

1. Name:	MOHAMMED ALKAHTANI
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2. Education:

Degree	Discipline	Institution	Year
Ph.D.	Electrical Engineering- Electronics Engineering	University Of Liverpool – United Kingdom	2021
M.Sc.	Electrical Power and Control Engineering	Liverpool John Moores University – United Kingdom	2016
B.Eng.	Electrical and Electronics Engineering	Liverpool John Moores University – United Kingdom	2014

3. Academic experience:

Institution	Rank	Dates Held	FT/PT
Bisha University, Saudi Arabia	Assistant Professor	2022-Present	FT
Prince Sattam Bin Abdulaziz University, Saudi Arabia	Lecture	2017-2018	FT

4. Non-academic experience:

Organization	Title	Duties	Dates Held	FT/PT
DACO Trading & Contracting Company	Advisor	Collaborate with project managers to provide technical solutions on electrical and electronic system	2022-2023	PT
NATO Engineering Consulting	Advisor	Provide advice and recommendations on electrical equipment and systems to project managers.	2018-2022	PT
Ar Rayn Municipality in Engineering Project Management Department.	Electrical Engineering	Develop and implement project plans, including defining project goals, objectives, scope, and deliverables. Conduct feasibility studies and site assessments to determine project viability.	2015-2016	FT

5. Certifications or professional registrations:

- Electrical Equipment: AC and DC motors.
- Plant Science: Basic Electrical Principles.
- Introduction to Process Control.
- Negotiation Foundations and Communications.

6. Current membership in professional organizations:

- Member |IET The Institution of Engineering and Technology
- Member |Saudi Council of Engineers
- Member |IEEE Young Professionals
- Member |IEEE Membership
- Member |MDPI Guest Editor
- Member |Control Engineering Practice Journal Guest Editor

7. List the most important publications and presentations from the past five years:

- 1) Alkahtani M, Wu Z, Kuka CS, Alahammad MS, Ni K. A Novel PV Array Reconfiguration Algorithm Approach to Optimising Power Generation across Non-Uniformly Aged PV Arrays by Merely Repositioning. *J.* 2020; 3(1):32-53. <https://doi.org/10.3390/j3010005>
- 2) Alkahtani M, Hu Y, Wu Z, Kuka CS, Alhammad MS, Zhang C. Gene Evaluation Algorithm for Reconfiguration of Medium and Large Size Photovoltaic Arrays Exhibiting Non-Uniform Aging. *Energies.* 2020; 13(8):1921. <https://doi.org/10.3390/en13081921>
- 3) Alkahtani M, Hu Y, Alghaseb MA, Elkhayat K, Kuka CS, Abdelhafez MH, Mesloub A. Investigating Fourteen Countries to Maximum the Economy Benefit by Using Offline Reconfiguration for Medium Scale PV Array Arrangements. *Energies.* 2021; 14(1):59. <https://doi.org/10.3390/en14010059>
- 4) M. Alkahtani, J. Zhou, Y. Hu, F. Alkasmoul, Z. H. Kiani and C. S. Kuka, "An Experimental Investigation on Output Power Enhancement With Offline Reconfiguration for Non-Uniform Aging Photovoltaic Array to Maximise Economic Benefit," in *IEEE Access*, vol. 9, pp. 87510-87519, 2021, <https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=9452124>
- 5) Z. Wu, C. Zhang, M. Alkahtani, Y. Hu and J. Zhang, "Cost Effective Offline Reconfiguration for Large-Scale Non-Uniformly Aging Photovoltaic Arrays Efficiency Enhancement," in *IEEE Access*, vol. 8, pp. 80572-80581, 2020, doi: 10.1109/ACCESS.2020.2991089
- 6) Z. Wu, W. Li, S. Kuka and M. Alkahtani, "Analysis of Dust Deposition on PV Arrays by CFD Simulation," *IECON 2019 - 45th Annual Conference of the IEEE Industrial Electronics Society*, 2019, pp. 5439-5443, doi: 10.1109/IECON.2019.8926897.
- 7) Zan X, Wu N, Xu R, Cui M, Jiang Z, Ni K, Alkahtani M. Design and Analysis of a Novel Converter Topology for Photovoltaic Pumps Based on Switched Reluctance Motor. *Energies.* 2019; 12(13):2526. <https://doi.org/10.3390/en12132526>
- 8) C. S. Kuka, Y. Hu, Q. Xu and M. Alkahtani, "An Innovative Near-Field Communication Security Based on the Chaos Generated by Memristive Circuits Adopted as Symmetrical Key," in *IEEE Access*, vol. 8, pp. 167975-167984, 2020, doi: 10.1109/ACCESS.2020.3023049
- 9) Z. Wu, Z. Zhou and M. Alkahtani, "Time-Effective Dust Deposition Analysis of PV Modules Based on Finite Element Simulation for Candidate Site Determination," in *IEEE Access*, vol. 8, pp. 65137- 65147, 2020, doi: 10.1109/ACCESS.2020.2985158.
- 10) C. Gong, M. Alkahtani, W. Li, T. Wu, Y. Hu and J. Liu, "FCS Model Predictive Current Control Method for EV PMSMs at Low Control Frequency Considering Flux Mismatch," 2020 *IEEE Applied Power Electronics Conference and Exposition (APEC)*, 2020, pp. 265-270, doi: 10.1109/APEC39645.2020.9124093.
- 11) Kuka, Sokol, Ni, Kai and Alkahtani, Mohammed. "A Review of Methods and Challenges for Improvement in Efficiency and Distance for Wireless Power Transfer Applications" *Power Electronics and Drives*, vol.5, no.1, 2020, pp.1-25. <https://doi.org/10.2478/pead-2020-0001>
- 12) K. Ni, W. Li, Y. Hu and M. Alkahtani, "Simulation Study of the Effects of Synchronous Generator Parameter Deviations on the Performance of a DFIM-SPS," *IECON 2019 - 45th Annual Conference of the IEEE Industrial Electronics Society*, 2019, pp. 5450-5455, doi: 10.1109/IECON.2019.8927703.

