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Dr. Mohammad Alshawaf is an assistant professor of Environmental Science at Kuwait University. His area of research interest include environmental and resource management, pollution prevention, renewable energy, water and wastewater, and exploring interconnections between the environment, policy, and economics. Dr. Alshawaf holds a PhD degree in environmental science, and MSc and BE, in environmental science and engineering. Previously, he worked as a research fellow at the Oxford Institute for Energy Studies.

EXPERIENCE

Acting Chairman – Dept of Environmental Sciences College of Life Sciences – Kuwait University	2021 - Present
Consultant Ministry of Water & Electricity – Kuwait	2021 - 2021
General Supervisor of the Academic Accreditation Unit College of Life Sciences – Kuwait University	2019 - Present
Assistant Professor College of Life Sciences – Kuwait University	2014 - Present
Beginner Environmental Engineer Ministry of Oil - Kuwait	2005 - 2006

EDUCATION

Doctor of Philosophy (Ph.D.), Environmental Sciences UNIVERSITY OF MASSACHUSETTS BOSTON	2009 - 2014
Master's degree, Environmental Planning & Management LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE	2006 - 2008
Bachelor of Science (B.S.), Environmental Engineering LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COLLEGE	2000 - 2005
LEED Green Associate credential Certificate. U.S. GREEN BUILDING COUNCIL	2014

FELLOWSHIPS AND INTERNSHIPS

Research Fellow The Silesian University of Technology. The faculty of energy and environmental engineering. Poland	May 2019
Research Fellow Oxford Institute for Energy Studies – Oxford, UK	Jun 2018 - Sept 2018
Intern, Innovente, Inc. – Boston, USA Quantify the organic waste sources in Massachusetts using ArcGIS.	Jan 2011 - May 2011
Intern, Kuwait-MIT Center For Natural Recourses Environmental Benefits of Reducing Electric and Water subsidy in Kuwait	May 2009 - Sept 2009

PUBLICATIONS

- Alsanad, A., & **Alshawaf, M.** (2023). SARS-CoV-2 EPIDEMIC FIRST WAVE: THE IMPACT OF PARTIAL AND COMPLETE LOCKDOWNS ON ROAD-DEPOSITED SEDIMENTS IN KUWAIT. APPLIED ECOLOGY AND ENVIRONMENTAL RESEARCH, 21(2), 1075–1094. https://doi.org/https://aloki.hu/pdf/2102_10751094.pdf
- Wojciech Hryb, Mohammad **Alshawaf***, and Pawel Krysztofiński, "A Preliminary Assessment of Utilizing Solid Waste Fractions as an Agricultural Growth Medium in Arid Soils," International Journal of Environmental Science and Development vol. 14, no. 3, pp. 195-201, 2023
- Alwaeli, M., **Alshawaf, M.**, & Klasik, M. (2022). Recycling of selected fraction of municipal solid waste as artificial soil substrate in support of the circular economy. Archives of Environmental Protection, 48(No 4), 68–77. <https://doi.org/10.24425/aep.2022.143710>
- Alhajeri NS, Al-Fadhli FM, **Alshawaf M**, Aly A. An integrated framework for exploring the tradeoffs between cost-optimized fuel allocation and regional air quality impacts in a water-energy nexus infrastructure. Environ Sci Pollut Res 2022:1–18. <https://doi.org/10.1007/S11356-022-20118-Z>.
- Alolayan M, Albarrak F, Abotalib M, **Alshawaf M**. Reforming energy subsidy in Kuwait: maximizing net benefits and equity compliance. Kuwait Journal of Science. 2022 (online). <https://doi.org/10.48129/kjs.11837>
- **Alshawaf M**, Alsulaili A, Alwaeli M, Allanaqawi H. The Role of Biomethane from Sewage Sludge in the Energy Transition: Potentials and Barriers in the Arab Gulf States Power Sector. Applied Sciences. 2021; 11(21):10275. <https://doi.org/10.3390/app112110275>
- Almutairi, A., & **Alshawaf, M.** (2021). Pan Evaporation Modeling with Artificial Neural Network and Multivariate Nonlinear Regression Compared to Empirical Methods Under an Arid Environment. Indian Journal of Environmental Protection, 5.
- **Alshawaf, Mohammad**, Rahmatallah Poudineh, and Nawaf S. Alhajeri. 2020. "Solar PV in Kuwait: The Effect of Ambient Temperature and Sandstorms on Output Variability and Uncertainty." Renewable and Sustainable Energy Reviews 134 (September): 110346. <https://doi.org/10.1016/j.rser.2020.110346>.
- Alwaeli, M., & **Alshawaf, M.** (2019). WASTE UTILIZATION IN CONCRETE TECHNOLOGY AS A SUBSTITUTE FOR NATURAL AGGREGATES IN THE CONTEXT OF CIRCULAR ECONOMY: AN OVERVIEW. In 19th International Multidisciplinary Scientific GeoConference SGEM 2019. Vienna, Austria: STEF92 Technology Ltd. <https://doi.org/10.5593/sgem2019V/4.2/S05.021>
- **Alshawaf, M.**, Poudineh, R., & Alhajeri, N. S. (2018). Estimating the Power Output of Photovoltaics in Kuwait Using a Monte Carlo Approach [Abstract]. In 20th International Conference on Advanced Data Analytics for Energy, Environment, and Water. Istanbul, Turkey: Open Science Index. Retrieved from <https://publications.waset.org/abstracts/99078/working-title-estimating-the-power-output-of-photovoltaics-in-kuwait-using-a-monte-carlo-approach>
- **Alshawaf, M.**, Douglas, E., & Ricciardi, K. (2016). Estimating Nitrogen Load Resulting from Biofuel Mandates. International journal of environmental research and public health, 13(5), 478. DOI:10.3390/ijerph13050478

