

CURRICULUM VITAE

Dr. Hussain Jaber Ahmed Al-Faifi



CONTACT INFORMATION

Name: Husain Jaber Ali Alfaifi

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EDUCATION:

- ***Ph.D. in Hydrogeology***, Western Michigan University, USA, (**May, 2014**).
Dissertation title: *Comparing slug test methods for unconfined aquifers.*
- ***M.Sc. in Geology***, King Saud University, Riyadh, Saudi Arabia (2006).
Dissertation title: *Evaluation of Groundwater Resources in Wadi Addwasir Southern Saudi Arabia Using Computer Simulation.*
- ***B.Sc. in Engineering Geology***, King Abdul-Aziz University, Jeddah, KAS. 1997.

EMPLOYMENT HISTORY:

- *Head of Geology Department, 2015- 2019 College of Science, King Saud University, Riyadh, Saudi Arabia*
- April 2019 –Present: ***Associate Professor***, Geology & Geophysics Dept., college of Science, King Saud University.
- June 2015: ***Assistant Professor***, Geology & Geophysics Dept., college of Science, King Saud University.
- May 2019: ***Associate Professor***, Geology & Geophysics Dept., college of Science, King Saud University.
- 1997 – May 2015: ***Geologist***, Dept. of Geology, college of Science, King Saud University, Riyadh.
- General Secretary of Saudi Society of Geosciences since 2018
- Consultant in Ministry of Environment, Water & Agriculture 2018

TEACHING EXPERIENCE:

❖ Teaching undergraduate courses;

1. **Geo 101:** Physical Geology
2. **Geo 455:** Groundwater Geology
3. **Geo341:** Geophysical Well Logging
4. **Geo393:** Field geology
5. **Geo274:** Geological Reports
6. **Geo384:** Geological Survey
7. **Geo497:** Graduation Project 1 & 2
8. **Geo596:** Geology Proposal
9. **Gph 598:** Geophysics Proposal
10. **Gph 598:** Master Seminar
11. **Geo 599:** Special Topics
12. **Gph 555 :** Advanced Hydrogeology
13. **Hydg 511 :** Advanced Geology & Hydrogeology (Exc. Master)
14. **Hydg 513 :** Advanced Hydrochem & GW Pollution (Exc. Master)
15. Advisor of many Master student theses

RESEARCH SKILLS:

- Extensive knowledge of SPSSX statistical programs.
- Groundwater: Visual mudflow, GMS, Aquachem, Infinite Element, Durov plot.
- Geophysics: (Resistivity): ATO.
- Well Logging: RG, Video Logger and Camera.
- Maps: Surfer, Rock-Ware, Photoshop, GIS.

CONFERENCES:

- Attendance of the 3rd, 4th, 5th, 6th, 7th Meetings of Saudi Society of Geosciences, in different places.
- Three conferences of groundwater Conference of Science in King Saud University.
- 7th International Conference on water resources and arid environments, King Saud University, 4-6 December 2016, Riyadh, Saudi Arabia.

PUBLICATIONS:

a- Abstracts in conferences

1. **Hussain J. Alfaiji**, Ali Y Kahal, El- Khedr E. Ibrahim, Kamal Abdel Rahman and Saad M. Alhumidan (2016): Integrated geophysical investigation to assess seawater intrusion into the coastal aquifer in the southwest of Saudi Arabia. *AGU Fall Meeting, San Francisco*, 12-16 December.
2. **Hussain J Alfaiji**, Saad M Alhumidan, ElKhedr E Ibrahim and Kamal Abdel Rahman (2015): Hydrogeochemistry and Groundwater Quality Assessment along Wadi Al-Shwat, Khamis Mushiet District, Southwest Saudi Arabia. *AGU Fall Meeting, San Francisco*, 14-18 December.

b- Peer-reviewed papers

1. **Alfaiji, H.**, Albassam, A.; Kahal, A., Ibrahim, E., Kamal Abdel Rahman, Zaidi, F., Alhumidan, S., Alarifi, N. and Loni, O. (2016): Hydrochemistry and Groundwater Quality Assessment along Wadi Al-Showat, Khamis Mushayt District, South-west Saudi Arabia. *7 International*

