Associate Professor

Mechatronics Engineering

Department

School of Engineering

The University of Jordan

Amman, 11942

Jordan

Tel. +962 6 5355 000 ext. 23030

Mobile: +962 79 604 1322

e-mail: a.sharkawi@ju.edu.jo

Adham Yaseen Mohammad Alsharkawi

Research Interests	System Dynamics, Automatic Control, Solar Energy, Artificial Intelligence, Robotics

Education

KU Leuven, Belgium   2022 – 2023

M.Sc. - Master of Artificial Intelligence in Business and Industry

Thesis Title: Improving Stability in Univariate Time Series Forecasting Using Multi-Layer Perceptron Neural Network

- Distinction

The University of Sheffield, UK   2014 – 2017

Ph.D. Automatic Control and Systems Engineering

Thesis Title: Automatic Control of a Parabolic Trough Solar Thermal Power Plant

- Successful completion

The University of Manchester, UK   2012 – 2013

M.Sc. Advanced Control and Systems Engineering

Dissertation Title: Sliding Mode Control for Trajectory Tracking of an Omnidirectional Mobile Robot

- Distinction

Tafila Technical University, Jordan   2006 - 2010

B.Sc. Mechatronics Engineering

- Excellent

Academic Experience	**The University of Jordan, Amman, Jordan**	2022 – Pres.
	Associate Professor	
	Teaching undergraduate courses in system dynamics, industrial process control (online learning model), and artificial intelligence (blended learning model). Additionally, teaching reinforcement learning for master's students and research methodology (online learning model).	
	The University of Jordan, Amman, Jordan	2017 – 2022
	Assistant Professor	
	Teaching courses in system dynamics, industrial process control (in online learning model), and artificial intelligence (in blended learning model).	
	The University of Sheffield, Sheffield, UK	2014 - 2017
	Part time Graduate Teaching Assistant (GTA)	
	The University of Jordan, Amman, Jordan	2011 - 2012
	Full time Research & Teaching Assistant (RTA)	
	Jordan University of Science and Technology, Irbid, Jordan	2010 - 2011
	Part time Research & Teaching Assistant (RTA)	

Professional Experience	School of Engineering, The University of Jordan	2024 – Pres.
	Deputy Dean for Quality Affairs, Accreditation, and International Rankings	
	Department of Mechatronics Engineering, The University of Jordan	2023 – 2024
	Head of the Department	
	Accreditation and Quality Assurance Center, The University of Jordan	2021 – 2022
	Assistant Director	

Professional Memberships	The Institute of Electrical and Electronics Engineers	2022 – Pres.
	• *IEEE Control Systems Society*	
	• *IEEE Aerospace and Electronic Systems Society*	
	Arab Robotics & AI Association	2022 – Pres.
	Jordan Engineers Association	2010 – Pres.

Professional Development	The University of Granada, Granada, Spain	May 2022
	Advanced Data Science - Training Course	
	Offered by the Department of Computer Science and Artificial Intelligence – University of Granada.	
	The University of Jordan, Amman, Jordan	Sep. 2021
	Jordanian National Qualifications Framework	
	Offered by the German development agency GIZ and through the Jordanian Accreditation and Quality Assurance Commission for Higher Education Institutions.	
	The University of Florida, Florida, USA	Aug. 2021
	Course Mapping Camp	

	Offered by the Centre for Instructional Technology and Training / University of Florida Information Technology.	
	The University of Jordan, Amman, Jordan	May 2021
	ISO 9001:2015 – Quality Management Systems Auditor / Lead Auditor Training Course	
	Certificated by the International Register of Certificated Auditors.	

Honors and Awards	The Fulbright Foreign Scholarship Board and The Bureau of Educational and Cultural Affairs of the United States Department of State	Sep. 2024
	Fulbright Alumni Development Grant Award	
	The Fulbright Foreign Scholarship Board and The Bureau of Educational and Cultural Affairs of the United States Department of State	Aug. 2021
	Fulbright Junior Faculty Development Program Award	
	Hosted by The University of Florida, Florida, USA.	
	Phi Science Institute, in cooperation with Beyond limits	Oct. 2019
	Winner of the 2nd place of ARAB ARTIFICIAL INTELLIGENCE CHALLENGES 2019 - DEVELOPERS' TRACK	
	Conducted at the King Hussein bin Talal Convention Centre - Dead Sea	
	Advance HE	Jul. 2016
	Associate Fellow of Higher Education Academy (AFHEA)	
	Advance HE (formerly the Higher Education Academy) is a British charity and professional membership scheme promoting excellence in higher education.	

