

Mohammad AL MASHAGBEH

PERSONAL DATA

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WORK EXPERIENCE

SEP 2024- PRESENT	Chairman of Mechatronics Engineering Department , Mechatronics Engineering Department, University of Jordan , Amman, Jordan.
NOV 2018- PRESENT	Assistant Professor , Mechatronics Engineering Department, University of Jordan , Amman, Jordan.
SEP 2018- NOV 2018	Postdoctoral Fellow , Mechanical and Mechatronics Engineering Department, University of Waterloo , ON, Canada.
MAY 2011- APRIL 2012	Lecturer , The university of Jordan, Amman, Jordan.
APRIL 2010- APRIL 2011	Instrument And Control Engineer , Samra Electric Power Generation Company, Amman, Jordan.

EDUCATIONAL BACKGROUND

2014- 2018	Ph.D. , Mechanical and Mechatronics Engineering Department, University of Waterloo , Waterloo, ON, Canada.
2012- 2014	Master of Applied Science , Mechanical and Mechatronics Engineering Department, University of Waterloo , Waterloo, ON, Canada.
2015- 2018	The Certificate in University Teaching (CUT) , University of Waterloo , Waterloo, ON, Canada.
2005- 2010	Bachelor of Applied Science , Mechatronics Engineering Department, The University of Jordan , Amman, Jordan.

TEACHING EXPERIENCES

Fall 2025, Winter 2024, Fall 2023, Winter 2023, Fall 2022	Introduction to Robotic Systems, Master course, University of Jordan, Jordan.
Fall 2025, Fall 2023, Winter 2024, Fall 2023, Winter 2023, Fall 2022, Winter 2022, Fall 2021, Winter 2021, Fall 2022	Industrial and Applied Robotic , Master course, University of Jordan, Jordan. Robotic Systems, Fluid Power Engineering, Statics and Strength of Materials, University of Jordan, Jordan.
Fall 2025, Winter 2019, Fall 2022	Control systems, University of Jordan, Jordan. Advance Hydraulic and Pneumatic systems, University of Jordan, Jordan. Introduction to Robotic Systems, School of Workforce Development, Continuing Education and Online Learning, Conestoga College, ON, Canada.
Winter 2020	Robotic Systems, Fluid Power Engineering, Statics and Strength of Materials, Introduction to Engineering, University of Jordan, Jordan.
Fall 2020	Robotic Systems, Fluid Power Engineering, Statics and Strength of Materials, Introduction to Engineering, University of Jordan, Jordan.
Spring 2019, Winter 2019	Calculus 2 for the Sciences "MATH 128", University of Waterloo, Canada. Robotic Systems, Fluid Power Engineering, Statics and Strength of Materials, University of Jordan, Jordan.
Spring 2018	Fundamental Engineering Math 2 for System Design Engineering Students "SYDE112", University of Waterloo, Canada.
Fall 2011, Winter 2012, Fall 2011	Hydraulic and Pneumatic Lab for Mechatronics Engineering, University of Jordan, Jordan. Circuit Lab for Electrical and Mechatronics Engineering, University of Jordan, Jordan.

TEACHING AWARDS AND CERTIFICATES

Winter 2015, Winter 2017	Department of Mechanical and Mechatronics Engineering Teaching Assistant Award, University of Waterloo, Canada.
Winter 2015	Fundamentals of University Teaching certificate, University of Waterloo, Canada.
Spring 2018	The Certificate in University Teaching (CUT), University of Waterloo, Canada.

RESEARCH INTEREST

Engineering Education, Mechatronics Systems, Force Control Techniques, Robotics, Electromagnetic Actuators.

