

Curriculum Vitae

Mustafa Al Kuisi, Ph.D.

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Environmental Hydrogeochemistry / Water Resources Managements/Climate change

Personal Information

Full name: Mustafa Al Kuisi
Date and place of Birth: November 22, 1967, Amman, Jordan
Nationality: Jordanian / American
Gender: Male
Marital status: Married Five kids
Spoken languages: Arabic, English, and Germany



Work Address

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Research Intrest:

My research aims to link environmental hydrogeochemistry, isotope geochemistry, and applied hydrogeology with environmental problems in order to trace the sources and mechanisms of water contamination. Current research includes global climate change and changes of the chemical and isotopic compositions of water resources due to human intervention and contamination especially by organic pollutants, salinization of water resources in the Middle East.

1. Academic Qualifications and Degrees

Degree	Period	Field/Subject	Institution	Thesis
PhD.	1995-1998	Environmental Hydrogeochemistry	University of Münster Department of Environmental Geology Germany	Environmental effects of irrigation water with special regards to biocides on soil and water in the Jordan Valley area / Jordan
M.Sc.,	1990-1992	Environmental geology	The University of Jordan Department of Geology, Amman, Jordan	Assessment of the physical and inorganic chemical parameters of surface and groundwater resources in Amman Zarqa River Basin
B.Sc.,	1986-1990	Applied Geology & Environment	The University of Jordan Department of Geology, Amman, Jordan	

2. Awards and honors

May 2013 till Sep. 2013	Visiting Professor at Department of Geology, Miami University Oxford, Ohio, USA
Feb to September 2012	Visiting Professor at Department of Geological Sciences and Environmental Studies at Binghamton University, Binghamton, New York, USA
June to September 2011	Visiting Professor at Department of Geological Sciences and Environmental Studies at Binghamton University, Binghamton, New York, USA
Sept. 2009 – Feb. 2010	Research Visitor for the Nicholas School Faculty division of Earth and Ocean Sciences, Duke University – USA
June 2009 – Sept. 2009	Research scholarship at RWTH-Aachen University from the German Research Foundation (DFG)/Germany

Jul. 2007 - Sept. 2007	Research scholarship at RWTH-Aachen University from the German Academic Exchange Service (DAAD)/Germany
Apr. 1994 – July 1998	Ph.D. Scholarship from the German Academic Exchange Service (DAAD) / Germany
Sep. 1990 - Jan. 1993	Master degree scholarship from the Faculty of Graduated Studies- The University of Jordan/Jordan

3. Administration

Period	Title
2007 Sep – 2013 Sep	Administrative Affairs Assistant to the Dean of Faculty of Science, The University of Jordan

4. Academic Experience

4.1. Academic ranks and experience

Period	Position	Institution	Duties
2010 Mar. – Present	Associate Professor	University of Jordan Department of Applied and Environmental Geology, Amman, Jordan	Teaching load of 12 credit hours -B.Sc., M.Sc., and Ph.D. Applied Geology and environmental courses -Graduate student supervision
2006 Feb. – 2010 Mar.	Assistant Professor	University of Jordan Department of Applied and Environmental Geology, Amman, Jordan	Teaching load of 12 credit hours -B.Sc., M.Sc., and Ph.D. Applied Geology and environmental courses -Graduate student supervision
2004 Feb – 2006 Jan.	Part Time Lecturer	University of Jordan Department of Applied and Environmental Geology, Amman, Jordan	Teaching load of 12 credit hours -B.Sc., M.Sc., and Ph.D. Applied and environmental courses -Graduate student supervision
1995 Oct. – 1998 Feb.	Teaching Assistant	University Munster, Germany	Teaching and student supervision in Water quality and environment courses
1990 Sep. – 1993 Jan.	Teaching Assistant	University of Jordan Department of Applied and Environmental Geology, Amman, Jordan	Teaching and student supervision in Hydrogeology, Water quality and environment courses