- 13) K. Ni, W. Li, L. Xie, D. T. Lagos, M. Alkahtani and Y. Hu, "Control of Doubly-Fed Induction Motor Based Shipboard Propulsion System for More-Electric Ships," IECON 2019 - 45th Annual Conference of the IEEE Industrial Electronics Society, 2019, pp. 3187-3192, doi: 10.1109/IECON.2019.8927754.
- 14) C. Gong, Y. Hu, C. Gan, G. Chen and M. Alkahtani, "Modeling, Analysis, and Attenuation of Uncontrolled Generation for IPMSM-Based Electric Vehicles in Emergency," in IEEE Transactions on Industrial Electronics, vol. 67, no. 6, pp. 4453-4462, June 2020, doi: 10.1109/TIE.2019.2926049.
- 15) K. Ni, Y. Hu, R. Liang, H. Wen and M. Alkahtani, "Internal Voltage Phase-Amplitude Dynamic Analysis With Interface Friendly Back-To-Back Power Converter Average Model for Less Power Electronics-Based More-Electric Ship," in IEEE Access, vol. 7, pp. 93339-93351, 2019, doi: 10.1109/ACCESS.2019.2927617.
- 16) T. Wu, W. Li, K. Ni, S. Song and M. Alkahtani, "Modular Tri-Port Converter for Switched Reluctance Motor based Hybrid Electrical Vehicles," in IEEE Access, vol. 7, pp. 15989-15998, 2019, doi: 10.1109/ACCESS.2019.2894818.
- 17) Ni K, Hu Y, Ye X, AlZubi HS, Goddard P, Alkahtani M. Carbon Footprint Modeling of a Clinical Lab. Energies. 2018; 11(11):3105. <https://doi.org/10.3390/en11113105>
- 18) Colin Sokol Kuka, James Chandler, Mohammed Alkahtani. Chaotic-based Security for Near Field Communication in the Internet of Things Devices May 2021 Proceedings of the IEEE https://www.researchgate.net/publication/351285982_Chaoticbased_Security_for_Near_Field_Communication_in_Internet_of_Things_Devices
- 19) J Yang, D Yu, M Alkahtani, L Yuan, Z Zhou, H Zhu, M Chiemeka. Dual-Coupled Inductor High Gain DC/DC Converter with Ripple Absorption Circuit, Journal of Power Electronics 19 (6), 1366- 1379 <https://doi.org/10.6113/JPE.2019.19.6.1366>
- 20) Kuka, C. S., Alkahtani, M., Poliposyan, G., & Alahammad, M. An Innovative Memristor-Based Near Field Communication Topology Adopted as Security Key, ICONS 2020, The Fifteenth International Conference on Systems.
- 21) Kuka CS, Hu Y, Xu Q, Chandler J, Alkahtani M. A Novel True Random Number Generator in Near Field Communication as Memristive Wireless Power Transmission. J. 2021; 4(4):764-783. <https://doi.org/10.3390/j4040052>

For more information and research:

SOCIAL AND ACADEMIC MEDIA

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