

Curriculum Vitae

Mustafa Al Kuisi, Ph.D.

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Environmental Hydrogeochemistry / Hydrogeology / Hydrology / Surface and Groundwater Modelling / Climate change

Personal Information

Full name: **Mustafa Al Kuisi (مصطفى محمود مصطفى القيسي)**
Date and place of Birth: November 22, 1967, Amman, Jordan
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Dr. Al Kuisi holds a Ph.D. in Environmental Hydrogeochemistry and environmental geology. He has more than 30 years of national, regional, and international experience in water resources and environmental pollution. Dr. Al Kuisi's research aims to link environmental hydrogeochemistry, isotope geochemistry, and applied hydrogeology in order to trace the sources and mechanisms of water contamination. Dr. Al Kuisi is a senior academic leader, professional technical consultant, and devoted educator in hydrogeology, hydrogeochemistry, and hydrology. He has diverse and progressive experience in hydrogeochemical modeling and hydrological studies of floods and flood risk mapping by using professional software packages.

يهدف بحثي العلمي إلى ربط علم هيدروجيوكيمياء البيئة، الهيدروجيولوجيا والجيولوجيا التطبيقية بالمشاكل البيئية من أجل تتبع مصادر وآليات تلوث المياه السطحية والجوفية حيث يتم ذلك من خلال نمذجة المياه السطحية والجوفية باستخدام برمجيات متخصصة مثل WMS11.0 و GMS 10.5. بالإضافة إلى ذلك فقد شملت أبحاثي الحالية تلوث الهواء وتغير المناخ العالمي وإدارة المخاطر بسبب التغيرات المناخية ككوارث الفيضانات.

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. CLASSES TAUGHT

- Undergraduate courses (University of Jordan):

BSc.:

1st year level: Environmental Science, General Geology, Environmental Geology

2nd year level: Meteorology

3rd year level : Principles of Hydrogeology and Hydrology, Aqueous Geochemistry, Biogeochemistry

4th year level: Environmental Geochemistry and Pollutants, Dam Geology and Reservoirs, Environmental Impact Assessment (EIA)

- Graduate courses (University of Jordan):

MSc.: Hydrogeology, Hydrological Modelling, Environmental Impact Assessment (EIA)

Ph.D.: Groundwater modeling and hydrodynamics, Environmental Geology, Hydrogeochemistry

3. Awards and honors

Sept. 2021 – Sept. 2022	Visiting Professor at Department of Geology, Rochester University, New York, USA
Aug. 15 th to Feb 2017	Visiting Professor at Department of Geology, Nebraska at Lincoln University, Nebraska, USA
Feb. 2014 to Feb. 2015	Sabbatical leave at Department of Geology, Miami University Oxford, Ohio, USA
May 2013 to 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

4. Administration

Period	Title
Sep. 2015 –Sept. 2016	Chairman of the Geology Department, Faculty of Science, The University of Jordan
2007 Sep – 2013 Sep	Administrative Affairs Assistant to the Dean of Faculty of Science, The University of Jordan

5. Academic Experience

5.1. Academic ranks and experience

Period	Position	Institution	Duties
May 2014	Professor	University of Jordan Department of Applied and Environmental Geology, Amman, Jordan	Teaching load of 9 credit hours -B.Sc., M.Sc., and Ph.D. Applied Geology and environmental courses -Graduate student supervision
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