National and International Service Activities	*Reviewer,* The 63rd IEEE Conference on Decision and Control (CDC)	2024
	Reviewer, 22nd International Conference on Research and Education in Mechatronics (REM)	2024
	Reviewer, Int. J. of Automation and Control	2024
	Reviewer, Journal of Applied Research and Technology	2022
	Member, Program Committee (PC) of the 1st International Conference on Artificial Intelligence: Theories and Applications	2022

Member, Technical Program Committee (TPC) of 1st International Conference on General and Multidisciplinary Engineering Applications - Mechatronics Engineering Technologies Track	2022
Member, International Advisory Committee of the 10th International Conference on Recent Challenges in Engineering and Technology	2022
Student Branch Chapter Advisor at the University of Jordan, IEEE Aerospace and Electronic Systems Society	2022 – Pres.
Judge, LUMA StarT International Award, Amman, Jordan	2022
Judge, LUMA StarT International Award, Amman, Jordan	2021
Member, Technical Program Committee (TPC) of 1st Mosharaka International Conference on Emerging Applications of Electrical Engineering - Control and Systems Engineering Track	2020
Judge, LUMA StarT International Award, Amman, Jordan	2020
Student Branch Chapter Advisor at the University of Jordan, IEEE Robotics and Automation Society	2019 – 2020 2023 – 2024
Reviewer, International Conference on Applied Engineering	2019
Reviewer, Dynamic Systems and Control Conference	2019
Reviewer, Joint IFAC Symposium on Mechatronic Systems & IFAC Symposium on Nonlinear Control Systems	2019
Judge, IEEE RAS Portal Firefighting Competition, Amman, Jordan	2019
Judge, English Language Olympics (ELO), Amman, Jordan	2019
Judge, LUMA StarT International Award, Amman, Jordan	2019
Reviewer, European Control Conference	2018
Judge, English Language Olympics (ELO), Amman, Jordan	2018
Judge, First Lego League (FLL), Amman, Jordan	2018
Reviewer, The Control Conference Africa	2017
Reviewer, International Journal of Adaptive Control and Signal Processing	2016
Reviewer, Cogent Engineering	2016
Reviewer, 10th IFAC Symposium on Nonlinear Control Systems	2016

Funded Projects	Project Team Member, Developing Curricula for Artificial Intelligence and Robotics (DeCAIR), Erasmus+ Capacity Building in Higher Education, €850,108, 2020-2023.

Presentations	Robotics and Artificial Intelligence, The Innovation and Development Center at the Public Security Directorate, Amman, Jordan, Feb. 2022

Professional Participation in Distinguished Events	**The AI Conference** *San Francisco, USA* A vendor-neutral ecosystem for knowledge sharing and professional networking in artificial intelligence.	Sep. 10–11, 2024
	MENA ICT Forum *Amman, Jordan* The premier regional event exploring emerging technologies, digital innovation, and ICT industry advancements in the MENA region.	Nov. 20–21, 2024

Publications: Peer-Reviewed Journal Articles	**Alsharkawi A.**, Al-Fetyani M., Dawas M., Saadeh H. and Alyaman M. (2022). Improved Poverty Tracking and Targeting in Jordan Using Feature Selection and Machine Learning. IEEE Access, 10, 86483-86497.
	Abu Mohareb, S., **Alsharkawi, A.**, & Zgoul, M. (2021). Hysteresis Modeling of a PAM System Using ANFIS. Actuators, 10(11), p. 280.
	Al-Yaman, M., Alhaj Mustafa, H., Hassanain, S., Abd AlRaheem, A., **Alsharkawi, A.,** & Al-Taee, M. (2021). Improved Automatic License Plate Recognition in Jordan Based on Ceiling Analysis. Applied Sciences, 11(22), 10614.
	Alsharkawi, A., Al-Fetyani, M., Dawas, M., Saadeh, H. and Alyaman, M. (2021). Poverty Classification Using Machine Learning: The Case of Jordan. Sustainability, 13(3), p.1412.
	Al-Fetyani, M., Hayajneh, M. and **Alsharkawi, A.** (2020). Design of an executable anfis-based control system to improve the attitude and altitude performances of a quadcopter drone. International Journal of Automation and Computing, 18(1), pp.124-140.

