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Adham Yaseen Mohammad Alsharkawi

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

Education	The University of Sheffield, UK Ph.D. Automatic Control and Systems Engineering <i>Thesis Title: Automatic Control of a Parabolic Trough Solar Thermal Power Plant</i> <ul style="list-style-type: none">▪ Successful completion	2014 – 2017
	The University of Manchester, UK M.Sc. Advanced Control and Systems Engineering <i>Dissertation Title: Sliding Mode Control for Trajectory Tracking of an Omnidirectional Mobile Robot</i> <ul style="list-style-type: none">▪ Distinction	2012 – 2013
	Tafila Technical University, Jordan B.Sc. Mechatronics Engineering <ul style="list-style-type: none">▪ Excellent	2006 - 2010

Academic Experience	The University of Jordan, Amman, Jordan Assistant Professor Teaching courses in system dynamics, industrial process control (in online learning model), and artificial intelligence (in blended learning model).	2017 – Pres.
	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	Accreditation and Quality Assurance Center, The University of Jordan <i>Assistant Director</i>	2021 – 2022
Professional Memberships	The Institute of Electrical and Electronics Engineers <ul style="list-style-type: none"> • <i>IEEE Control Systems Society</i> • <i>IEEE Aerospace and Electronic Systems Society</i> Arab Robotics & AI Association Jordan Engineers Association	2022 – Pres. 2022 – Pres. 2010 – Pres.
Professional Development	The University of Granada, Granada, Spain <i>Advanced Data Science - Training Course</i> Offered by the Department of Computer Science and Artificial Intelligence – University of Granada. The University of Jordan, Amman, Jordan <i>Jordanian National Qualifications Framework</i> 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 <i>Course Mapping Camp</i> Offered by the Centre for Instructional Technology and Training / University of Florida Information Technology. The University of Jordan, Amman, Jordan <i>ISO 9001:2015 – Quality Management Systems Auditor / Lead Auditor Training Course</i> Certificated by the International Register of Certificated Auditors.	May 2022 Sep. 2021 Aug. 2021 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 <i>Fulbright Junior Faculty Development Program Award</i> Hosted by The University of Florida, Florida, USA. Phi Science Institute, in cooperation with Beyond limits <i>Winner of the 2nd place of ARAB ARTIFICIAL INTELLIGENCE CHALLENGES 2019 - DEVELOPERS' TRACK</i> Conducted at the King Hussein bin Talal Convention Centre - Dead Sea	Aug. 2021 Oct. 2019

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

<i>Reviewer</i> , Journal of Applied Research and Technology	2022
<i>Member</i> , Technical Program Committee (TPC) of 1st International Conference on General and Multidisciplinary Engineering Applications - Mechatronics Engineering Technologies Track	2022
<i>Member</i> , International Advisory Committee of the 10th International Conference on Recent Challenges in Engineering and Technology	2022
Student Branch Chapter <i>Advisor</i> at the University of Jordan, IEEE Aerospace and Electronic Systems Society	2022
<i>Judge</i> , LUMA StarT International Award, Amman, Jordan	2022
<i>Judge</i> , LUMA StarT International Award, Amman, Jordan	2021
<i>Member</i> , Technical Program Committee (TPC) of 1st Mosharaka International Conference on Emerging Applications of Electrical Engineering - Control and Systems Engineering Track	2020
<i>Judge</i> , LUMA StarT International Award, Amman, Jordan	2020
Student Branch Chapter <i>Advisor</i> at the University of Jordan, IEEE Robotics and Automation Society	2019
<i>Reviewer</i> , International Conference on Applied Engineering	2019
<i>Reviewer</i> , Dynamic Systems and Control Conference	2019
<i>Reviewer</i> , Joint IFAC Symposium on Mechatronic Systems & IFAC Symposium on Nonlinear Control Systems	2019
<i>Judge</i> , IEEE RAS Portal Firefighting Competition, Amman, Jordan	2019
<i>Judge</i> , English Language Olympics (ELO), Amman, Jordan	2019
<i>Judge</i> , LUMA StarT International Award, Amman, Jordan	2019
<i>Reviewer</i> , European Control Conference	2018

Judge, English Language Olympics (ELO), Amman, Jordan 2018
Judge, First Lego League (FLL), Amman, Jordan 2018
Judge, LUMA StarT International Award, Amman, Jordan 2018

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	<p>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, DOI: 10.1109/ACCESS.2022.3198951.</p> <p>Abu Mohareb, S., Alsharkawi, A., & Zgoul, M. (2021). Hysteresis Modeling of a PAM System Using ANFIS. Actuators, 10(11), p. 280.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>

**Publications:
Peer-Reviewed Conference
Proceedings**

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.