5.2. Graduate Student supervision

Student Name	Degree	Institution	Thesis Title	Graduation Year
Dalia Mohammad	M.Sc.	University of Jordan Department of Geology		Dec, 2022
Abd Al Rahman Abu Ershaid	M.Sc.	University of Jordan Department of Physics	Adaptation of a Global Mass-Heat-Balance Numerical Model to Investigate the Dew Formation Potential and Harvesting under Different Conditions in Jordan	Sep, 2022
Noor Mohammad Matarnah	M.Sc.	University of Jordan Department of Geology	Assessment And Modeling of Groundwater Quality by Using Water Quality Index (WQI) and GIS Technique in El-Mujib Basin/Central Jordan	July, 2022
Doaa Hamza Alhiary	M.Sc.	University of Jordan Department of Geology	Pollution Levels Of Polychlorinated Biphenyls (PCBs) Residue In Sediments And Water Of Kafrein And Shueib Dams.	May, 2022
Rihan Ahmad Al Saodi	M.Sc.	University of Jordan Department of Mechanical Engineering	Assessing The Hydrologic Vulnerability To Climate Change Impacts At Amman- Zarqa Basin, Jordan	Dec, 2021
Mahmoud Darweesh Alghaffari	M.Sc.	University of Jordan Department of Physics	Major And Trace Elements Concentrations In The Sediments Of Kafrein Dam Using Wavelength Dispersive X-Ray Fluorescence Technique	Mar, 2021
Emad Abdel Halim A. Awad	M.Sc.	University of Jordan Department of Geology	On The Water Resources Management Of Wadi Kufrinja Catchment Using : GIS, Hydrogeochemical and Hydrological Data	May, 2021
Tasneem Yaseen Hyarat	Ph.D.	University of Jordan Department of Geology	Assessment And Prediction Of Groundwater Quality Parameters Using Artificial Neural Network, In Amman Zarqa Area/Jordan	May, 2021
Mutaz Hamzah Al-Omari	M.Sc.	University of Jordan Department of Geology	Groundwater Quality Assessment Using Water Quality Indices And GIS Techniques For Al Yarmouk Basin	May, 2021
Alaa Hussein Hawamdeh	Ph.D.	University of Jordan Department of Geology	Developing A Flood Risk Assessment Using Artificial Neural Network And Hydrological Modeling To Assess The Flash Flood For Wadi Al Wala Watershed	May, 2021
Reem Jehad Al-Shuaibi	M.Sc.	University of Jordan Department of Geology	Investigation Of Dew Water Harvesting Quantity And Quality At Selected Sites In Jordan	May, 2021
Yazeed Ghazi Al Jbour	M.Sc.	University of Jordan Department of Geology	Hydrochemistry And The Water Quality Changes Of The Upper Aquifer Complex In Khan Al-Zabib Area/ South Amman.	Aug, 2020
Naheel Majed Al Azzam	Ph.D.	University of Jordan Department of Geology	Flood Hazard And Risk Assessment Of Flash Floods For Irbid City Using Hydrological And GIS Modeling.	Dec, 2020
Arwa Abu Islaiah	M.Sc.	University of Jordan Department of Geology	Impact Of Climate Change On Flash Floods Using Hydrological Statistical Analysis And GIS: Case Study Zarqa Ma'in Area	Dec, 2020
Abeer Wasfi Lababneh	M.Sc.	University of Jordan Department of Geology	Wadi Al Hasa Catchment Area Parameterization Using SWAT And GIS Modeling	Jun, 2020
Zeinab M. Abu Romman	Ph.D.	University of Jordan Department of Geology	Assessment Of Groundwater Recharge Under Climate Change Scenarios Using GIS and Remote Sensing	May, 2019

