

Dr. Mohammad A. Alolayan

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Education:

Year	Degree	Field	University	Country
2012	Doctor of Science	Environmental Science and Risk Management	Harvard University	U.S.A.
2008	Master of Science	Environmental Science & Engineering	Colorado School of Mines	U.S.A.
2006	Master of Science	Chemical Engineering	Kuwait University	Kuwait
2003	Bachelor of Science	Chemical Engineering	Kuwait University	Kuwait

Work Experience:

From	To	Title	Entity
2025	Present	Associate Professor	Kuwait University/College of Life Sciences/Department of Environmental Sciences
2019	2023	Committee Member	Supreme Council for Environment/Council of Ministers General Secretariat/State of Kuwait Government
2012	2025	Assistant Professor	Kuwait University/College of Life Sciences/Department of Environmental Sciences
2006	2012	Teaching Assistant	Kuwait University/College of Life Sciences/Department of Environmental Sciences
2003	2006	Process Engineer	Kuwait Gulf Oil Company/Production Department

General Information:

Nationality: Kuwait

Residency: Kuwait

Age: 43 years

Languages: Arabic, English

Research Areas:

- Risk Management
- Environmental Risk Assessment
- Policy & Decision Science
- Environmental Impact Assessment
- Environmental Science
- Risk Assessment
- Environmental Health
- Environmental Cost-Benefits Analysis
- Environmental Pollution Control (air, water, soil ... etc)
- Exposure Assessment

Professional Training Courses:

Course	Company
Pumps & Compressors	John M Campbell
Processing Engineering Fundamentals	GLOMACS
HYSYS Simulation	Aspentech
Multiphase Flow Meter	AGAR corporation
Value Engineering	RWTUV akademie
PRO II simulation	Simulation Sciences inc
Surface Production Operations	Petro Skills
Introduction to Electrical sub impressible Pump application	Baker Hughes
Pumps, Compressors and Turbines Troubleshooting	Harvard Technology

Association:

- American Water Resources Association (AWRA).
- International Society for Environmental Epidemiology (ISEE).
- Society for Risk Analysis (SRA).
- Referee at Kuwait Science & Engineering competition.
- Member of the Kuwait Environmental Public Authority committee for establishing national emission standards for stationary sources.

Publications:

- Alolayan, M. A., Abraham, L. M., & Ramadan, A. A. (2025). Fate and speciation of NO_x in an arid climatic region: factors assessment. *Environmental Monitoring and Assessment*, 197(640). doi:10.1007/s10661-025-14077-4.
- Alshawaf, M., Alwaeli, M., Pikon, K., & Alolayan, M. (2025). The characterization of municipal solid waste in Kuwait: a pathway to reform the waste management sector. *Discover Sustainability*, 6(208). doi:10.1007/s43621-025-01041-y.
- Aladwani, S. M., Almutairi, A., Alolayan, M. A. (2024). Prediction of solar radiation as a function of particulate matter pollution and meteorological data using machine learning models. *Journal of Engineering Research*. <https://doi.org/10.1016/IJEWm.2023.131150>.
- Alolayan, M. A., Almutairi, A., Aladwani, S., & Alkhamees, S. (2023). Investigating Major Sources of Air Pollution and Improving Spatiotemporal Forecast Accuracy Using Supervised Machine Learning and a Proxy. *Journal of Engineering Research*. <https://doi.org/10.1016/IJEWm.2023.131150>.
- Alolayan, M., Al-Sanad, A., Al-Jallal, L. I., & Elmi, A. (2023). Municipal Solid Waste Characteristics and Segregation Efficiency of In-House Direct Sampling in Kuwait. *International Journal of Environment and Waste Management*, 31(4), 467-480, <https://doi.org/10.1504/j.jer.2023.100126>.
- Alolayan, M., Albarrak, F., Abotalib, M., & Alshawaf, M. (2022). Reforming energy subsidy in Kuwait: maximizing net benefits and equity compliance. *Kuwait Journal of Science*, 49(3), 1-15, <https://doi.org/10.48129/kjs.11837>.
- Alsanad, A., & Alolayan, M. (2020). Heavy metals in road-deposited sediments and pollution indices for different land activities. *Environmental Nanotechnology, Monitoring & Management*, 14, 100374. <https://doi.org/10.1016/j.enmm.2020.100374>.
- Elmi, A., Al-Khaldy, A., & Alolayan, M. (2020). Sewage sludge land application: Balancing act between agronomic benefits and environmental concerns. *Journal of Cleaner Production*, 250, 119512, <https://doi.org/10.1016/j.jclepro.2019.119512>.
- Alolayan, M. A., Evans, J. S., & Hammitt, J. K. (2017). Valuing Mortality Risk in Kuwait: Stated-Preference with a New Consistency Test. *Environmental and Resource Economics*, 66, 629-646, <https://doi.org/10.1007/s10640-015-9958-1>.
- Alolayan, M. A., Brown, K. W., Evans, J. S., Bouhamra, W. S., & Koutrakis, P. (2013). Source Apportionment of Fine Particles in Kuwait City. *Science of the Total Environment*, 448, 14-25, <https://doi.org/10.1016/j.scitotenv.2012.11.090>.
- Al-Olayan, M. A.; Hammitt, J. K.; Evans, J. S., Estimating the social benefits of reducing SO₂ emission from power plants in Kuwait, Doctoral Thesis Chapter 3, Harvard University, 2012.

