

# CURRICULUM VITAE

## Mustafa Al Kuisi, Ph.D.

Updated: Wednesday, December 4, 2024

### ENVIRONMENTAL HYDROGEOCHEMISTRY / 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  
Nationality: **Jordanian / American**  
Gender: Male  
Marital status: Married Five kids  
Spoken languages: Arabic, English, and Germany  
ORCID: 0000-0002-8795-7790  
Google Scholar: h-index=17; i10-index=21, 946 citation



#### WORK ADDRESS

The University of Jordan  
Faculty of Science  
Department of Geology  
Amman-11942  
Jordan  
Voice: 009626- 5535000 Ext: 22254  
Fax: 009626 -5300253  
E-mail: [mkuisi@ju.edu.jo](mailto:mkuisi@ju.edu.jo)  
[mkuisi@gmail.com](mailto:mkuisi@gmail.com)  
[mkuisi2006@gmail.com](mailto:mkuisi2006@gmail.com)

#### HOME ADDRESS (JORDAN)

Dahiyaet Al Rasheed  
Ibrahim Al Karaki street  
Building No. 12  
Amman 11942  
Jordan  
Cell: 00962777499510  
00962796906169

#### HOME ADDRESS (USA)

31 Frederick street  
Johnson City, NY, 13790  
USA  
Cell: 0016072174861

R<sup>6</sup>: <https://www.researchgate.net/profile/Mustafa-Al-Kuisi>

Google Scholar: <https://scholar.google.com/citations?hl=en&authuser=2&user=nhKuWhoAAAAJ>

LinkedIn: <https://www.linkedin.com/in/dr-mustafa-al-kuisi-b810843b/>

Dr. Al Kuisi holds a Ph.D. in Environmental Hydrogeochemistry and environmental geology. He has more than 35 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 بالمشكلات 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
Ph.D.,	1995-1997	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. RESEARCH INTERESTS

My research interests encompass a wide range of interdisciplinary topics aimed at understanding and addressing environmental challenges. Specifically, I am passionate about:

- **Water Quality and Pollution Sources:** Investigating the sources and dynamics of pollutants in water systems, including surface water bodies and groundwater aquifers, to assess their impact on ecosystem health and human well-being.
- **Air Pollution:** Studying the sources, transport, and dispersion of air pollutants, such as particulate matter, volatile organic compounds, and greenhouse gases, and their effects on air quality, human health, and the environment.
- **Climate Change:** Examining the impacts of climate change on hydrological processes, including precipitation patterns, evaporation rates, and water availability, and developing adaptation strategies to mitigate the effects on water resources and ecosystems.
- **Disaster Management:** Utilizing hydrological modeling techniques to assess and mitigate the risks associated with natural disasters, such as floods, droughts, and landslides, and enhancing resilience and preparedness measures for vulnerable communities.

### 3. CLASSES TAUGHT

#### - Undergraduate courses (University of Jordan):

##### BSc.:

1<sup>st</sup> year level: Environmental Science, General Geology, Environmental Geology

2<sup>nd</sup> year level: Meteorology

3<sup>rd</sup> year level : Principles of Hydrogeology and Hydrology, Aqueous Geochemistry, Biogeochemistry

4<sup>th</sup> 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

### 4. AWARDS AND HONORS

Sept, 2024 – October, 2024	Visiting Professor at Department of Geology, Miami University Oxford, Ohio, USA
Sept. 2021 – Sept. 2022	Visiting Professor at Department of Geology, Rochester University, New York, USA
Aug. 15 <sup>th</sup> 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
Sept. 1990 - Jan. 1993	Master degree scholarship from the Faculty of Graduated Studies- The University of Jordan/Jordan

### 5. Administration

PERIOD	TITLE
Oct., 2024- Till now	Vice Dean for Administrative and Laboratories School of Science, The University of Jordan
Oct. 2023 –Sept. 2024	Chairman of the Geology Department, School of Science, The University of Jordan
Sept. 2015 –Sept. 2016	Chairman of the Geology Department, School of Science, The University of Jordan
2007 Sep – 2013 Sep	Administrative Affairs Assistant to the Dean of School of Science, The University of Jordan