Alsharkawi, A. and Rossiter, J. A. (2017). Towards an improved gain scheduling predictive control strategy for a solar thermal power plant. IET Control Theory & Application, volume 11(12), pages 1938-1947.

Publications: Peer-Reviewed Conference Proceedings	Hindi, I, Al Mashagbeh, M., & **Alsharkawi, A.** (2024, August). Optimizing Cherry Tomato Crop Irrigation: A Robust Daily Schedule Incorporating Weather, Soil, and Irrigation Data through Cascaded-Output ANN. In *2024 15th International Conference on Information and Communication Systems (ICICS)* (pp. 1-6). IEEE.
	Abu-Elola, M., Al-Qaisia, A. A., Alhadidi, A. H., & **Alsharkawi, A.** (2024, September). Enhancing Flying Qualities in Medium-Sized Commercial Aircraft Through Stability Augmentation. In *2024 22nd International Conference on Research and Education in Mechatronics (REM)* (pp. 196-203). IEEE.
	Al-Adwan, O. H., Abdellat, H. A., Hussein, S., AlJabbareen, O., Abo-Hammour, Z. S., & **Alsharkawi, A.** (2024, September). In-Class Examinations Proctoring System Using YOLO Architecture. In *2024 22nd International Conference on Research and Education in Mechatronics (REM)* (pp. 154-159). IEEE.
	Nalawi, M., Baghdadi, M., Alyateem, B., Abo-Hammour, Z. S., & **Alsharkawi, A.** (2024, September). Design of a Real-time Detection System for Potholes and Bumps Using Deep Learning. In *2024 22nd International Conference on Research and Education in Mechatronics (REM)* (pp. 160-165). IEEE.
	Al-Fetyani, M., Al-Barham, M., Abandah, G., **Alsharkawi, A.**, & Dawas, M. (2023, January). MASC: Massive Arabic Speech Corpus. In 2022 IEEE Spoken Language Technology Workshop (SLT) (pp. 1006-1013). IEEE.
	Naji, S. M., Almousily, A. Y., & **Alsharkawi, A. Y.** (2022, November). Design a Fully Automated Safety and Security System for Swimming Pools. In 2022 International Conference on Electrical and Computing Technologies and Applications (ICECTA) (pp. 318-321). IEEE.
	Alsharkawi, A., Al-Fetyani, M., Ijaabo, E.M. and Khasawneh, H. (2020). Adaptive Neuro-Fuzzy Inference System for a Three-

Wheeled Omnidirectional Mobile Robot. In Proceedings of the 3rd International Conference on Applied Engineering, Batam, Indonesia, (pp. 1-6). IEEE.

Ijaabo, E.M., **Alsharkawi, A.** and Firdaus, A.R. (2019). Trajectory Tracking of an Omnidirectional Mobile Robot Using Sliding Mode Control. In Proceedings of the 2nd International Conference on Applied Engineering, Batam, Indonesia, (pp. 1-6). IEEE.

Alsharkawi, A. and Rossiter, J. A. (2018). Towards an Improved Hierarchical Control Strategy for a Solar Thermal Power Plant. In Proceedings of 16th European Control Conference, Limassol, Cyprus. IEEE.

Alsharkawi, A. and Rossiter, J. A. (2017). Modelling analysis of a solar thermal power plant. In Proceedings of the 6th International Conference on Clean Electrical Power, Liguria, Italy, pages 694-69. IEEE.

Alsharkawi, A. and Rossiter, J. A. (2016). Gain scheduling dual mode MPC for a solar thermal power plant. In Proceedings of the 10th IFAC Symposium on Nonlinear Control Systems, California, USA, volume 49(18), pages 128-133. Elsevier.

Alsharkawi, A. and Rossiter, J. A. (2016). Dual mode MPC for a concentrated solar thermal power plant. In Proceedings of the 11th IFAC Symposium on Dynamics and Control of Process Systems, including Biosystems, Trondheim, Norway, volume 49(7), pages 260-265. Elsevier.

Alsharkawi, A. and Rossiter, J. A. (2015). Distributed collector system: Modelling, control and optimal performance. In Proceedings of the International Conference on Renewable Energy and Power Quality 2015, La Coruna, Spain.