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Radwan J. El-Kelani

An-Najah National University, Nablus,

P.O. Box 7, Palestine

Mobile: 970569840535

E-mail: radwan@najah.edu

radwan.kelani@gmail.com

Experience

2021- present

Full Professor

Civil and Architectural Engineering

Faculty of Engineering and Information Technology,

An-Najah National University, Nablus, Palestine

2018-2020

Associate Professor

Faculty of Engineering and Information Technology,

An-Najah National University, Nablus, Palestine

2018-2019

Researcher

Department of Geology, Utah State University, USA.

2010-2017

Associate Professor

Faculty of Science,

An-Najah National University, Nablus, Palestine

2003-2004

Guest Professor

Department of Geophysics, Free University of Berlin, Germany

2000-2008

Assistant Professor

Faculty of Engineering and Information Technology,

An-Najah National University, Nablus, Palestine

1998-Present

Researcher and Principal Investigator

Urban Planning and Disaster Risk Reduction Centre; former "Earth Sciences and Seismic Engineering Centre (ESSEC), An-Najah National University, Nablus, West Bank, Palestine:

- Geophysical and geological investigations for locations of proposed dams, landfills, highways, land sliding, cavities, and crushers.
- Integrated Geophysical Study of the Dead Sea Rift Valley for Hazard Assessment and Mineral Resources.
- Earthquake Hazard Assessments for Building

	<p>Codes.</p> <ul style="list-style-type: none"> • Dead Sea Research Project: Crustal Structure and Evolution (DESERT 2000). • GEO-scientific Dead Sea Integrated Research Project (GEO-DESIRE), a multinational and interdisciplinary study. • Cross-border earthquake hazard and risk assessment in the Dead Sea Fault Region.
	<p>Researcher and Teaching Assistant</p>
1989-1992	Department of Geology and Mineralogy, Jordan University, Jordan.
Education	
	<p>Ph.D., Applied Geophysics</p> <p>Thesis: "Integrated 3-dimensional geophysical investigations of the Westerwald Volcanics, Germany", Clausthal Technical University (TUC), Germany.</p>
1994- 1997	
	<p>M.Sc., Geology and Mineralogy</p> <p>Thesis: "Geophysical studies of Zarqa Ma'in area as a potential renewable source of geothermal energy", Jordan University, Jordan.</p>
1989- 1991	
	<p>B.Sc., Earth Sciences and Environment</p>
1985- 1989	Yarmouk University, Jordan.
Awards	
June 2018- July-2019	Sabbatical leave, Department of Geology, Utah State University, USA.
June-July 2010	Research grant, Department of Geophysics, Geosciences Institute, Johann Wolfgang Goethe Frankfurt University, Germany. German Academic Exchange Service (DAAD), Germany.
2004	Grant of Islamic Development Bank in Technology and Science to a researcher team from An-Najah National University, Nablus, Palestine.
June 2003-May, 2004	Guest Professor grant, Deutsche Forschungsgemeinschaft (DFG), Department of Geophysics at the Free University Berlin, Germany

2000	Equipment grant, Federal Ministry for Economic Co-operation and Development, Germany (through the DAAD), Germany.
1993- 1998	Ph.D scholarship from the DAAD, Germany.
1989-1992	M.Sc scholarship for outstanding achievement, Jordan University, Amman, Jordan.
1987-1989	B.Sc scholarship for outstanding achievement, Yarmouk University, Irbid, Jordan.

Teaching

2003-Present

Bachelor courses:

- Engineering geology
- Geology and Earth sciences
- Principles of geology
- Principles of petrology
- Applied geophysics
- Principles of geomorphology
- Geomorphological studies
- Astronomy
- Geophysics
- Geomorphology

Master level courses:

- Exploration geophysics
- Scientific research
- Earth sciences and natural disasters
- Techniques of applied geographic data collection

Publications

2023

El-Kelani, R., and Atatri, A. (2024). Preliminary analysis of the aftershock sequence of the February 6, 2023, Turkey earthquake. *An-Najah University Journal for Research - A (Natural Sciences)*, 38(1). <https://doi.org/10.35552/nujr.a.38.1.2148>

2021

El-Kelani, R and Burqan, M. (2021): Water harvesting and mitigation of flood in the wadi Massin basin by dams: selection of suitable sites using remote sensing and geographical information Ssystem, north West Bank, Palestine, *Journal of Social Sciences*, Academic Publication Council, Kuwait University, in press.

