

## Dr. Mahmoud M. ELWAHEIDI

King Saud University – Geology & Geophysics Department

Riyadh - KSA

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### 1. PERSONAL DATA

**Name:** Mahmoud M. ELWAHEIDI

**Place of Birth:** Jericho (Jordan)

**Nationality:** Italian

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**Research IDs:** ResearcherID: E-1176-2013

**Google Scholar:** Mahmoud M. ELWAHEIDI

**Researchgate:** Mahmoud Elwaheidi

**Publon:** <https://publons.com/researcher/956131/dr-mahmoud-m-elwaheidi/>

### 2. ACADEMIC/PROFESSIONAL PARTICULARS

(a) **Field of Specialization:** Applied Geophysics/Environmental & Engineering Geophysics

(b) **Academic Qualifications**

Degree	Major	Year	University	Country
Ph.D.	Environmental & Engineering Geophysics	1994	Università degli Studi di Genova	Italy
MSc.	Applied Geophysics	1990	Jordan University	Jordan
BSc.	Earth & Environmental Sciences	1987	Yarmouk University	Jordan

(c) **Academic Honors and Awards**

- Ph.D. Scholarship by the Italian Ministry of Foreign Affairs (1990-1994)
- Several recognition certificates for accreditation achievement and society services issued by the College of Science, dep. Of Geology & Geophysics (King Saud University) and by Saudi Geoscientists Association,

**(d) Membership of Professional Bodies**

- American Association of Petroleum Geologists. Member, April 2017
- Saudi Society for Geosciences. Member, Sep. 2012
- European Association of Geoscientists & Engineers. Member, Nov. 2014
- Society of Exploration Geophysicists (USA). Member, July, 2014
- Jordanian Geologists Association Member, January 1990

**(e) Language Proficiency**

Arabic (Native), English and Italian (both fluent)

### 3. CAREER DETAILS

**(a) Academic Positions Held**

Rank	Department	College	University	Country	Period
Associate Professor	Geology & Geophysics	Science	King Saud University	Saudi Arabia	December 2021
Assistant Professor	Geology & Geophysics				August 25, 2012
	Earth & Environmental Sciences		Yarmouk University	Jordan	Sept 1, 1997

**(b) Professional/Industrial Positions Held**

Position	Title	Department	Company	Country	Period
Team leader	Senior Geophysicist	Exploration	Geophysical Service Centre LTD	Jordan	January 1996 – January 1997
Researcher	Part time researcher	Geology	Hashemite University	Jordan	Sept 1, 2000 - Sept 1, 2001
Administrative	Students' affairs coordinator	Cultural Dep. - Student's affairs.	Italian Embassy	Jordan	March 1, 2002 - Sept 1, 2012

### 4. TEACHING

**(a) Summary of Courses Taught**

Course code	Course name	Number of Semesters Taught	University	Level
GPH 201	Principles of Geophysics	12	King Saud	B.Sc.
GPH 221	Seismic Exploration	12		
GPH 301	Geophysical Exploration	3		
GPH 390	Radiometric and Geothermal Methods	22		
GPH 424	Environmental & Engineering Geophysics	18		
GPH 381	Geophysical reports	2		

GPH 541	Advanced Environmental Geophysics	5		M.Sc.
GPH 496	Research project in applied geophysics -1	22		
GPH 497	Research project in applied geophysics -2	22		B.Sc.
Geo. 371	An Introduction to Applied Geophysics	6	Yarmouk	B.Sc.
Geo. 471	Applied Geophysics	6		
Geo. 474	Engineering Geophysics	6		
Geo. 483	Advanced Topics in Geophysics	4		
Geo. 677	Engineering and Environmental Geophysics	6		M.Sc.

**(b) Participation in Academic Accreditation**

Name of Program	Role	Institution	Name of Accreditation Body	Period (MM/YY- MM/YY)
King Saud University Board of Assessors	Member	King Saud University	King Saud Institutional Accreditation Renewal 2024	May 2023- December 2024
			King Saud University Board of Assessors	Jan 2021 - present
Geophysics	Accreditation Team member – Coordinator of MSc program in Geophysics	King Saud University (KSU)	The National Commission for Academic Accreditation and Assessment (NCAAA)	May 2016 – present
			ASIIN	April 2011 – Sept. 2016

- Two personal recognition certificates from the Faculty of science (KSU) and the Dept. of Geology & Geophysics at KSU, in recognition of efforts made to achieve the accreditation of the Geophysics Program.

