Associate Professor

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Adham Yaseen Mohammad Alsharkawi

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

Education		
	KU Leuven, Belgium 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	2022 – 2023
	The University of Sheffield, UK Ph.D. Automatic Control and Systems Engineering *Thesis Title: Automatic Control of a Parabolic Trough Solar Thermal Power Plant* ▪ Successful completion	2014 – 2017
	The University of Manchester, UK M.Sc. Advanced Control and Systems Engineering *Dissertation Title: Sliding Mode Control for Trajectory Tracking of an Omnidirectional Mobile Robot* ▪ Distinction	2012 – 2013
	Tafila Technical University, Jordan B.Sc. Mechatronics Engineering ▪ Excellent	2006 - 2010

Academic Experience	The University of Jordan, Amman, Jordan *Assistant Professor*	2017 – Pres.

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 *Part time Graduate Teaching Assistant (GTA)*	2014 - 2017
	The University of Jordan, Amman, Jordan *Full time Research & Teaching Assistant (RTA)*	2011 - 2012
	Jordan University of Science and Technology, Irbid, Jordan *Part time Research & Teaching Assistant (RTA)*	2010 - 2011
Professional Experience	Department of Mechatronics Engineering, The University of Jordan *Head of the Department*	2023 – 2024
	Accreditation and Quality Assurance Center, The University of Jordan *Assistant Director*	2021 – 2022
Professional Memberships	The Institute of Electrical and Electronics Engineers • *IEEE Control Systems Society* • *IEEE Aerospace and Electronic Systems Society*	2022 – Pres.
	Arab Robotics & AI Association	2022 – Pres.
	Jordan Engineers Association	2010 – Pres.
Professional Development	The University of Granada, Granada, Spain *Advanced Data Science - Training Course* Offered by the Department of Computer Science and Artificial Intelligence – University of Granada.	May 2022
	The University of Jordan, Amman, Jordan *Jordanian National Qualifications Framework* Offered by the German development agency GIZ and through the Jordanian Accreditation and Quality Assurance Commission for Higher Education Institutions.	Sep. 2021
	The University of Florida, Florida, USA *Course Mapping Camp* Offered by the Centre for Instructional Technology and Training / University of Florida Information Technology.	Aug. 2021
	The University of Jordan, Amman, Jordan *ISO 9001:2015 – Quality Management Systems Auditor / Lead Auditor Training Course* Certificated by the International Register of Certificated Auditors.	May 2021

Honors and Awards	The Fulbright Foreign Scholarship Board and The Bureau of Educational and Cultural Affairs of the United States Department of State *Fulbright Junior Faculty Development Program Award* Hosted by The University of Florida, Florida, USA.	Aug. 2021
	Phi Science Institute, in cooperation with Beyond limits *Winner of the 2nd place of ARAB ARTIFICIAL INTELLIGENCE CHALLENGES 2019 - DEVELOPERS' TRACK* Conducted at the King Hussein bin Talal Convention Centre - Dead Sea	Oct. 2019
	Advance HE *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.	Jul. 2016
National and International Service Activities	*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
	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
	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

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	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.