Yanal Abdel Al Mhadeen	M.Sc.	University of Jordan Department of Geology	Geogenic and Anthropogenic Influences on The Water Resources Quality Variations In Wadi Karak Catchment.	Nov., 2019
Deema Suliman Al Rbihat	M.Sc.	University of Jordan Department of Geology	Natural Recharge Of The Kafrein And Shueib Dams On The Groundwater Quality In Downstream Areas	Oct, 2019
Rasha Ahmed Aburukbh	Ph.D.	University of Jordan Department of Geology	Evaluation of Agricultural Water Resources Sustainability In Jordan Using Remote Sensing Techniques.	July, 2018
Majadi Mustafa Al Majdalawi	Ph.D.	University of Jordan Department of Geology	Hydrochemistry Of The Surface and Groundwater Resources In The Area Between Khirbet Es Samra and Jarash Bridge And The Self Purification Processes Along The Zarqa River/ Jordan	June, 2018
Claire A. Brady	M. Sc.	Wesleyan University, USA	The Impacts of Water Scarcity on Female Refugees in Jordan & How Adverse Impacts Can be Mitigated	Sept, 2018
Sondos Alzoubi	M.Sc.	University of Jordan Department of Geology	The Effect Of Global Criteria Implementation For Blue Flag On A Jordan-Aqaba Beach Comparing With The Unimplemented Beaches.	Mar, 2017
Abdallah Bani Fauaz	M.Sc.	University of Jordan Department of Geology	Assessing The Awareness Levels Regarding Water Conservation Among School Students In Jordan	Aug, 2016
Mohammad Omar Al Sayada	M.Sc.	University of Jordan Department of Geology	Assessment Of The Susceptibility To Landslides In The Area Around King Talal Dam Using Remote Sensing And Geographic Information Systems	Aug, 2016
Tasneem Yaseen Hyarat	M.Sc.	University of Jordan Department of Geology	Disaster Management, Flood Hazard And Risk Assessment: Case Study Wadi Al Arab Basin	May, 2016
Shadia Mohammad Alqudah	M.Sc.	University of Jordan Department of Geology	Greywater Management System For Faculty Of Science In The University Of Jordan	Nov, 2016
Rafa'A Khaled Abu Qaoud	M.Sc.	University of Jordan Department of Geology	Environmental Impact Assessment Of Madaba Landfill	July, 2015
Gentry Ann Catlett	M.Sc.	Miami University, USA	Pluvial deposits in Mudawwara, Jordan and their implications for Mediterranean and monsoonal precipitation in the Levant	Aug, 2014
Mohammad Wasfai Abumughli	M.Sc.	University of Jordan Department of Geology	Polychlorinated Biphenyls (PCBs) water sediments samples of Zarqa River and soil samples from electrical companies in Jordan	May, 2014
Ala'a Mahmoud Al Basha	M.Sc.	University of Jordan Department of Geology	Ground Water Vulnerability To Pollution With Molybdenum In Yarmouk Basin: A Semi-Arid Environment	Dec., 2012
Abeer Satai Theab	M.Sc.	University of Jordan Department of Geology	Investigation Of Nitrogen Sources In In Al-Hashmiya And Ad-Dulail Areas Using Nitrogen (N ¹⁵) And Oxygen(O ¹⁸) Isotopes	May, 2012
Nisreen Mohammad Azizieh	M.Sc.	University of Jordan Department of Geology	Potential Impact Of Climate Change On Drinking Water Quality In El-Mujib basin And Needed Adaptation/Response Plans.	Oct, 2012
Jomana Mohammad Al-Btoosh	M.Sc.	University of Jordan Department of Geology	Strategic Environmental Assessment Of Jordan's Nuclear Power Program	May, 2011
Sawsan Khaled Al-Atari	M.Sc.	University of Jordan Department of Geology	Environmental Effects Of MTBE And BTEX Concentrations In Groundwater Resources In Amman Area	May, 2010
Farah Abbas Al Efan	M.Sc.	University of Jordan Department of Geology	Delineation Of Groundwater Protection Zones And Vulnerability Mapping In Wadi Es Sir Area Using GIS And Isotope Techniques	May, 2010
Suha A. Abu Ali	M.Sc.	University of Jordan Department of Geology	Environmental Effects Of Phosphate Beneficiation On Amman Wadi Es Sir Aquifer In Central Jordan	May, 2010
Abeer Shareef Salman	Ph.D.	University of Jordan Department of Geology	Geo-Environmental Quality Assessment Of Wadi El-Mujib Groundwater Resources Using Advanced Statistical And Geographical Information System	May, 2009
Mohammad Alaween	M.Sc.	University of Jordan Department of Geology	GIS Based Model of Groundwater Vulnerability and Contamination Risk of Wadi Kufrinja Catchment Area, Jordan Department of Water Resources and Environmental Management	May, 2009

Daniella Hirschfeld	M.Sc.	Duke University, USA	Planning to Avert a Crisis: Analysis of Jordan's Groundwater, Understanding its Characteristics and Providing Solutions	Oct, 2008
Lina A. Al-assi	M.Sc.	University of Jordan Department of Geology	Arsenic Contamination of Groundwater And Its Health Impact In Amman-Zarqa Basin	July, 2008