**(c) Research Students Supervised/Trained**

Level	Number of Trainees
Master Students	More than 20
Undergraduate Students	More than 50

**(d) Participation in Thesis and Oral Examination Committees**

Level	Number of Examinations
Master	More than 15

### (e) Training

Training Institution	Country	Training Course	Period (MM/YY- MM/YY)
Universita degli Studi di Milano Bicocca	Italy	Detrital Geochronology and Thermochronology	18 Jan – 3 Feb, 2021
King Saud University - Deanship of Skills Development	Saudi Arabia	Digital transformation in Higher Education Institutions	August 30, 2021
		Basics of Academic Guidance for Academic Counselors	April 3 – April 3, 2018
		Effective Strategies for Teaching Critical and Innovative Thinking	April 13 – April 13, 2015
		Guidelines for Effective Teaching and Learning in Higher Education	April 12 – April 12, 2015
		Using Problem-Based learning Pedagogies to Teach Problem Solving	April 14 – April 14, 2015
		Effective Teaching Strategies	Feb. 28 – 29, 2016
		Professional Teaching Strategies	Jan 28 –Jan 28, 2016
		Assessing Learning Outcomes	Dec 8-9, 2015
		Developing the Course File	Dec 2-2, 2015
		Learning Management System (Blackboard)	Jan 18-19, 2016
		Geographical Information System (GIS)	April 5 –6, 2015
		Authoring and Publishing Books	Dec 6 – 7, 2016
		Basics of Academic Translation	April 13 – April 13, 2015

## 5. RESEARCH

### (a) Research Interests

My research interests address issues related to:

- Applying near-surface geophysical methods (such as Geoelectrical, electromagnetic and seismic) to investigate environmental and engineering problems. These include: landfill-related problems, groundwater exploration and contamination issues, Landslides, Liquefaction, archeological explorations, geotechnical site characterization and others.
- Climate change and global warming research in relation to energy consumption and pollution, and applying possible solutions using renewable energy resources.

### (b) Publications/Citations Data

Type of Publication	Number of Publications
Articles in International Refereed Journals	20
Conference Papers	1

Books/Book Chapters	3
Others (specify): Translated books	More than 15

Citation Source	Number of Citations
Google Scholar	344
WEB of Science	193
ResearchGate	341

**(c) Research Grants**

Type of Grant	Role	Title of Project	Awarding Body	Duration (MM/YY-MM/YY)	Grant Amount
Research project	PI	Assessment of natural and anthropogenic factors effects on climate changes in KSA in relation to consumption of fossil fuel and contribution of renewable energy using dynamic and statistical downscaling procedures.	King Abdulaziz City for Science and Technology (KACST) - KSA	Two years (Submitted June 2017, under external review).	150 K USD
	Co-PI	Studying the rifting history of the Red Sea at the Arabian Shield margin using geophysical data		Two years (waiting for fund)	500 K USD
	Co-I	Groundwater vulnerability in Saq aquifer, KSA		Two years (2013-2014). Completed.	500 K USD
	Consultant	Distribution of water recharge areas and deterioration of groundwater resources in the Midyan basin		Two years (2011-2012). (Completed)	500 K USD
	Co-I	Evaluation of the Ruseifa Municipal Landfill Effects on Groundwater Aquifer using Geochemical and Geophysical Methods,	Higher Council for Science and Technology (Jordan).	Two years (2005-2006). (Completed)	120 K USD
	Co-I	Groundwater Artificial Recharge in Jordan.	U.S. AID (USA)	One year (1996) (Completed)	170 K USD

### (e) Regional & International Conferences

Type	Name	Place	Date
Conference	5th International Conference on Water Resources and Arid Environment (ICWRAE)	Riyadh, KSA	29-31 March, 2021
	11 <sup>Th</sup> International Geological Conference.		12-14 May, 2015
	2 <sup>nd</sup> Saudi International Water Technology Conference.		23-25 February, 2014
	5 <sup>th</sup> International Conference on Water Resources and Arid Environment (ICWRAE)		7-9 January, 2013
Workshop	The Experience of College of Science (KSU) in e-Learning		7 May, 2015
	Seismic modelling techniques for Geothermal exploration purposes.		8 Nov, 2016

## 6. SERVICE

### (a) Membership of Conference Committees

Mmeber of the Scientific Committee of the 11<sup>Th</sup> International Geological Conference, 12-14 May, 2015  
– Riyadh, KSU