Conferences:

- The 4th International Symposium in Environmental Science and Industrial Ecology, Bangkok, Thailand, 2024.
- The 2nd International Conference on Environmental Sustainability Through Waste & Recycling, United Scitenfic Groug, 2024, Boston, MA, USA.
- The 5th Symposium of International Waste Working Group (IWWG) – Asian Arab Region, 2023, Bali, Indonesia.
- The 21st International Conference on Solid Waste, 2019, Sydney, Australia
- The Arab Forum for Environment and Development, 2018, Beirut, Lebanon
- The 18th International Conference on Risk Assessment and Management, World Academy of Science, Engineering and Technology, 2016, Naarden, Netherland. “ best Presentation Award”
- The 1st Africa/Middle-East Expert Meeting and Workshop on the Health Impact of Airborne Dust, Amman, Jordan, 2-5 November 2015, sponsored by UNEP/ROWA and Kuwait representative.
- Clean water, soil, and air, 2015, Petaling Jaya, Malaysia.
- Society for Risk Analysis (SRA), 2014, Denver, Colorado, USA.
- Society for Risk Analysis (SRA), 2013, Baltimore, Maryland, USA.
- Dust and Sand Storms, 2012, Kuwait.
- International Society for Environmental Epidemiology (ISEE), 2011, Barcelona, Spain.

Given Professional Workshops:

- “Environmental Impact Assessment”, 5 days to Kuwait Municipality in December 2014.
- “Sustainable Project Management”, 5 days to Engineers at Kuwait Ministry of Electricity and Water in November 2023.

Reviewer:

- Journal of Science of The Total Environment
- International Journal of Environmental Science and Technology

Community services:

- Member of the national committee created through the Public Authority for Environment for establishing national standards for emissions to the ambient between 2016 and 2018
- Member of a committee assigned by the minister of Oil to evaluate the performance of the associate deputy minister and recommend whether to renew and extend the contract. 2019
- Member of the national environmental awareness campaign “Mobader”
- Participated in many scientific lectures as a guest and main speaker.
- Hosted on-campus and visited many high schools to give the senior students the academic guidance they seek.
- The advisor of the association of the College of Life Sciences students at Kuwait University in 2014
- Assigned by the General Secretariate of the Supreme Council for Planning and Development in Kuwait, the United Nations Development Plan Program in Kuwait, and the World Bank Office in Kuwait to coach three teams at Q8 VSCOVİD-19 Hackathon, Kuwait Hacks the Crisis, Regional Ideathon in August 2020.

Awards:

- Full Scholarship from Kuwait University to do a master's degree in Environmental Science, Engineering, and risk assessment at a broad in the United States of America.
- Full Scholarship from Kuwait University to do a ph.d degree in Environmental Science, Engineering, and risk assessment at a broad in the United States of America.
- A research grant No. RW01/15 from Kuwait University of 32,500 USD.
- A research grant No. FE01/23 from Kuwait University of 12,250 USD.
- A research grant No. FR01/24 from Kuwait University of 13,000 USD.
- Financial Support of 7,000 USD from the Kuwait Foundation for the Advancement in Sciences to attend and participate in an international conference abroad.