### 6. Academic Experience

#### 6.1. 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

<b>MARCH, 2010</b>	<b>Associate Professor</b>	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
<b>FEBRUARY, 2006</b>	<b>Assistant Professor</b>	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
<b>2004 FEB – 2006 JAN.</b>	<b>Part Time Lecturer</b>	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
<b>1995 OCT. – 1998 FEB.</b>	<b>Teaching Assistant</b>	University Munster, Germany	Teaching and student supervision in Water quality and environment courses
<b>1990 SEP. – 1993 JAN.</b>	<b>Teaching Assistant</b>	University of Jordan Department of Applied and Environmental Geology, Amman, Jordan	Teaching and student supervision in Hydrogeology, Water quality and environment courses

## 7. GRADUATE STUDENT SUPERVISION

### 7.1 DOCTORAL Ph.D. THESIS

STUDENT NAME	DEGREE	INSTITUTION	THESIS TITLE	GRADUATION YEAR
<b>TASNEEM YASEEN HYARAT</b>	<b>Ph.D.</b>	University of Jordan Department of Geology	Assessment And Prediction Of Groundwater Quality Parameters Using Artificial Neural Network, In Amman Zarqa Area/Jordan	May, 2021
<b>ALAA HUSSEIN HAWAMDEH</b>	<b>Ph.D.</b>	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
<b>NAHEEL MAJED AL AZZAM</b>	<b>Ph.D.</b>	University of Jordan Department of Geology	Flood Hazard And Risk Assessment Of Flash Floods For Irbid City Using Hydrological And GIS Modeling.	Dec, 2020
<b>ABEER WASFI LABABNEH</b>	<b>Ph.D.</b>	University of Jordan Department of Geology	Wadi Al Hasa Catchment Area Parameterization Using SWAT And GIS Modeling	Jun, 2020
<b>ZEINAB M. ABU ROMMAN</b>	<b>Ph.D.</b>	University of Jordan Department of Geology	Assessment Of Groundwater Recharge Under Climate Change Scenarios Using GIS and Remote Sensing	May, 2019
<b>RASHA AHMED ABURUKBH</b>	<b>Ph.D.</b>	University of Jordan Department of Geology	Evaluation of Agricultural Water Resources Sustainability In Jordan Using Remote Sensing Techniques.	July, 2018
<b>MAJADI MUSTAFA AL MAJDALAWI</b>	<b>Ph.D.</b>	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
<b>ABEER SHAREEF SALMAN</b>	<b>Ph.D.</b>	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

### 7.2 MASTER THESIS

STUDENT NAME	DEGREE	INSTITUTION	THESIS TITLE	GRADUATION YEAR
<b>OSAMA IGHRAYEB</b>	M.Sc.	University of Jordan Department of Geology	Advancing Urban Sustainability: A Multidisciplinary Approach to Greywater Reuse, Green Roofs and Hydroponics	December, 2025
<b>ALI AL SALAFAH</b>	M.Sc.	University of Jordan Department of Geology	Predicting Flash Flood Risk in Greater Amman Governorate-Jordan, Using Artificial Intelligence Models and Hydrological Information Systems	December, 2025
<b>RAMA AL YOUSEFI</b>	M.Sc.	University of Jordan Department of Geology	Assessing the Water Quality and Potential Corrosion Scaling in Greater Amman Water Distribution Networks through Water Quality and Stability Indices	January, 2025
<b>GHAYDA ALMAAIEH</b>	M.Sc.	University of Jordan Department of Geology	Assessment of Groundwater Quality Using Water Quality Index in Madaba Governorate, Jordan	January, 2025
<b>SALAH SHARABATI</b>	M.Sc.	University of Jordan Department of Geology	Assessing the Environmental Impacts of JAWA Dam –Northeast Jordan	January, 2025
<b>SALAH AL QURAN</b>	M.Sc.	University of Jordan Department of Geology	Strontium Concentrations and Its Potential Health Risks in Groundwater Resources in Amman-Zarqa Basin (AZB)	January, 2025
<b>DALIA BARHAM</b>	M.Sc.	University of Jordan Department of Geology	Evaluation of Groundwater Quality Using Water Quality Index (WQI) and Water Stability Indices in Qalqilya City, West Bank	May, 2024