### (b) Service as Reviewer

Name of Journal	ISSN No.	Publisher	since: MM/YY
Journal of Applied Geophysics	0926-9851	Elsevier	August, 2020
Journal of Coastal Research	0749-0208	Coastal Education Research Foundation Inc.	April, 2020
Environmental Earth Sciences Journal	1866-6280	Springer	September, 2013
Arabian Journal of Geosciences	1866-7511	Springer	May, 2017
Journal of Asian Earth Sciences	1367-9120	Elsevier	June, 2014
Journal of Water Resource and Protection	1945-3094	Scientific Research	February, 2013
International Journal of Hydrology	2576-4454	MedCrave	February, 2017
British Journal of Applied Science & Technology	2231-0843	Science Domain International	March, 2012

**(c) Membership of Journal Editorial Boards**

Name of Journal	ISSN No.	Publisher	since: MM/YY
International Journal of Earth Science and Geology (IJEG)	2642-1569	Madridge	April, 2018
International Journal of Hydrology	2576-4454	MedCrave	February, 2017

**(d) University Service**

Name of Institution	Country	Name of Committee	Role	Period
King Saud University	Kingdom of Saudi Arabia			
		King Saud University Board of Assessors	Member	March 2021
		Student Guidance Committee	Academic advisor for Geophysics program	Sept. 2016 - current
		College of Science for BSc programs national accreditation	Coordinator	Jan 2018-ncurrent
		Dept. of Geology & Geophysics Statistics Committee	Member	Jan 2018-ncurrent
		Dept. of Geology & Geophysics Quality and Development Committee	Member	Jan 2018-ncurrent
		Evaluation & Academic Accreditation Committee	Coordinator of the Master program in Geophysics	Sept. 2013 - Sept. 2017
		Postgraduate studies & Research Committee	Member	Sept. 2012 - Sept. 2017
		E-learning Committee	Member	Sept. 2013 - Sept. 2016

**(e) Service to Profession/Industry**

Name of Organization	Country	Role	Date
King Abdulaziz & his Companions Foundation for Giftedness & Creativity (Mawhiba)	Saudi Arabia	Cooperator / Translator	Since January 2009

## 7. List of Publications

### (a) International Refereed Journals

Authors	Title of Article	Name of Journal	Publisher (Country)	Pages	Year
Saleh Al Arni, Mahmoud M Elwaheidi	Waste Tyre Recycling: Processes and Technologies	Chapter in book: Advanced Technologies for Solid, Liquid, and Gas Waste Treatment	CRC Press	57-72	2023
Chokri Jallouli, Ali K Abdelfattah, Mahmoud M El-Waheidi, Saleh Alqaysi, Saad Mogren, Hassan Alzahrani	Geophysical evidences on reactivation of NE faults in southern Arabian Shield and its tectonic implications	Journal of King Saud University-Science	Elsevier	<a href="https://doi.org/10.1016/j.jksus.2022.102445">https://doi.org/10.1016/j.jksus.2022.102445</a>	2023
Dr. Saleh Al Arni, Mahmoud Elwaheidi, Attilio Converti, Mhamed Benaissa, Alsamani A. M. Salih, Saad Ghareba, Nadir Abbas	Application of Date Palm Surface Fiber as an Efficient Biosorbent for Wastewater Treatment	ChemBioEng	Wiley	<a href="https://doi.org/10.1002/cben.202200008">https://doi.org/10.1002/cben.202200008</a>	2022
Salman S Alharbi, Saleh I Qaysi, Mahmoud M Elwaheidi	Hydrogeophysical characterization of the Southern Red Sea coastal aquifer, Saudi Arabia, using Time-Domain electromagnetic method	Human and Ecological Risk Assessment: An International Journal	Taylor & Francis	1-14 <a href="https://doi.org/10.1080/10807039.2022.2104693">https://doi.org/10.1080/10807039.2022.2104693</a>	2022
Mahmoud M Elwaheidi, Giorgio Russo, Habes Ghrefat, Omar Badhris	A novel method for the assessment of the variations in surface air temperature seasonality of southern Mediterranean region: climatological implications for the Italian	Arabian Journal of Geosciences	Springer	<a href="https://doi.org/10.1007/s12517-022-09949-9">https://doi.org/10.1007/s12517-022-09949-9</a>	2022
Ahmed Hakami, Habes Ghrefat, Mahmoud Elwaheidi, Mahmoud Galmed, Madyan Yahya Ali	Assessment of the corrosivity of the Southern Red Sea coastal sabkha soil: an integrated mineralogical,	Environmental Earth Sciences	Springer	<a href="https://doi.org/10.1007/s12665-022-10316-w">https://doi.org/10.1007/s12665-022-10316-w</a>	2022