Projects

Kuwait University Project ID FE01/20. "Roadmap to Waste management and circular economy for Kuwait: Policy and Technical challenges and opportunities"

CONFERENCES AND WORKSHOPS

Oral Presentation

- Eighth International Conference on Energy Research and Development – ASHRAE/KFAS **Nov 2023**
- "An overview of the Challenges Associated with Renewable Energy Driven Desalination in the Middle East" – IDA Water & Climate Change . Spain **Oct 2023**
- "Transitioning to a hydrogen economy: driving change through policy and regulations". 3rd KPC-JCCP Kuwait Hydrogen Symposium **Jun 2023**
- "The pillars of energy security toward a sustainable future" - U.S.-Kuwait Business **Jun 2023**
- Pollution and the Climate-Energy-Health-Nexus: Sustainability in West Asia and the Arabian. Tafahum Wa Tabadul Workshop. By CARPO. Kuwait University **Oct 2022**
- "Energy Security vs Energy Transition: A Zero-Sum Game?" The NATO-ICI Regional Centre and the NATO Strategic Direction, Kuwait **May 2022**
- "Security Roadmap for West Asia and the Arabian Peninsula". Tafahum Project 3rd annual conference. By CARPO. Berlin, Germany. **Sep 2021**
- "Energy Transition and Climate Change, Challenges and Opportunities for the Gulf Region." The Gulf Research Meetings (Online) - **Workshop Director.** **Jul 2021**
- "Academia and Industry: Bridging the Gap" KFAS (Online)- as a Moderator **Dec 2020**
- "Security Roadmap for West Asia and the Arabian Peninsula". Tafahum Project 2nd annual conference (Online) **Dec 2020**
- "The Green Investment " A Kuwait Oil Company webinar **Nov 2020**

- "Fundamentals of Energy Security." Constructing a Regional Security Paradigm and Enhancing Parameters for Engagement by CARPO. The Hague, Netherlands. **Dec 2019**
- "Climate Change and Regional Security". Security Roadmap for West Asia and the Arabian Peninsula Annual Conference By CARPO. Berlin, Germany. **Sep 2019**
- "Realizing the full potential of solar energy and the challenges of large scale integration". OIES-KFAS **Workshop** Positioning for Energy Transition and Key Strategies in the GCC. Kuwait. **Apr 2019**
- "Estimating the Power Output of Variable Solar Energy Using a Monte Carlo Approach". 20th ICADAEW International Conference on Advanced Data Analytics for Energy, Environment and Water. Istanbul, Turkey. **Nov 2018**
- "Natural Resources Conservation". Green and Clean Expo and Conference. Kuwait. **Oct 2018**
- "A Brief on Environmental Economics". Environmental **Workshop** by KEPA. Kuwait **Apr 2018**
- "Smart cities and sustainability" Technology week by Kuwait University. Kuwait **Mar 2017**
- "The contribution of renewable fuels to energy security: US ethanol mandates" 2nd Kuwait International Conference on Life Sciences. Kuwait. **Apr 2016**

Posters

- "A Preliminary Municipal Solid Waste Characterization and Circular Economy Potential in Kuwait" SCIENTIFIC RESEARCH CONFERENCE, Kuwait University. **March 2023**
- "The Role of Biomethane from Sewage Sludge in the Energy Transition: Potentials and Barriers in the Arab Gulf States Power Sector" SCIENTIFIC RESEARCH CONFERENCE, Kuwait University. **March 2022**
- "Estimating the Power Output of Variable Solar Energy Using a Monte Carlo Approach." 3rd Kuwait International Conference on Life Sciences. Kuwait. **Nov 2018**
- "The Temporal Trends of Dust Events in Kuwait: Preliminary Data Assessment. Scientific Poster Day at Kuwait University. **Mar 2018**

Academic Workshops

- West Asia Regional Foresight Workshop – Kuwait University **Nov 2023**
- Kuwait Hydrogen Valley – Kuwait University and Embassy of Netherland in Kuwait **Oct 2023**
- Regional project development within the Climate-Energy-Health-Nexus – Sweden **Mar 2023**
- Energy Transition - Gulf Waste Management & Recycling Forum **Feb 2023**
- Solid Waste Management - Gulf Waste Management & Recycling Forum **Feb 2023**
- CABI webinar Journey to Publish **Jun 2020**
- Positive Education Training by Bareeq & KFAS. Kuwait **Oct 2017**
- Research Publication Workshop by KFAS & UC Berkley. Kuwait **Oct 2017**
- Teaching Excellence Workshop by Center for Teaching and learning UC Berkeley. Kuwait **Mar 2017**
- Developing Competitive Research Proposals Workshop by KFAS & AAAS. Kuwait **Dec 2016**

ADMINISTRATIVE RESPONSIBILITIES

- Scientific Committee
- Accreditation and Quality assurance committee
- Department's Representative in Kuwait Environmental Protection Authority
- Students and Course Schedule Committee
- Contracts and Hiring Committee
- Libraries Committee
- Laboratories Committee
- Adviser for the Student's Environmental Club O₂ and Earth Day (2016-2017)
- Member in the Strategic Plan Committee for Kuwait University (2018-2022)

CERTIFICATIONS AND AFFILIATIONS

- **LEED Green Associate credential Certificate 2014.** U.S. GREEN BUILDING COUNCIL
 - **Kuwait Society of Engineers**
 - **Elviser Reviewer**
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