- 2020 El-Kelani, R and Arraf, Sh. (2021). The historical earthquakes in the Dead Sea rift region, *Journal of Geographical Researches*, 33, 119-174. DOI.10.36328/0833-000-033-006
- El-Kelani, R and Burqan, M. (2020). Preliminary site selection of dams using GIS and remote sensing: A case study- harvesting of Daraja watershed, south West Bank, Palestine, *Journal of Geographical Researches*, 32:219-248.
- 2019 El-Kelani, R. (2020). A review of gravity and magnetic studies in the Jordan Dead Sea Transform zone, *Jordan Journal of Earth and Environmental Sciences*, 11 (1): 49-61.
- El-Kelani, R. and Khader, A. (2019). Refraction seismic study over a proposed landfill site in south West Bank, Palestine, *Springer Nature Switzerland AG 2019 N. Sundararajan et al. (eds.), On Significant Applications of Geophysical Methods, Advances in Science, Technology & Innovation*, https://doi.org/10.1007/978-3-030-01656-2_22.
- 2018 El-Kelani, R and Khader, A. (2019). Assessment and mapping of proposed dam sites in north West Bank, Palestine Using GIS, *Springer Nature Switzerland AG 2019 H. I. Chaminé et al. (eds.), Advances in Sustainable and Environmental Hydrology, Hydrogeology, Hydrochemistry and Water Resources, Advances in Science, Technology & Innovation*, https://doi.org/10.1007/978-3-030-01572-5_100.
- Khader, A., El-Kelani, R., Shadeed, S. (2018). Groundwater artificial recharge to a semi-arid basin: Case study in a shallow aquifer, south of West Bank, Palestine, *Jordan Journal of Earth and Environmental Sciences*, 10 (4): 187-193.
- 2017 El-Kelani, R., Shadeed S., Hasan, A., Ghodieh, A., Burqan, M. (2017). Geospatial Implications Assessment of Zahrat Al Finjan Solid Waste Landfill, North of West Bank, Palestine, *IUG Journal of Natural Studies* Vol. 25, No 2, 1-9.
- 2016 El-Kelani, R. (2016). Geophysical investigation for the locations of proposed dams in Jenin district, north of the West Bank, Palestine, *10th edition of the international congress Geotunis*, 30-26 April.
- 2015 El-Kelani, R. and Zeid, A. (2015). The Geothermal energy in Palestine practical applications, *IEEE 978-1-4673-6813-1/15*.
- Zeid, A. and El-Kelani, R. (2015). The status and prospectus of renewable energy in Palestine, *IEEE 978-1-4673-6813-1/15*.

- Zeid, A., El-Isa Z., El-Kelani, R. (2015). Utilization of geothermal energy in Jordan, *IEEE* 978-1-4673-6813-1/15.
- 2014 Braeuer B., Asch G., Hofstetter R., Haberland Ch., Jaser D., El-Kelan R., Weber M. (2014). Detailed seismicity analysis revealing the dynamics of the southern Dead Sea area, *Journal of Seismology* 18(4):731-748.
- 2013 Naser M. M. Meqbel, Oliver Ritter and DESIRE Group-(...El-Kelani, R...), (2013). A magnetotelluric transect across the Dead Sea Basin: electrical properties of geological and hydrological units of the upper crust. *Geophys. J. Int.* 193, 1415–1431
- 2012 Braeuer B., Asch G., Hofstetter R., Haberland Ch., Jaser D., El-Kelan R., Weber M. (2012). High-resolution local earthquake tomography of the southern Dead Sea area. *Geophys. J. Int.* 191, 881–897.
- Braeuer B., Asch G., Hofstetter R., Haberland Ch., Jaser D., El-Kelan R., Weber M. (2012). Microseismicity distribution in the southern Dead Sea basin and its implications on the structure of the basin, *Geophys. J. Int.*, 188: 873–878.
- Paschke M., Stiller M., T. Ryberg, Weber M., and DESIRE Group-(...El-Kelani, R...) (2012): The shallow P-velocity structure of the southern Dead Sea basin derived from near-vertical incidence reflection. *Geophys. J. Int.* 188, 524–534
- 2011 E-Kelani, R. and Jardaneh, I. (2011): Surface Soil Effects Study Using Microtremor Observations in Nablus City, Palestine. *The Islamic University Journal* (Natural Studies and Engineering) Vol. 19, No. 2, 99-112.
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- 2009 Mechie, J., Abu-Ayyash, K., Ben-Avraham, Z., El-Kelani, R., Qabbani, I., Weber, M. (2009). Crustal structure of the southern Dead Sea basin derived from project DESIRE wide-angle seismic data, *Geophys. J. Int.*, 178, 457-478.
- Weber et al., (...El-Kelani, R...), (2009). Anatomy of the Dead Sea Transform from Lithospheric to Microscopic Scale. *Reviews of Geophysics*, 47, RG2002 / 200/ 1-44 ,2008RG000264