	geochemical, and GIS approach				
Saleh Al Arni, Mahmoud Elwaheidi, Alsamani AM Salih, Djamel Ghernaout, Mohammed Matouq	Greywater reuse: an assessment of the Jordanian experience in rural communities	Water Science and Technology	IWA	<a href="https://doi.org/10.2166/wst.2022.080">https://doi.org/10.2166/wst.2022.080</a>	2022
Habes Ghrefat, Haider Zaman, Awni Batayneh, Mahmoud M El Waheidi, Saleh Qaysi, Ahmed Al-Taani, Chokri Jallouli, Omar Badhris	Assessment of Heavy Metal Contamination in the Soils of the Gulf of Aqaba (Northwestern Saudi Arabia): Integration of Geochemical, Remote Sensing, GIS, and Statistical Data	Journal of Coastal Research	Coastal Education and Research Foundation	864-872	2021
<b>Mahmoud M. Elwaheidi, et al.</b>	Hydrogeophysical Characterization of the Coastal Aquifer System in the Northeast Gulf of Aqaba (Saudi Arabia): An Investigation in the Context of Groundwater Resources Management	Journal of Coastal Research	Coastal Education and Research Foundation (CERF), (USA)	14	2021
<b>Mahmoud M. Elwaheidi</b>	Geophysical Imaging of a Buried Tertiary Valley Aquifer in an Arid Region Using Time Domain Electromagnetic Method	Journal of Geoscience and Environment Protection	Scientific Research (USA)	195-206	2020
<b>Mahmoud M. Elwaheidi</b>	Scientific Challenges for a Rigorous Interpretation of the Phenomenon of Global Warming: Review article	Journal of Geology and Geoscience	Sciaeon publishers(UK)	1-4	2020
<b>Mahmoud ELWAHEIDI, H. GHREFAT, Y. NAZZAL, A. BATAYNEH, T. ZUMLOT</b>	Integrated application of geoelectrical techniques for structural investigations: case study of Wadi Marsad Graben, Jordan	Arabian Journal of Geosciences	Springer (Germany)	9(6):1-17	2016

T. ZUMLOT, A. BATAYNEH, H. ZAMAN, H. GHREFAT, S. MOGREN, Y. NAZZAL, E. ELAWADI and <b>Mahmoud ELWAHEIDI</b>	Statistical Analysis of Different Chemical Elements in Groundwater of Northwestern Saudi Arabia.	Journal Geological Society of India	Springer (Germany)	87 (4): 469-475	2016
Habes Ghrefat, <b>Mahmoud El Waheidi</b> , A. Batayneh, Y. Nazzal, T. Zumlot, S. Mogren.	Pollution assessment of arsenic and other selected elements in the groundwater and soil of the Gulf of Aqaba, Saudi Arabia.	Environ Earth Sci.	Springer (Germany)	75:229	2016
Ibrahim M. Bahkaly, <b>Mahmoud M. ELWAHEIDI</b> , Chokri Jallouli, Awni Batayneh.	Assessment of Shallow Aquifer Salinity in the Aqaba Coastal Plain Using ERT Method: Case study of Maqna Region, Northwestern Saudi Arabia.	Environ Earth Sci.	Springer (Germany)	74:2105–2114.	2015
Yousef Nazzal, Nassir Al-Arifi, Muhammad Kamran Jafri, Hossam Kishawy, Habes Ghrefat, <b>Mahmoud M El-Waheidi</b> , Awni T Batayneh, Taisser A Zumlot.	Study the urban soils contamination by heavy metals for selected industrial locations in the Greater Toronto area, Canada, using multivariate statistical analysis.	Geologia Croatica	Croatian Geological Survey	147-159.	2015
Awni T. Batayneh, Taisser Zumlot, Habes Ghrefat, <b>Mahmud M. El-Waheidi</b> , Yousef Nazzal	The use of ground penetrating radar for mapping rock stratigraphy and tectonics: Implications for geotechnical engineering.	Journal of Earth Science	Springer (Germany)	895-900	2014
Yousef Nazzal, Izrar Ahmed, Nassir S. N. Al-Arifi, Mahmud <b>M. El-Waheidi</b> .	A pragmatic approach to study the groundwater quality suitability for domestic and agricultural usage, Saq aquifer, northwest of Saudi Arabia.	Environmental Monitoring and Assessment	Springer (Germany)	DOI: 10.1007/s10661-014-3728-3.	2014