4.2. Graduate Student supervision

Student	Degree	Period	Institution	Role
Abeer Al Salman	Ph.D.	2007-2009	University of Jordan Department of Applied and Environmental Geology, Amman, Jordan	Supervisor
Lina Al Assi	M.Sc.	2006-2008	University of Jordan Department of Applied and Environmental Geology, Amman, Jordan	Supervisor
Mohammad Alwaween	M.Sc.	2009-2010	University of Jordan Department of Applied and Environmental Geology, Amman, Jordan	Supervisor
Suha Abu Ali	M.Sc.	2009-2011	University of Jordan Department of Applied and Environmental Geology, Amman, Jordan	Supervisor
Sawsan Al Attari	M.Sc.	2010-2012	University of Jordan Department of Applied and Environmental Geology, Amman, Jordan	Supervisor
Farah Al Afan	M.Sc.	2010-2012	University of Jordan Department of Applied and Environmental Geology, Amman, Jordan	Supervisor
Jomana Al Btoosh	M.Sc.	2011-2012	University of Jordan Department of Applied and Environmental Geology, Amman, Jordan	Supervisor
Alaa Al Basha	M.Sc.	2011-2013	University of Jordan Department of Applied and Environmental Geology, Amman, Jordan	Supervisor
Nisreen Azziezziah	M.Sc.	2011-2013	University of Jordan Department of Applied and Environmental Geology, Amman, Jordan	Supervisor

Abeer Theep	M.Sc.	2012-2015	University of Jordan Department of Applied and Environmental Geology, Amman, Jordan	Supervisor
Mohammad Wasfai	M.Sc.	2015 – current	University of Jordan Department of Applied and Environmental Geology, Amman, Jordan	Supervisor
Rafaa Abu Qaouad	M.Sc.	2015 – current	University of Jordan Department of Applied and Environmental Geology, Amman, Jordan	Supervisor
Daniella Hirschfeld	M.Sc.	2008-2009	Duke University, USA	Co-supervisor for field work
Gentry Catlett	M.Sc.	2012-2014	Miami University, Ohio, USA	Co-supervisor for field work

5. Research and Work Experience

5.1. Research positions and scientific experience

Period	Position	Institution	Duties
2010 March – present	Assoc. Prof.	University of Jordan Department of Applied and Environmental Geology, Amman, Jordan	Research projects, National/international collaboration
2006 Feb. – 2010 Feb.	Assist. Prof.	University of Jordan Department of Applied and Environmental Geology, Amman, Jordan	Research projects, National/international collaboration
2013 May - 2013 Sep.	Assoc. Prof.	Visiting Professor at Department of Geology, Miami University, Oxford, Ohio, USA	PALEOCLIMATIC IMPLICATIONS OF PLUVIAL DEPOSITS IN MUDAWWARA, JORDAN Re-assessing the depositional age of coquina in the Mudawwara depression, Jordan
2011 Jun. - 2011 Sep	Assoc. Prof.	Visiting Professor at Department of Geological Sciences and Environmental Studies, Binghamton University, New York, USA	Hydrogeochemistry of Groundwater from Karstic Limestone Aquifer Highlighting Arsenic Contamination: Case study from Jordan
2009 Sep. - 2010 Feb.	Assist. Prof.	Research Visitor for the Nicholas School Faculty division of Earth and Ocean Sciences, Duke University – USA	Hydrogeochemical characterization of Disi Sandstone aquifer, southern Jordan
2009 Jun – Sep.	Assist. Prof.	Research Visitor at RWTH-Aachen University, Germany	<i>Groundwater vulnerability to selenium in semi-arid environments, Jordan</i>
2007 Jun –Sep.	Assist. Prof.	Research Visitor scholarship at RWTH-Aachen University, Germany	Impact of the use of reclaimed water on the quality of groundwater resources in the Jordan Valley, Jordan

5.2 Work Experience

Period	Position	Institution	Duties
2004 - 2005	Senior Consultant Hydrogeology and Environment	German Development Cooperation (GTZ) ,	Jordan Valley Project
2003 - 2004	Site Manager, Hydrogeology and Engineering Geology	Dar Al Omran Consulting Company	Abu Burqa Dam Project, South Jordan
2002-2003	Director of Site Investigation and Projects Department	Geotechnical Engineering and Materials Testing Company	Amman, Jordan
2000 - 2003	Senior Site and Geological Engineer	Joint Venture Soletanche Bachy/France and Specialized Engineering Services Company (SESCO) Jordan	Tannur Dam Project
1993 - 1994	Environmental Geologist and Hydrogeologist	Ministry of Water and Irrigation Department of Planning, Development and Information	Amman, Jordan