6. Research and Work Experience

6.1. Research positions and scientific experience

Period	Position	Institution	Duties
May 2018- Present	Professor	University of Jordan Department of Applied and Environmental Geology, Amman, Jordan	Cyanobacterial Microcystin toxins in irrigation water bonds in the Jordan Valley
June 2017- Present	Professor	University of Jordan Department of Applied and Environmental Geology, Amman, Jordan	Hydrogeochemical processes produced the Sinkholes in South Dead Sea Shores
March 2016-Present	Professor	University of Jordan Department of Applied and Environmental Geology, Amman, Jordan	Iron Oxide Crusts, Botroids and columns in South Jordan Sandstones, Constructed by Iron Oxidizing Bacteria. A Bio-Geochemical Genesis Perspective
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
2010 Jun. - 2010 Sep	Assoc. Prof.	Visiting Professor at Department of Geological Sciences and Environmental Studies, Binghamton University, New York, USA	Effects of reclaimed water on soil and groundwater in Amman Zarqa Basin. Studying the soil profile and its nitrogen mineralization in addition heavy metals accumulations during the infiltration process. Isotherm adsorption for toxic elements on clay minerals.
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

6.2 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	<i>Dar Al Omran Consulting Company</i>	Abu Burqa Dam Project, South Jordan
2002-2003	Director of Site Investigation and Projects Department	<i>Geotechnical Engineering and Materials Testing Company</i>	Amman, Jordan
2000 - 2003	Senior Site and Geological Engineer	Joint Venture <i>Soletanche Bachy/France</i> and Specialized Engineering Services Company (SESCO) Jordan	Tannur Dam Project
1993 - 1994	Environmental Geologist and Hydrogeologist	<i>Ministry of Water and Irrigation</i> Department of Planning, Development and Information	Amman, Jordan

6.3 Consultation: Environmental and Social Impact Assessment (ESIA)

Period	Company	Duties
July-August 2019	Geological Consultancy Center (GCC)	Gas pipe Route (Flood and Landslide Hazards) South Jordan
Mar-May 2019	Geological Consultancy Center (GCC)	Gas pipe Route (Flood and Landslide Hazards) North Jordan
Jan-March 2019	Geological Consultancy Center (GCC)	Flood and risk assessment for Wadi Maa'in catchment area
Mar-May 2018	Geological Consultancy Center (GCC)	Flood and Landslide Hazards in North Jordan
Nov-Dec 2017	Al Mustaqbal Consultancy Company	Wadi Issal Dam
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

6.4. 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	UNESCO 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

6.5 Invited Seminar Talks

Period	Conference Name	Location
Oct. 22-25 2017	The Geological Society of America 129 th Annual Meeting	Seattle, Washington, USA
Sep. 25-28 2016	The Geological Society of America 128 th Annual Meeting	Denver Colorado, USA
Dec. 6-8 2015	The regional fifth conference 2015 - Arab Water Resources Assessment	Amman, Jordan
Nov. 1-4 2015	The Geological Society of America 127 th Annual Meeting	Baltimore, USA
Oct. 19-22 2014	The Geological Society of America 126 th Annual Meeting	Vancouver, British Columbia, Canada
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)