<b>SAFA KAMAL</b>	M.Sc.	University of Jordan Department of Geology	Environmental Factors Impacting Organoclay Adsorption Efficiency and Interaction Dynamics	August, 2024
<b>ASAYEL AL AWABDEH</b>	M.Sc.	University of Jordan Department of Geology	Earthquake Risk Assessment for At-Tafilah Area using Analytical Hierarchy Process (AHP) and Artificial Neural Network (ANN)	Jan, 2024
<b>TASNEEM SALAMEH</b>	M.Sc.	University of Jordan Department of Geology	Climate Change Impacts on Rainfall Amounts and Trends Using Neural Networks (NNs) and Machine Learning (ML): Case Study Amman Zarqa Basin	Dec, 2023
<b>FEDA AL QASEM</b>	M.Sc.	University of Jordan Department of Mechanical Engineering	Impact of Climate Change on Water Quality and Sustainability in Amman Zarqa Basin by using Pollution Indices and Water Budget Model	May, 2023
<b>DALIA MOHAMMAD</b>	M.Sc.	University of Jordan Department of Geology	Investigation of Air Pollutants in Amman and Zarqa Cities from 2015-2021 and its Contribution to Air Quality Index	Sept., 2023
<b>HADEEL FANOON</b>	M.Sc.	University of Jordan Department of Geology	Comparative Study of Climate Change Impacts on Wildlife in Two Climatic Regions in Jordan: Yarmouk Forest Reserve and Fifa Nature Reserve	April, 2023
<b>RAZAN AFANAH</b>	M.Sc.	University of Jordan Department of Geology	The Potential Use of Jordanian Limestone and Nano Limestone in Treating Olive Mill Wastewater from Phenolic Compounds	Sept., 2023
<b>MOHAMMAD MELEHAHAT</b>	M.Sc.	University of Jordan Department of Geology	Hydrogeochemical Characterization of the Different Groundwater Aquifers in the Area between Ras Al Ain and Zawahra Bridge	May, 2023
<b>RANIA FAWAZ</b>	M.Sc.	University of Jordan Department of Geology	Rare Earth Elements Geochemistry and Occurrences in Central Jordan and Its Economic and Environmental Impacts	May, 2023
<b>ABD AL RAHMAN ABU ERSHAID</b>	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
<b>NOOR MATARNAH</b>	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	April, 2023
<b>DOAA ALHIARY</b>	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
<b>RIHAN AL SAODI</b>	M.Sc.	University of Jordan Department of Mechanical Engineering	Assessing The Hydrologic Vulnerability To Climate Change Impacts At Amman- Zarqa Basin, Jordan	Dec, 2021
<b>MAHMOUD ALGHAFFARI</b>	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
<b>EMAD A. AWAD</b>	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
<b>MUTAZ AL-OMARI</b>	M.Sc.	University of Jordan Department of Geology	Groundwater Quality Assessment Using Water Quality Indices And GIS Techniques For Al Yarmouk Basin	May, 2021
<b>REEM AL-SHUAIBI</b>	M.Sc.	University of Jordan Department of Geology	Investigation Of Dew Water Harvesting Quantity And Quality At Selected Sites In Jordan	May, 2021
<b>YAZEED AL JBOUR</b>	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
<b>ARWA ABU ISLAIHAH</b>	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
<b>YANAL AL MHADEEN</b>	M.Sc.	University of Jordan Department of Geology	Geogenic and Anthropogenic Influences on The Water Resources Quality Variations In Wadi Karak Catchment.	Nov., 2019
<b>DEEMA AL RBIHAT</b>	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
<b>CLAIRE A. BRADY</b>	M. Sc.	Wesleyan University, USA	The Impacts of Water Scarcity on Female Refugees in Jordan & How Adverse Impacts Can be Mitigated	Sept, 2018
<b>SONDOS ALZOUBI</b>	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
<b>ABDALLAH BANI FAUAZ</b>	M.Sc.	University of Jordan Department of Geology	Assessing The Awareness Levels Regarding Water Conservation Among School Students In Jordan	Aug, 2016
<b>MOHAMMAD AL SAYADA</b>	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
<b>TASNEEM HYARAT</b>	M.Sc.	University of Jordan Department of Geology	Disaster Management, Flood Hazard And Risk Assessment: Case Study Wadi Al Arab Basin	May, 2016