5.3 Consultation: Environmental and Social Impact Assessment (ESIA)

Period	Company	Duties
Jan – May 2015	Integrated Resources Management (IRM)	Al FAHARES Touristic Village Jewel of the Dead Sea.
Jan – May 2013	Geological Consultancy Center (GCC)	Tafiela Wind Energy Project Environmental and Social Impacts Assessments. Water Resources Baseline Study. (Jordan Wind Renewable Energy, Jordan).
Jan –May 2012	Geological Consultancy Center (GCC)	Jordan Bromine Company, Petra Project Expansion
Jan – May 2011	Geological Consultancy Center (GCC)	Tafiela Wind Energy Project Environmental and Social Impacts Assessments. Water Resources Baseline Study at Al Fujeij Area
Sep – Dec. 2010	Geological Consultancy Center (GCC)	Oil Shale Exploration Program and Feasibility Study of Sultani’s MOU Area Jordan Oil Shale Energy Company P.L.C. (JOSECO)
Sep. – Oct. 2008	Integrated Resources Management (IRM)	Wastewater Treatment Feasibility Study in Jordan, Baqaa and Rmemmian areas

5.4. Special Training Courses / Workshops

Period	Course Name	Sponsor	Location
13-17 Mar. 2010	Drilling wells, engineering and techniques	Ministry of Municipality and irrigation water	Masqat Oman
22-28 Nov. 2008	Climate Change Adaptation Strategies	University of Jordan AREN Member Universities	Amman-Jordan
17-21 Feb 2008	Stable and Radioactive Isotopes Applications in Water	Atomic Energy Authority	Cairo, Egypt
22-24 Jun. 2006	Echohydrology and Phytotechnology for sustainable Water Resources Management	UNSCO Office	Amman-Jordan
5 to 16 Dec. 2006	Environmental Impact Assessment for the Dead Red Sea-Red Sea Channel	Integrated Water Resources Management ITWRM–MENA, Swedish Agency for International Development Cooperation, Sida	Amman, Jordan
Jul.-28-Aug.8, 2006	Hydrologic Modelling using GIS and Hydrologic Modelling System (HEC-HMS)	Department of Applied Geology and Environment/ University of Jordan	Amman, Jordan
8-12 Jun. 2006	Drinking Water Quality	Water Resources and Study Centre /University of Jordan	Amman, Jordan
May-28-Jun.- 8, 2006	Water Quality Monitoring System	Water Resources and Study Centre / University of Jordan	Amman, Jordan

5.5 Invited Seminar Talks

Period	Conference Name	Location
27-30 Oct. 2013	GSA’s 125 th Anniversary Annual meeting & Exposition, Chair for the session T229. PAST CLIMATES OF THE MIDDLE EAST FROM PROXY RECORDS; INSIGHTS ON WATER RESOURCES AND IMPACTS ON THE PEOPLE OF THE REGION	Denver Colorado USA
6-10 Oct. 2010	Eurasia Conference on Chemical Sciences-11	King Hussein Bin Talal Convention Center, The Dead Sea Jordan
7-9 Mar. 2007	The Regional Workshop of the Inter Academy Panel Water Program on “Integrated Water Resources Management”	Amman-Jordan
18– 19 Sep. 2006	<i>Environmental Protection in the Middle East and North Africa-Water Resources and Air Quality</i>	Frankfurt University, Germany
11–May 2004	<i>Seminar Groundwater Protection</i>	Hashemite University, Zarqa, Jordan
4–6 Apr. 2004	<i>Eighth Geological Conference</i>	Jordan Geological Association, Amman University, Amman- Jordan

7–10 Apr. 2002	<i>International Conference in Roller Compacted Concrete Dam Construction in Middle East</i>	Jordan University of Science and Technology, Irbid Jordan
2–4 Apr. 2001	<i>Seventh Geological Conference</i>	Jordan Geological Association, University of Jordan, Amman- Jordan
30 Oct. 2001	Natural Resources Management and Combating Desertification using GIS	UNESCO Chair for Desert Studies, Yarmouk University
23-27 Apr. 2000	Environmental impact assessment of industrial activity in the Zarqa Governorate	National Workshop of the Jordanian-German Technical Cooperation, Zarqa-Jordan
9-20 Mar. 2001	strengthening drinking water quality monitoring & surveillance systems	WHO Offices
3 March, 1999	Water situation in the Zarqa Governorate	Zarqa, Jordan
28-29 Nov. 1999	Localizing Sustainable Development (LSD) in the Zarqa Region	Zarqa-Jordan
7 Apr. 1999	Applications of Remote Sensing	Hashemite University in cooperation with Japan International Cooperation Agency (JICA)