7. List of Publications

A. Publications

- (1) Hyarat, T., **Al Kuisi, M.**, Saffarini G. (2022) Assessment of Groundwater Quality Using Water Quality Index (WQI) and Multivariate Statistical Analysis in Amman-Zarqa Area /Jordan. *Journal of Hydrogeology* (Under revision)
- (2) **Al Kuisi, M.**, Azaam, N., and Hyarat, T. (2022) Flood hazard and risk assessment of flash floods for ancient city Petra using hydrological, GIS and analytical hierarchy (AHP) modeling. *Science of the Total Environment*. (Under press).
- (3) Hyarat, E.; Hyarat, T.; **Al Kuisi, M.** (2022) Barriers to the Implementation of Building Information Modeling among Jordanian AEC Companies. *Buildings*, 2022, 12, 150. <https://doi.org/10.3390/buildings12020150>
- (4) Abu Romman, Z., Al-Bakri, J., **Al Kuisi, M.** (2021). *Comparison of methods for filling in gaps in monthly rainfall series in arid regions*. *International Journal of Climatology*. <https://doi.org/10.1002/joc.7219>
- (5) Hyarat, T., **Al Kuisi, M.** (2021) Comparison between Weighted Arithmetic and Canadian Council of Ministers of the Environment Water Quality Indices performance in Amman-Zarqa Area, Jordan. *Jordan Journal of Earth and Environmental Sciences*. JJEES (2021) 12 (4): 295-305.
- (6) Al Azzam N., and **Al Kuisi M.** (2020) Determination of Flash Floods Hazards and Risks for Irbid Governorates Using Hydrological and Hydraulic Modelling. *Jordan Journal of Earth and Environmental Sciences*. JJEES (2021) 12 (1): 181-91. SS`N 1995-6681.
- (7) Abu Islaih, A., Yaghan R., **Al Kuisi, M.** and Al-Bilbisi H (2020) Impact of climate change on flash floods using hydrological modelling and GIS: case study Zarqa Ma'in area. *International Journal of Applied and Natural Sciences* (IJANS). 9(5):29–52
- (8) Atashi, N., Rahimi, D., **Al Kuisi, M.**, Anwar, J., Vuollekoski, H., Kulmala, M., Vesala, T. and Hussein T. (2020) Modeling Long-Term Temporal Variation of Dew Formation in Jordan and Its Link to Climate Change. *Water* 2020, 12, 2186; <https://doi.10.3390/w12082186>
- (9) Al-Saqarat, B. S., Abbas, M., Lai, Z., Gong, S., **Al Kuisi, M.**, Abu Hamad, A. M.B., Carling, P. A., Jansen, J. D. (2020). A wetland oasis at Wadi Gharandal spanning 125–70 ka on the human migration trail in southern Jordan. *Quaternary Research* 1–16. <https://doi.org/10.1017/qua.2020.82>
- (10) Abu Romman, Z, Al-Bakri, J., **Al Kuisi, M.** (2019) Estimation of Rainfall Missing Data in an Arid Area using Spatial and EM Methods. *Journal of Engineering Research and Application*. Vol. 9, Issue 3 (Series -II) March 2019, pp 76-80
- (11) Wasfi, A, **Al Kuisi, M.** and Al-Bilbisi, H (2019) Hydrological modeling for Al Hasa catchment area using GIS Technique. *Journal of Engineering Research and Application*, Issue 2 (Series -I) Feb 2019, pp 38-48
- (12) Hussein T., Juwhari H., **Al Kuisi M.**, Alkattan H, Lahlouh B. and Al-Hunaiti A. (2018) Accumulation and Coarse Modes Aerosols Concentrations and Carbonaceous Contents in the Urban Background Atmosphere in Amman – Jordan. *Arabian Journal of Geosci*. 11(20):617: 1-11 <https://doi.org/10.1007/s12517-018-3970-z>
- (13) Catlett, G, Rech, J Pigati J, **Al Kuisi M**, Li S, Honke J (2017) Activation of a small ephemeral lake in southern Jordan during the last full glacial period and its paleoclimatic implications, *Quaternary Research*, (88) 93-103 <https://doi.10.1017/qua.2017.29>
- (14) David B. Loope, Richard M. Kettler, Karrie A. Weber, Kevin J. Loope, **Al Kuisi, M.** (2016) A New Rock Record of Microbial Biofilms: Iron-Oxide-Cemented Columns Built by Lithautotrophs in Sandstone Aquifers.
- (15) Abed, A.M., Jaber, O., Alkuisi, M. et al. Rare earth elements and uranium geochemistry in the Al-Kora phosphorite province, Late Cretaceous, northwestern Jordan. *Arab J Geosci* 9, 187 (2016). <https://doi.org/10.1007/s12517-015-2135-6>
- (16) **Al Kuisi, M.**, Abed, A.M., Mashal, K. (2015). Hydrogeochemistry of groundwater from karstic limestone aquifer highlighting arsenic contamination: case study from Jordan. *Arab J Geosci* 8, 9699–9720 (2015). <https://doi.org/10.1007/s12517-015-1919-z>
- (17) **Al Kuisi, M.**, Al-Hwaiti, M., Mashal, K. (2015). Spatial distribution patterns of molybdenum (Mo) concentrations in potable groundwater in Northern Jordan. *Environ Monit Assess* 187, 148 (2015). <https://doi.org/10.1007/s10661-015-4264-5>
- (18) **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>
- (19) Al-Hwaiti M., **Al Kuisi M.** Saffarini, G. and Al zughouh K. (2014) Assessment of elemental distribution and heavy metals contamination in Eranbee phosphate deposits, Jordan, *Environ Geochem Health*, <http://dx.doi.10.1007/s10653-013-9587-y>