- 2008 Al-Dabbeek, J. and El-Kelani, R. (2008). Rapid Assessment of Seismic Vulnerability in Palestinian Refugee Camps. *Journal of Applied Sciences*, 8 (8):1371-1382.
- Kesten, D., Weber, M., Haberland, Ch., Janssen, Ch., Agnon, A., Bartov, Y., Rabba, I. and the DESERT Group-(...El-Kelani, R.,...) (2008). Combining satellite and seismic images to analyse the shallow structure of the Dead Sea Transform near the DESERT transect, *Int J Earth Sci (Geol Rundsch)* 97:153–169.
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- 2007 El-Kelani, R. (2007). Interpretation of gravity data in the Jericho area, Dead Sea Transform. *The Islamic University Journal (Natural Studies and Engineering)* Vol. 15, No. 2, 21-39.
- Habib, I. and El-Kelani R. (2007). The Dead Sea Desiccation and the Proposed Canal (Red-Dead Sea), *The Islamic University Journal (Natural Studies and Engineering)* Vol. 15, No. 2, 283-317.
- Goetze, H.-J., El-Kelani, R., Schmidt, S., Rybakov, M., Hassouneh, M., Foerster, H.-J., Ebbing, J., (2007). Integrated 3-D density modeling and segmentation of the Dead sea Transform, *International Journal of Earth Sciences*, Vol 96, 2: 289–302.
- 2006 Tasarova, Z., Goetze, H.-J., El-Kelani, R., Ebbing, J., Hassoueh, and DESERT Group (2006). Small-scale gravity modeling of upper crustal structures in the Araba valley along the Dead Sea Transform, Geochemistry, Geophysics, Geosystem (G3) an *Electronic Journal of the Earth Sciences*, Vol. 7, Nr. 9, Q09012, doi: 10.1029/2005GC001229.
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- 2005 Mohsen, A., Hofstetter, A., Bock, G., Kind, R., Weber, M., Wylegalla, G., G. Rumpker, and DESERT Group-(El-Kelani, R) (2005). A receiver function study across the Dead Sea Transform, *Geophys. J. Int.*, 160, 948-960, doi: 10.1111/j.1365-246X.

El-Kelani, R. (2005). Crustal Structure of the Dead Sea Rift from Gravity Data: 3-dimensional modeling, the 1st International Conference of Science and Development (ICSD-1), 1-2 March, the Islamic University of Gaza, Gaza, Palestine.

El-Kelani, R. (2005). 3-dimensional gravity model of the southern Jordan Dead Sea Transform, *An-Najah University Journal for Research-A (Natural Sciences)*, Vol. 19, 185-208.

Al-Dabbeek, J. and El-Kelani, R. (2005). Dead Sea Earthquake of 11 February 2004, ML 5.2: post-earthquake damage assessment, the *International Earthquake Engineering Conference (TINEE)*, 21-24 November, Dead Sea, Jordan.

El-Kelani, R. and Al-Dabbeek, J. (2005). 3-dimensional mapping of landslide in Nablus City, Palestine: a preliminary risk assessment, *Conference of Urban Engineering*, 12-13 October, Lille, France.

Mechie, J., Abu-Ayyash, K., Ben-Avraham, Z., El-Kelani, R., Mohsen, A., Ruempker, G., Saul, J., Weber, M. (2005). Crustal shear velocity structure across the Dead Sea Transform from 2-D modelling of DESERT project explosion seismic data, *Geophys. J. Int.*, Vol. 160, 910-924, doi: 10.1111/j.1365-246X.