6. List of Publications

A. Publications

- (1) Abed A., Jaber, O and **Al Kuisi M.** (2015) Rare earth elements and uranium in the Al-Kora phosphorite province, northwestern Jordan (**Arabian Journal of Geosciences**)
- (2) **Al Kuisi. M.**, Mashal K, Abed. A and Saffarini G. (2015) Hydrogeochemistry of groundwater from karstic limestone aquifer highlighting arsenic contamination-Case study from Jordan. (**Arabian Journal of Geosciences**)
- (3) **Al Kuisi. M.**, Al –Hwaiti M, Mashal K and Abed. A (2015) Spatial distribution patterns of molybdenum (Mo) concentrations in potable groundwater in Northern Jordan. **Environ Monit. Assess**, 187: 1-26
- (4) **Al Kuisi M.**, Mashal K., Al-Qinna M., Abu Hamad A., Margana A. (2014) Groundwater Vulnerability and Hazard Mapping in an Arid Region: Case Study, Amman-Zarqa Basin (AZB)-Jordan. **Journal of Water Resource and Protection**, 6, 297-318. <http://dx.doi.org/10.4236/jwarp.2014.64033>
- (5) Al-Hwaiti M., **Al Kuisi M.** Saffarini, G. and Al zughoul K. (2014) Assessment of elemental distribution and heavy metals contamination in Eranbee phosphate deposits, Jordan, **Environ Geochem Health**, DOI 10.1007/s10653-013-9587-y
- (6) Salman A. Al Qinna M. and **Al Kuisi, M.** (2013) Spatial analysis of physical and chemical parameters of soil and shallow groundwater in El-Mujib Basin\ Central of Jordan. **Journal of Asian Earth Sciences** 79 (2014) 366–381
- (7) **Al Kuisi, M.** and El-Naqa, A (2013) GIS-based Spatial Groundwater Recharge estimation in Jafr Basin using WetSpa model, Southern Jordan (**REVISTA MEXICANA DE CIENCIAS GEOLÓGICAS**)
- (8) El-Naqa, A and **Al Kuisi, M.** (2012) Groundwater Resources Assessment for Irrigable Agricultural lands in Wadi Araba Area, Southern Jordan. **Arabian Journal of Geosciences**, 2012.
- (9) **Al Kuisi M.**, Saffarini, G, Yassen, N. and Alawi, M. (2011) Environmental assessment of MTBE and petroleum derivatives BTEX in groundwater resources in Jordan. **Clean – Soil, Air, Water**, 2012.
- (10) **Al Kuisi M.** and Abdel-Fattah, A. (2010) Groundwater vulnerability to selenium in semi-arid environments: Amman Zarqa basin, Jordan **Environmental Geochemistry and Health**, 32:107-128.
- (11) Abed, A, **Al Kuisi M.** and Abul Khair, H. (2009) Characterization of the Khamaseen Dust in Jordan, source, pathways, composition, and health effect. **Atmospheric Environment**, 43 (2009) 2868–2876.
- (12) **Al Kuisi M.**, Al Jazzar, T., Rude, T. and Margana A. (2008): Impact of the use of reclaimed water on the quality of groundwater resources in the Jordan Valley, Jordan. **Clean – Soil, Air, Water** 36, 12, 1001–1014
- (13) **Al Kuisi M.**, Al Qanni, M. Margana, A and Al Jazzer T. (2009): Spatial assessment of salinity and nitrate pollution in the Amman Zarqa Basin: a case study. **Environmental Earth Sci.**, 59: 117-129.
- (14) Abed, A., Sadaqah R. and **Al Kuisi, M.** (2008) Uranium and potentially toxic metals during the mining, beneficiation, and processing of phosphorite and their effects on ground water in Jordan. **Mine Water Environment**, 27:171–182
- (15) Shaqour, F, Jarrar G., Hencher, S and **Al Kuisi M.** (2008): Geotechnical and mineralogical characteristics of marl deposits in Jordan. **Environmental Geology**, 55:1777–1783.
- (16) El Naqa A. and Hammouri, N., **Al Kuisi M.** (2006): GIS-based modeling of groundwater vulnerability at Russeifa Area/Jordan. **Revista Mexicana de Ciencias Geológicas, Mexico**, 23 (3):277-287.
- (17) **Al Kuisi M.**, El Naqa A. and Hammouri, N. (2006): Vulnerability of shallow groundwater aquifer using SINTACS model in the Jordan Valley area, Jordan. **Environmental Geology**. 50: (5) 651 – 667
- (18) **Al Kuisi M.**, El Naqa Ali and Shaqour, F. (2005): Improvement of dam foundation using grouting dam site, South Jordan. **Electronic Journal of Geotechnical Engineering**.
- (19) El Naqa, A. and **Al Kuisi M.** (2004) Hydrogeochemical modeling of the water seepages through Tannur Dam Southern Jordan. **Environmental Geology** 45 (8): 1087-1100.