Awni T. Batayneh, Habes Ghrefat Taisir Zumlot Eslam Elawadi Saad Mogren Haider Zaman Ahmed A. Al-Taani Yousef Nazzal and <b>Mahmoud Elwahaidi,</b>	Assessing of Metals and Metalloids in Surface Sediments along the Gulf of Aqaba Coast, Northwestern Saudi Arabia.	Journal of Coastal Research	Coastal Education & Research Foundation (USA)	DOI: 10.2112/JCOAST RES-D-13-00143.1.	2014
Al-Tarazi, E, Rajab JA, Al-Naqa A, <b>Mahmoud El-Waheidi</b>	Detecting leachate plumes and groundwater pollution at Ruseifa municipal landfill utilizing VLF-EM method.	Journal of Applied Geophysics	Elsevier (Netherlands)	65 (3), 121 – 131.	2008
Al-Tarazi E, El-Naqa A, <b>Mahmoud El-Waheidi</b> , Abu Rajab J	Electrical geophysical and hydrogeological investigations of groundwater aquifers in Ruseifa municipal landfill, Jordan.	Journal of Environmental geology	Springer (Germany)	50 (7), 1095 – 1103.	2006
<b>Mahmoud M. El-Waheidi</b> , Merlanti F, Pavan M,	Geoelectrical resistivity survey of the central part of Azraq basin (Jordan) for identifying saltwater/freshwater interface.	Journal of Applied geophysics	Elsevier (Netherlands)	29 (2), 125 – 133.	1992

## (b) Conference Papers

Authors	Title of Article	Name of Conference	Location	Dates
Yousef Habous Nazzal, Izrar Ahmed, Nassir S. N. Al-Arifi, <b>Mahmoud Elwaheidi</b>	HYDROCHEMICAL CHARACTERIZATION OF SAQ AQUIFER COUPLED WITH STATISTICAL ANALYSES, STUDY ON THE NORTHWESTERN PART OF THE KINGDOM OF SAUDI ARABIA	The 2nd Abu Dhabi University Annual International Conference: Mathematical Science and Its Applications	Abu Dhabi, United Arab Emirates	November 2013

## (c) Books/Book Chapters

Authors	Title of Book/Chapter	Publisher (Country)	Pages	Year
Saleh Al Arni and Mahmoud M. ELWAHEIDI	Concise Handbook of Waste Treatment Technologies (Book in English)	ISBN: 9780367631307 <a href="https://doi.org/10.1201/9781003112266">https://doi.org/10.1201/9781003112266</a> Tylor and Francis CRC Group (USA)	158	2020

GHREFAT Habes, Nazzal Y, Elwaheidi Mahmoud, Al-Arifi Nasser, Zaid Faisal, Ahmed Azar	Mapping Land Cover Patterns at the Ghuwaymid Sabkha, Saudi Arabia, Using Aster Reflectance Data	Nova Science publisher (USA)	23 - 39	2017
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#### (d) Other Publications

##### Translated books:

Authors	Original Title of Book	Title in Arabic	Publisher (Country)	Pages	Year
B. MacFarlane	STEM Education for High-Ability Learners: Designing and IMPLEMENTING Programming	تصميم مناهج ستيم للطلبة الموهوبين: تصميم برمجة ستيم وتنفيذها	Prufrock Press Inc	350	2015
J. Tarbuck, F. K. Lutgens	EARTH: An Introduction to Physical Geology. Tenth edition	الأرض: مقدمة في الجيولوجيا الفيزيائية	Pearson Publishers (USA)	895	2014

## 8. My Teaching Strategy

My teaching strategy is based on my strong belief that the teacher must play the role of a real educator who is always close to the needs of his students. I usually work hard to facilitate the perception of knowledge by encouraging students to ask questions and seek answers. I do my best to encourage thinking in rational and critical ways. I particularly emphasize learning by thinking about directions and trends rather than memorization. When discussing questions, mistakes are treated as opportunities to find out misconceptions, not as a reflection of a student's abilities.

I also consider students' feedback a vital issue in the whole process of teaching; it highly contributes into finding the most effective ways to help students and overcoming problems. Furthermore, personal contact with students is essential in my approach. I emphasize my availability for informal discussions and my willingness to help students overcome problems.