- (20) Salman, Abeer; Al-Qinna, Mohammed; Kuisi, Mustafa Al (2014). Spatial analysis of soil and shallow groundwater physicochemical parameters in El-Mujib Basin-central Jordan. *Journal of Asian Earth Sciences*, 79(), 366–381. <http://dx.doi.org/10.1016/j.jseaes.2013.10.008>
- (21) Tanay R, Alaween, M, **Al Kuisi, M.** Al Manaseer, N (2013) GIS Based Model of Groundwater Vulnerability and Contamination Risk of Wadi Kufrinja Catchment Area, Jordan. *World Applied Sciences Journal* 24 (5): 570-581, 2013. <http://dx.doi.org/10.5829/idosi.wasj.2013.24.05.13210>
- (22) **Al Kuisi, M.**, El-Naqa, A., (2013), GIS based Spatial Groundwater Recharge estimation in the Jafr basin, Jordan – Application of WetSpa models for arid regions: *Revista Mexicana de Ciencias Geológicas*, v. 30, núm. 1, p. 96-109
- (23) El-Naqa, A., Al Kuisi, M. Groundwater resources assessment for irrigable agricultural lands in the Wadi Araba area, southern Jordan. *Arab J Geosci* 6, 3027–3039 (2013). <https://doi.org/10.1007/s12517-012-0579-5>
- (24) **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. 40(8), –. <https://doi.org/10.1002/clen.201100473>
- (25) **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. <http://dx.doi.org/10.1007/s10653-009-9269-y>
- (26) 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. <http://dx.doi.org/10.1016/j.atmosenv.2009.03.015>
- (27) **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. <https://doi.org/10.1002/clen.200700190>
- (28) **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. <http://dx.doi.org/10.1007/s12665-009-0010-z>
- (29) 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 <http://dx.doi.org/10.1007/s10230-008-0039-3>
- (30) 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 <http://dx.doi.org/10.1007/s00254-007-1128-5>
- (31) 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.
- (32) **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 <http://dx.doi.org/10.1007/s00254-006-0239-8>
- (33) **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**.
- (34) 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. <http://dx.doi.org/10.4236/ojmh.2020.101001>
- (35) 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. <https://doi.org/10.1007/s00254-002-0589-9>
- (36) **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. <https://doi.org/10.1007/s00254-002-0575-2>

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.

8. MEMBERSHIP

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

9. 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.

10. Reviewer for many journals

Aerosol and Air Quality Research; Aerosol Science Technology; Atmospheric Chemistry and Physics; Chemosphere; Environmental Pollution; Environmental Science and Technology; Jordan Journal of Earth and Environmental Sciences; Jordan Journal of Physics; Journal of Aerosol Science; Journal of Environmental Science and Health Part A; Journal of Geophysical Research – Atmospheres; Meteorology and Atmospheric Physics; Science of the Total Environment; Water, Air, and Soil Pollution, Journal of Arabian Geosciences, Journal of Hydrogeology, Hydrology, Environmental geochemistry and health

10. 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

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