- (20) El Naqa, A. and **Al Kuisi M. (2002)**: Geomechanical characterization of the rock masses at Tannur Dam site, South Jordan. **Environmental Geology** 42 (7): 817-826. Springer, Germany.
- (21) **Al Kuisi M. (2002)**: Adsorption isotherms of Dimethoate and 2,4-D pesticides on Jordan Valley soils and their environmental impacts. **Environmental Geology**, 42 (6): 666-671. Springer, Germany.

B. Abstracts

1. Rech J., Jeffrey S., Catlett, G and **Al Kuisi M.** (2013) The rise and fall of Late Pleistocene paleolakes in southern Jordan, USGS Annual Meeting 09/2013; 45(7)
2. Catlett, G., Rech J., Jeffrey S., and **Al Kuisi M.** (2013) PALEOCLIMATIC IMPLICATIONS OF PLUVIAL DEPOSITS IN MUDAWWARA, JORDAN, USGS Annual Meeting 09/2013; 45(7)
3. Catlett, G., Rech J., Jeffrey S., and **Al Kuisi M.** (2013) Re-assessing the depositional age of coquina in the Mudawwara depression, Jordan, USGS Annual Meeting 09/2013; 45(7)
4. Loope, D, Kettler, R., Weber, A., **Al Kuisi M.** (2013) Microbially Mediated Iron-Oxide Bands at Petra (southern Jordan) are Oxidation Products of Late Diagenetic Siderite, USGS Annual Meeting 09/2013; 45(7)

C. . Thesis

Al Kuisi, M. (1998): Environmental effects of irrigation water with special regards to biocides on soil and groundwater in the Jordan Valley area/Jordan. Heft 84, Ph.D. Thesis, 137 Fig. & 66 Tab. **Münstersche Forschungen zur Geologie und Paläontologie**, Münster, Germany.

Al Kuisi, M. (1992): Assessment of the physical and inorganic chemical parameters of surface and groundwater resources in Amman-Zarqa – Sukhna strip of Zarqa River Basin. M.Sc. Thesis, **University of Jordan**. Amman –Jordan.

D. . Books

Al Kuisi and others (2011) Principles of geology in Arabic Language.

7. MEMBERSHIP

Jordan Geological Association
German Geological Association
International Association of Hydrogeologist
Royal Society for the Conservation of Nature, Jordan

8. PROFESSIONAL SKILLS

- Broad background in the environment and geosciences as well as the basic sciences, particularly chemistry, math, statistics, and computer sciences.
- Sound understanding of geology and groundwater hydrogeology, IWRM, and Water Governance
- Experience in the use of laboratory analytical techniques, monitoring, data recording, and environmental problem solving.
- Capabilities for field research design and implementations including exposure to drilling techniques and description of well cuttings.
- Spatial and temporal data analyses abilities coupled with strong computer skills.
- Capacity and desire to work cooperatively as part of multidisciplinary teams as I have learned to work hand-in-hand with environmental engineers, scientist, and other technical professionals.

9. PERSONAL/INTER-PERSONAL SKILLS AND LEADERSHIP ABILITIES

Possess flexibility, adaptability, and responsibility
Friendly, outgoing, enthusiastic, and productive
Foreign language skills, as being a speaker of English, Germany and Arabic
Good traveling experience with quick adaptation to new environments
Good understanding of cross-cultural interpersonal and cross-religion
Excellent technical, organizational, and communication skills both written and verbal
Good leadership skills: effective leader and motivator, organized and goal-directed
Excellent human contact with excellent team spirit