forced single and multiple degree of freedom systems. Computer simulations and engineering applications
Industrial And Technical Experience:	Advanced Industrial Manufacturing (AIM) <i>First Wood-Plastics Composite materials manufacturer in Kuwait</i> Founder & CEO (2017 – Current) • Developed and executed business strategies and objectives to achieve sustainable growth. Since its inception, AIM has maintained a strong year-over-year revenue growth • Built a team of successful and highly motivated technical and business executives to lead sales and marketing • Ensured team building was integrated within ongoing business strategy to increase efficiency and performance • Created and instilled vision and inspired innovation to encourage employees • Implemented policies and codes of conducts to ensure full compliance and the highest level of work ethics, integrity and transparency • Allocated and managed budgets. Analyzed, evaluated and distributed budgets to various projects to improve cash flow • Developed and introduced over 25 new products to the market • Responsible for market research, competitor and customer analysis to mitigate risk and ensure high rate of return on investments NOORTEK LLC, Emmaus, PA Aircraft Components Supplier Founder & Managing Director (01/2008 – 09/2012) Representing International Aerospace companies in pursuit of potential business opportunities in the Middle East & North Africa, maintaining primary focus in the aerospace industry.

- Developed and executed business strategies and objectives to achieve sustainable growth
- Built a team of successful and highly motivated business development representatives to lead sales and marketing in designated territories/countries.
- Advised clients/partners concerning potential opportunities, existing regional customs, laws, regulations, culture sensitivity rules and public policies

TransDigm Group Inc. (Formerly BREEZE-EASTERN Corp.), Union, NJ (USA)

Marketing Consultant, Middle-East/North Africa (1/2007 – 5/2013)

- Analyzed target markets, attended trade shows and took action to maximize business revenue streams, ensuring proper representation of company brand and values
- Developed and executed a business plan and marketing strategies and objectives to achieve a strong business development
- Established relationships with countries in the Middle East in general and in the Gulf region in particular such as Kuwait, United Arab Emirates (UAE), Qatar, Bahrain, Oman and Saudi Arabia
- Performed contract negotiation and logistics support with the several Governments, which resulted in securing multi-million dollars opportunity and first time presence in the middle-east region
- Facilitated communications between potential customers and client and submit proposals and presentations to potential customers, including preparation of bid responses and contract proposals and language translation of correspondence as required
- Advised client concerning potential opportunities, existing regional customs, laws, regulations, culture sensitivity rules and public policies

Project Engineer - (3/2004-1/2007)

Responsible for overall design, development and prototyping of equipment while keeping projects on schedule and within budget. Created test plans, developed testing procedures, executed tests and prepared test reports. Coordinated with customers on product specifications and design changes.

- Project Manager responsible for leading design, development and delivery of Cargo Winch System for the Airbus Military A400M program
- Submitted design proposal for anchor cables and support arms for the Airbus Military A400M Retrieval Winch System. Design enables paratroopers to safely deplane aircraft through use of static lines and also supports cargo delivery. Program awarded
- Program Manager for the development of an 8HP 270V DC Brushless Motor to be used for Breeze-Eastern High Speed Hoist (Model HS-29900).

Sr. Design Engineer – TELEFLEX (04/2003 – 12/2003)

Participated in multiple projects, providing hands-on support in machine shop, coordinating testing and interfacing with vendors and customers.

- Designed a retrofit to upgrade adjustable pedal systems to include an enhanced DC motor and a memory sensor, leading to the introduction of a new product to the Teleflex pipeline
- Replaced existing gear shift control Neutral switch mechanism with more efficient and cost-effective design, leading to improved customer satisfaction and enhanced product safety

MOTOROLA, INC., Horsham, PA

(04/2000 – 07/2001)

Mechanical Engineer – Broadband Communications Sector

Performed mechanical design of broadband radio frequency and fiber-optic distribution and head-end equipment from concept to production. Qualified vendors by negotiating and confirming parts availability, manufacturing schedules and purchasing costs.

- Improved product quality with zero cost increase through substitution of better materials

	- Designed molded, machined and sheet metal parts, utilizing PRO/ENGINEER to facilitate fast and accurate production of design documents - Supported design development in all phases, performing thermal, stress and failure analyses using manual calculation and PRO/MECHANICA to ensure highest standard of quality EATON CORPORATION, Glenolden, PA (USA) Design Engineer – Aerospace Controls Unit (06/1998 – 03/2000) Managed multiple projects from conception to delivery, providing hands-on support in machine shop and assembly floor, coordinating testing and interfacing with vendors. - Supervised design and analysis for 7 mechanical and electro-mechanical product lines for oil monitoring systems, generating proposal, assembly and detail drawings ahead of schedule - Analyzed design issues including stress, strength, failure, thermal FEA, controls and vibration identifying weaknesses and recommending design optimization - Completed design of oil debris collection systems including chip detectors, chip collector, breather, sight gauges, filler caps, float switches and high temperature oil level sensors to provide maximum capture efficiency of oil debris in the turbo-jet engine gear box - Developed computer programs to analyze O-ring frictional forces, gland properties and to design springs, improving design accuracy and reducing time spent on repetitive.
Research Interest:	Engineering Design, Manufacturing, and Control Product Development Entrepreneurship Polymer Processing
Research Grants:	Pennsylvania Manufacturing Innovation Program
Research and Publications including Journal and Books:	Book Chapter: Zabalawi I., Toglaw S., Alsarheed M. (2020) The Role of Faculty Members in Building an Entrepreneurship Culture in Higher Education: The Case of the Australian University. In: Badran A., Baydoun E., Hillman J. (eds) Higher Education in the Arab World. Springer, Cham. https://doi.org/10.1007/978-3-030-37834-9_15 Journal:

1. "Experimental and Computational Study on Thermal Performance of Wood-Plastic Composites in Building Envelope
Special Topics & Reviews in Porous Media - An International Journal, (January 2023)
2. "Internal flow optimization in a complex profile extrusion die using flow restrictors and flow separators"
The International Journal of Advanced Manufacturing Technology, (October 2021)
3. "Computational Study of Ailerons in Cross Flows, Ground Effects and Biplanes Configurations," Journal of Aeronautics & Aerospace Engineering, (2016)
4. "Performance Evaluation of MHD Power Plant at Optimal Operating Conditions," International Journal of Energy, Environment, and Economics, Volume 23 Issue 2 (2016).
5. "Multivariable Model-Based Shape Control for the National Spherical Torus Experiment (NSTX)," Fusion Engineering and Design Journal, 86, (2011) 1107-1111

Conference Proceedings:

1. "Profile Extrusion Die Balancing Using Polymer Extrusion Simulation Software," SPE-ANTEC Technical Papers (2020).
2. "Development of An Integrated Melt Modulation System To Manipulate Cold-Runner Injection Molding Processing Parameters And Their Effect On Final Product Physical And Optical Properties" Proceedings of the 12th Manufacturing Science and Engineering Conference, (MSEC2017), Los Angeles, California, USA, June 2017.
3. "Problem Based Learning (PBL) And Entrepreneurship," PBL Symposium Proceedings, Australian College of Kuwait, March 2016
4. "Development of A Modular Melt Modulation Device To Manipulate Cold-Runner Injection Molding Processing Parameters And Their Effects On Final Product Physical And Optical Properties," SPE-ANTEC Technical Papers (2016).
5. "Experimental Results of Melt Modulation Packing Parameters Control on Cold-Runner Injection Molding Final Product Quality," SPE-ANTEC Technical Papers (2015).
6. "Investigation of Melt Modulation Control and Its Effect on Cold-Runner Injection Molding Packing Parameters and Final Product Quality," SPE-ANTEC Technical Papers, (2014).
7. "Investigation of Cold-Runner Injection Molding Processing Parameters Manipulated by Melt Modulation and Their Effects on Product Optical Properties," SPE-ANTEC Technical Papers, (2013).
8. "Multivariable Multi-Model-Based Magnetic Control System for The Current Ramp-up Phase in the National Spherical Torus Experiment (NSTX)," IEEE 50th Conference on Decision and Control and European Control Conference, (2011)

Paper Presentations at Professional Conferences:	1. "Development of An Integrated Melt Modulation System To Manipulate Cold-Runner Injection Molding Processing Parameters And Their Effect On Final Product Physical And Optical Properties" Proceedings of the 12th Manufacturing Science and Engineering Conference, (MSEC2017), Los Angeles, California, USA, June 2017. 2. "Problem Based Learning (PBL) And Entrepreneurship," PBL Symposium Proceedings, Australian University, March 2016 3. "Experimental Results of Melt Modulation Packing Parameters Control on Cold-Runner Injection Molding Final Product Quality," SPE-ANTEC Technical Papers (2015). 4. "Investigation of Melt Modulation Control and Its Effect on Cold-Runner Injection Molding Packing Parameters and Final Product Quality," SPE-ANTEC Technical Papers, (2014). 5. "Investigation of Cold-Runner Injection Molding Processing Parameters Manipulated by Melt Modulation and Their Effects on Product Optical Properties," SPE-ANTEC Technical Papers, (2013). 6. "Multivariable Multi-Model-Based Magnetic Control System for The Current Ramp-up Phase in the National Spherical Torus Experiment (NSTX)," IEEE 50th Conference on Decision and Control and European Control Conference, (2011) 7. "Multivariable Model-Based Shape Control For The National Spherical Torus Experiment (NSTX)," 26th Symposium on Fusion Technology, Porto, Portugal, September 26 – October 1, 2010
College Service including committee Membership:	- Mechanical Engineering Department Curriculum Committee - Mechanical Engineering Department PBL Committee - Mechanical Engineering Department Students Appeal and Complaint Committee - Mechanical Engineering Department labs and workshop Committee
National Service:	NA
College Committees:	Member of: College of Engineering PBL Committee