2004

Maercklin, N., Haberland, Ch., Ryberg, T., Weber, M., Bartov, V., and the DESSERT Group-(El-Kelani, R), (2004). Imaging the Dead Sea Transform with scattered seismic waves, *Geophys. J. Int.*, Vol. 158, 179-186.

2003

Haberland, Ch., Agnon, A., El-Kelani, R., Maercklin, N., Qabbani, I., Ruempker, G., Ryberg, T., Scherbaum, F., Weber, M. (2003). Modeling of seismic guided waves at the Dead Sea, *Journal of Geophysical Research*, Vol. 108, No. B7, 2342, doi: 10.10929/2002JB002309.

Ruempker, G., Ryberg, T., Guenter, B., Weber, M., Abu-Ayyash, K., Ben-Avraham, El-Kelani, R., Garfunkel, Z., Haberland, C., Hofstetter, A., Kind, R., Mechie, J., Mohsen, A., Qabbani, I., Wylegalla, K. (2003). Boundary-layer mantle flow under the Dead Sea transform fault inferred from seismic anisotropy, *Nature*, Vol. 425, 497-501.

Ritter O., Ryberg, T., Weckmann, U., Hoffmann-Rothe, A., Abueladas, A., Garfunkel, Z., and DESSERT Group-(...El-Kelani..., R) (2003). Geophysical images of the Dead Sea Transform in Jordan reveal an impermeable barrier for fluid flow, *Geophysical Research Letters*, Vol. 30, No. 14, 1741, doi: 10.1029/2003GL017541

- 2001 Mohsen, A., Bock, g., Abdel-Hafes, W., Hofsetter, R., El-Kelani, R., Ruempker, G., Wylegalla, K. and the DESSERT 2000 Team (2001). A passive seismic array across the Dead Sea Transform, San Francisco, USA, *AGU Fall Meeting*.
- 2000 Maercklin, N., El-Kelani, R., Haberland, Ch., Ryberg, T., Scherbaum, F., Weber, M. and the DESSERT 2000 Team: DESSERT 2000- CSA (2001). Seismic studies of the Araba Fault, Dead Sea Rift Transform, Jordan, San Francisco, USA, *AGU Fall Meeting*, 15.-20 December, 2000.
- 1998 El-Kelani, R., Jentzsch, G., Schreiber, U. (1998). Gravity anomalies and subsurface geology in the Westerwald volcanic area, Germany, *Geologische Rundschau, Springer, International Journal of Earth Sciences*, 87/3: 381-393.
- El-Kelani, R., Jahr, T., Jentzsch, G., Schreiber, U. (1998). Qualitative und quantitative Interpretationen der Westerwald Bouguer-Karte: Wellen- laengenfilterung und 3-dimensionale Modellierung des Schwere-feldes (abs.), 59 Conference of the German Geophysical Association (58 Jahrestagung der *Deutschen Geophysikalischen Gesellschaft DGG*), Germany, Goettingen, GG43: 81.
- El-Kelani, R., El-Isa, Z., Zaid, A. (1998). Interpretation of gravity data in Zarqa Ma'in, 58 Conference of the German Geophysical Association (59 Jahrestagung der *Deutschen Geophysikalischen Gesellschaft DGG*), Germany, Goettingen, GG43: 81.
- El-Kelani, R. (1998). 3-dimensionale gravimetrische Modellierung der tertiareren Vulkanite des Westerwaldes, TU Contact; *Zeitschrift (Journal) der Technischen Universitaet Clausthal*, Germany, V1: 59-61.
- 1997 El-Kelani, R. (1997). Integrated 3-dimensional geophysical investigations of the Westerwald Volcanics, Germany. Ph.D. Thesis, Clausthal Technical University, Calaustral, Germany.
- 1996 El-Kelani, R., Jahr T., Jentzsch G., Schreiber, U. (1996). 2-dimensionale gravimetrische Modellierung im westlichen Westerwald zur Ueber-prüfung geologischer Modellvorstellungen (abs.). 58 Conference of the GermanGeophysical Association (58 Jahrestagung der *Deutschen Geophysikalischen Gesellschaft, DGG*), Germany, Freiberg, PG11: 111.