<b>SHADIA ALQUDAH</b>	M.Sc.	University of Jordan Department of Geology	Greywater Management System For Faculty Of Science In The University Of Jordan	Nov, 2016
<b>RAFA'A ABU QAUD</b>	M.Sc.	University of Jordan Department of Geology	Environmental Impact Assessment Of Madaba Landfill	July, 2015
<b>GENTRY ANN CATLETT</b>	M.Sc.	Miami University, USA	Pluvial deposits in Mudawwara, Jordan and their implications for Mediterranean and monsoonal precipitation in the Levant	Aug, 2014
<b>MOHAMMAD ABUMUGHLI</b>	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
<b>ALA'A AL BASHA</b>	M.Sc.	University of Jordan Department of Geology	Ground Water Vulnerability To Pollution With Molybdenum In Yarmouk Basin: A Semi-Arid Environment	Dec., 2012
<b>ABEER THEAB</b>	M.Sc.	University of Jordan Department of Geology	Investigation Of Nitrogen Sources In In Al-Hashmiya And Ad-Dulail Areas Using Nitrogen (N <sup>15</sup> ) And Oxygen(O <sup>18</sup> ) Isotopes	May, 2012
<b>NISREEN AZIZIEH</b>	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
<b>JOMANA AL-BTOOSH</b>	M.Sc.	University of Jordan Department of Geology	Strategic Environmental Assessment Of Jordan's Nuclear Power Program	May, 2011
<b>SAWSAN AL-ATARI</b>	M.Sc.	University of Jordan Department of Geology	Environmental Effects Of MTBE And BTEX Concentrations In Groundwater Resources In Amman Area	May, 2010
<b>FARAH AL EFAN</b>	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
<b>SUHA A. ABU ALI</b>	M.Sc.	University of Jordan Department of Geology	Environmental Effects Of Phosphate Beneficiation On Amman Wadi Es Sir Aquifer In Central Jordan	May, 2010
<b>MOHAMMAD ALAWEEEN</b>	M.Sc.	University of Jordan Department of Geology	GIS Based Model of Groundwater Vulnerability and Contamination Risk of Wadi Kufrinja Catchment Area, Jordan	May, 2009
<b>DANIELLA HIRSCHFELD</b>	M.Sc.	Duke University, USA	Planning to Avert a Crisis: Analysis of Jordan's Groundwater, Understanding its Characteristics and Providing Solutions	Oct, 2008
<b>LINA AL-ASSI</b>	M.Sc.	University of Jordan Department of Geology	Arsenic Contamination of Groundwater And Its Health Impact In Amman-Zarqa Basin	July, 2008

## 8. RESEARCH AND WORK EXPERIENCE

### 8.1. RESEARCH POSITIONS AND SCIENTIFIC EXPERIENCE

PERIOD	POSITION	INSTITUTION	DUTIES
<b>MAY 2018</b>	Professor	University of Jordan Department of Applied and Environmental Geology, Amman, Jordan	Cyanobacterial Microcystin toxins in irrigation water bonds in the Jordan Valley
<b>JUNE 2017</b>	Professor	University of Jordan Department of Applied and Environmental Geology, Amman, Jordan	Hydrogeochemical processes produced the Sinkholes in South Dead Sea Shores
<b>MARCH 2016</b>	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
<b>MARCH 2010</b>	Assoc. Prof.	University of Jordan Department of Applied and Environmental Geology, Amman, Jordan	Research projects, National/international collaboration
<b>FEB. 2010</b>	Assist. Prof.	University of Jordan Department of Applied and Environmental Geology, Amman, Jordan	Research projects, National/international collaboration
<b>SEP. 2013</b>	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
<b>SEP. 2011</b>	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
<b>SEP. 2010</b>	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.
<b>FEB.2010</b>	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
<b>JUN. 2009</b>	Assist. Prof.	Research Visitor at RWTH-Aachen University, Germany	<i>Groundwater vulnerability to selenium in semi-arid environments, Jordan</i>
<b>JUN. 2007</b>	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

## 8.2 CONSULTATION EXPERIENCE

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

## 8.3 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., 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

## 8.4 INVITED SEMINAR TALKS

PERIOD	CONFERENCE NAME	LOCATION
OCT. 22-25 2017	The Geological Society of America 129 <sup>th</sup> Annual Meeting	Seattle, Washington, USA
SEP. 25-28 2016	The Geological Society of America 128 <sup>th</sup> 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 <sup>th</sup> Annual Meeting	Baltimore, USA
OCT. 19-22 2014	The Geological Society of America 126 <sup>th</sup> Annual Meeting	Vancouver, British Columbia, Canada

27-30 OCT. 2013	GSA's 125 <sup>th</sup> Anniversary Annual meeting & Exposition, Chair for the session T229. PAST CLIMATES OF THE MIDDLE EAST FROM PROXY RECORDS; INSIGHTSON 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- WaterResources 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)