PUBLISHED RESEARCH PAPERS

- 2024 Al Mashagbeh, Mohammad, et al. "Comparative analysis of artificial intelligence-driven assistance in diverse educational queries: ChatGPT vs. Google Bard." *Frontiers in Education*. Vol. 9. Frontiers Media SA, 2024.
- 2024 Hindi, Iman, Mohammad Al Mashagbeh, and Adham Alsharkawi. "Optimizing Cherry Tomato Crop Irrigation: A Robust Daily Schedule Incorporating Weather, Soil, and Irrigation Data through Cascaded-Output ANN." 2024 15th International Conference on Information and Communication Systems (ICICS). IEEE, 2024.
- 2024 Al Mashagbeh, M., and J. Qadir. "Engineering education in the era of exponential AI: a comparative analysis of student and Chatgpt exam responses in computing engineering." *EDULEARN24 Proceedings*. IATED, 2024.
- 2023 Mashagbeh, Mohammad, et al. "A Low-Cost Robotic Arm Manipulator Model for Enhancing Student Learning in an Industrial Robots Course." 2023 IEEE Frontiers in Education Conference (FIE). IEEE, 2023.
- 2022 Al Mashagbeh, Mohammad, Heba Alzaben, Raheeq Abutair, Reem Farrag, Leena Sarhan, and Musa Alyaman. "Gait Cycle Monitoring System Based on Flexiforce Sensors." *Inventions* 7, no. 3 (2022): 51.
- 2022 Almawgani, Abdulkarem HM, Malek G. Daher, Sofyan A. Taya, Mohammad Mashagbeh, and Ilhami Colak. "Optical Detection of Fat Concentration in Milk Using MXene-Based Surface Plasmon Resonance Structure." *Biosensors* 12, no. 7 (2022): 535.
- 2017 Al Mashagbeh, Mohammad, Thamir Al-Dulaimi, and Mir Behrad Khamesee. "Design and optimization of a novel magnetically-actuated micromanipulator." *Microsystem Technologies* 23.8 (2017): 3589-3600.
- 2017 Al Mashagbeh, Mohammad, Thamir Al-Dulaimi, and Mir Behrad Khamesee. "Design procedures in the development of an electromagnetic manipulator." *DS 87-4 Proceedings of the 21st International Conference on Engineering Design (ICED 17) Vol 4: Design Methods and Tools*, Vancouver, Canada, 21-25.08.2017.
- 2015 Al Mashagbeh, Mohammad, and Khamesee, Mir Behrad, "Virtual performance evaluation of an industrial SCARA robot prior to real-world task." *Microsystem Technologies* 21.12 (2015): 2605-2609.
- 2015 Al Mashagbeh, Mohammad, and Khamesee, Mir Behrad, "Force control for position interface industrial manipulator working in unknown environment." *Microsystem Technologies* 21.12 (2015): 2557-2563.
- 2015 Al Mashagbeh, Mohammad, and Mir Behrad Khamesee, "Unilateral teleoperated master-slave system for medical applications." *IFAC-PapersOnLine* 48.3 (2015): 784-787.
- 2014 Al Mashagbeh, Mohammad, and Mir Behrad Khamesee. "Force Control for Position Interface Industrial Manipulator Working in Unknown Inclined Plane." *ASME 2014 Conference on Information Storage and Processing Systems*. American Society of Mechanical Engineers, 2014.
- 2014 Al Mashagbeh, Mohammad, and Mir Behrad Khamesee. "Modeling and Simulation of an Industrial SCARA Robot: Performance Evaluation Prior to Real-World Task." *ASME 2014 Conference on Information Storage and Processing Systems*. American Society of Mechanical Engineers, 2014.

CONFERENCES ATTENDED

- 2024 16th annual International Conference on Education and New Learning Technologies Palma (Spain) - 1st, 2nd and 3rd July 2024.
- 2023 2023 IEEE Frontiers in Education Conference (FIE). IEEE, 2023, College Station, Texas, USA
- 2017 21st International Conference on Engineering Design (ICED 17), August 12-25, 2017, University of British Columbia, Vancouver, Canada.
- 2015 15th IFAC Symposium on Information Control Problems in Manufacturing, May 11-13, 2015, Ottawa Convention Centre, Ottawa, Canada.
- 2014 ASME 2014 Conference on Information Storage and Processing Systems June 23-24, 2014, Santa Clara, California, USA.

TECHNICAL REVIEWER

Robotics and Computer-Integrated Manufacturing - Journal - Elsevier.
ASME Journal of Dynamic Systems, Measurement and Control.
Results in Engineering, Elsevier.
Intelligent Service Robotics, Springer.