## 9. LIST OF PUBLICATIONS

### A. PUBLICATIONS

- (1) Umair, R., Alzoubi, J., Alawi, M., **Al Kuisi, M.**, Arar, S. (2024). A Snapshot Distribution of Chlorinated Pesticide Residue Levels within Meat Cuts and Organs of Bulls Imported to Jordan by QuEChERS Method: Dietary Exposure and Risk Assessment. *Jordan Journal of Chemistry (JJC)*, 19(2), 91-105.
- (2) **Al Kuisi, M.**; Al Azzam, N.; Hyarat, T.; Farhan, I. (2024) Flood Hazard and Risk Assessment of Flash Floods for Petra Catchment Area Using Hydrological and Analytical Hierarchy (AHP) Modeling. *Water* 2024, 16, 2283. <https://doi.org/10.3390/w16162283>
- (3) Umaira R., Alzoubia J., Alawia M., **Al Kuisi M.**, and Arar S. (2024) A Snapshot Distribution of Chlorinated Pesticide Residue Levels within Meat Cuts and Organs of Bulls Imported to Jordan by QuEChERS Method: Dietary Exposure and Risk Assessment. *Jordan Journal of Chemistry*.
- (4) Al Saodi R., **Al Kuisi M.** and Al Salaymeh A. (2023) Assessing the Vulnerability of Flash Floods to Climate Change in Arid Zones: Amman-Zarqa Basin, Jordan. *Journal of Water and Climate Change*. Vol 00 No 0, 1 <http://doi.10.2166/wcc.2023.237>
- (5) Abu Roman Z., and **Al Kuisi M.**, (2023) The impact of Water Legislation on Groundwater Sustainability in an Arid Region: Spatial Statistical Approach. *Environmental Development*. *Environmental Development* 46 (2023) 100852, <https://doi.org/10.1016/i.envdev.2023.100852>
- (6) Alhejoj, I., Hiasat, T., Salameh, E., Abu Hamad, A., **Al Kuisi, M.**, Hseinat, M. (2023). Use of the aquatic mayfly (Insecta: Ephemeroptera) as Environmental Bio-indicator in Jordan. *International Information and Engineering Technology Association* Vol. 18, No. 1, February, 2023, pp. 133-139. <http://iieta.org/journals/ijidne>
- (7) **Al Kuisi M.**, Hyarat T., Al Qaisi, K., Alhejoj, I., and I-Rshaidat M. (2023) Preliminary Investigation of Bioaccumulation of Microcystins in Hypereutrophic Irrigation Ponds Case Study – the Jordan Valley. *Journal of Ecological Engineering* 2023, 24(4), 36–53. <https://doi.org/10.12911/22998993/159334>
- (8) 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. *Water Practice & Technology* 17(4) <https://doi.org/10.2166/wpt.2022.076>
- (9) **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).
- (10) 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>
- (11) 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>
- (12) 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.

- (13) 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.
- (14) Al Hawamdah A. and **Al Kuisi M.** (2021) An artificial neural network model for flood forecasting, case study in Jordan. *Solid State Technology*. 64-2-4704-4714.
- (15) 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
- (16) 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.org/10.3390/w12082186>
- (17) 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>
- (18) 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
- (19) 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
- (20) 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>
- (21) 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.org/10.1017/qua.2017.29>
- (22) 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.
- (23) 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>
- (24) **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>
- (25) **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>
- (26) **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>
- (27) 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*, <http://dx.doi.org/10.1007/s10653-013-9587-y>
- (28) 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.jseae.2013.10.008>
- (29) 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>
- (30) **Al Kuisi, M.**, El-Naqa, A., (2013), GIS based Spatial Groundwater Recharge estimation in the Jafr basin, Jordan – Application of WetSpass models for arid regions: *Revista Mexicana de Ciencias Geológicas*, v. 30, núm. 1, p. 96-109
- (31) 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>
- (32) **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>
- (33) **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>
- (34) 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>
- (35) **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>
- (36) **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>
- (37) 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>
- (38) 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>
- (39) 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.
- (40) **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>
- (41) **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*.



- (42) 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>
- (43) 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>
- (44) **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.

---

### 10. MEMBERSHIP

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

---

### 11. 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.

---

### 12. 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.

---

### 13. 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

---

### 14. REFERENCES

1- **Prof. Dr. Ghaleb Jarrar**,  
Department of Geology  
University of Jordan  
Amman 11942  
Jordan  
(+962-6) 5355000 ext. 22273  
Cell: (+962) 777491617  
E-mail: [jarrargh@ju.edu.jo](mailto:jarrargh@ju.edu.jo)

2. **Prof. Dr. Jason Rech**  
Professor Isotope Geochemistry  
Miami University  
Department of Geology  
123 Shideler, Hall Oxford, OH 45056,  
USA  
Phone: 001 513 529-1935  
E-mail: [rechja@muohio.edu](mailto:rechja@muohio.edu)