2. **Alfaifi, H.**; Abdelfatah, M.; Kamal Abdelrahman; Zaidi, F.; Ibrahim, E. and Alarifi, N. (2016). "Groundwater Management scenarios for the Biyahd - Wasia Aquifer Systems in the eastern part of Riyadh region, Saudi Arabia". *Journal Geological Society of India*, Vol.89, June 2017, pp.669-674.
3. Almadani, S, Ibrahim, E., Kamal Abdelrahman, Zaidi, F., **Alfaifi, H.**, Fnais, M. (2016): A geoelectric resistivity exploration of a fractured granite aquifer in the Alwadeen area, Southwest Saudi Arabia. *Accepted in the Arabian Journal of Geosciences*.
4. Osama M. K. Kassem, Abdullah L.A. Almutairi, Abdel Aziz M. Al Bassam, **Hussain J. Al Faifi** (2016): Relationship between finite strain and tectonic setting in the Ar-Ruwaydah area, eastern Arabian Shield, Saudi Arabia, *Arab J. Geosci* (2016) 9:728. DOI: 10.1007/s12517-016-2760-8.
5. **Alfaifi, H.**, Kahal, A., Albassam, A., Ibrahim, E., Abdelrahman, K., Zaidi, F., Alhumaidan, S. (2016): Integrated geophysical investigation to assess seawater intrusion into the coastal aquifer in the southwest of Saudi Arabia. *Accepted in the Arabian Journal of Geosciences*.
6. S Almadani, **H Alfaifi**, A Al-Amri, M Fnais, E Ibrahim, K Abdelrahman, M Shehata, F Zaidi (2017): Hydrochemical characteristics and evaluation of the granite aquifer in the Alwadeen area, southwest Saudi Arabia. *Arabian Journal of Geosciences* 10 (6), 1-11
7. S AlHumidan, O Kassem, M Almutairi, H Al-Faifi, A Kahal (2017): Tectonic Evolution of Jabal Tays Ophiolite Complex, Eastern Arabian Shield, Saudi Arabia. *EGU General Assembly Conference Abstracts*, 1867
8. **HJ Alfaifi**, MS Abdelfatah, K Abdelrahman, FK Zaidi, E Ibrahim, NS Alarifi (2017): Groundwater management scenarios for the Biyahd-Wasia aquifer systems in the eastern part of Riyadh region, Saudi Arabia. *Journal of The Geological Society of India* 89 (6), 669-674
9. Talal Alharbi, **Hussain Alfaifi**, Abdelbaset El-Sorogy (2017): Metal pollution in Al-Khobar seawater, Arabian Gulf, Saudi Arabia. *Marine Pollution Bulletin* 119 (2017) 407–415
10. Faisal K. Zaidi, Abdulaziz M. Al-Bassam, Osama M. K. Kassem, **Hussain J. Alfaifi** and Saad M. Alhumidan (2017): Factors influencing the major ion chemistry in the Tihama coastal plain of southern Saudi Arabia: evidences from hydrochemical facies analyses and ionic relationships. *Environ Earth Sci* (2017) 76:472 DOI 10.1007/s12665-017-6817-0
11. K Abdelrahman, **H Alfaifi**, E Ibrahim, B Al-Qadasi, S Alhumidan (2017): Detection of a shallow groundwater aquifer using seismic refraction tomography: A case study of Wadi Showat, Abha District, southern Saudi Arabia. 2017 *SEG International Exposition and Annual Meeting*.
12. Talal Alharbi & **Hussain Alfaifi** & Sattam A. Almadani & Abdelbaset El-Sorogy (2017): Spatial distribution and metal contamination in the coastal sediments of Al-Khafji area, Arabian Gulf, Saudi Arabia. *Environ Monit. Assess.* 189:634. <https://doi.org/10.1007/s10661-017-6352-1>

13. **HJ Alfaiifi**, SM Alhumidan, AY Kahal, K Abdel Rahman, B Al-Qadasi (2017): Environmental Impact Assessment of Dumpsite: Case Study from southwestern Saudi Arabia. *AGU Fall Meeting Abstracts 2017*, NS23A-0010
14. Sattam Almadani & Elkhedr Ibrahim & Mahfooz Hafez & **Hussain Alfaiifi** & Talal Alharbi & Kamal Abdelrahman & Essam Abdel-Motaal (2018): Geotechnical investigation of the El-Elb dam site, northwest Riyadh, Saudi Arabia, using 2D resistivity and ground-penetrating radar techniques. *Arabian Journal of Geosciences* (2018) 11:33 <https://doi.org/10.1007/s12517-017-3353-x>
15. O Kassem, A AlMutairi, S AlHumidan, **H AlFaiifi** (2018): Deformation History in the Ar-Ruwaydah Area, Eastern Arabian Shield, Saudi Arabia. *EGU General Assembly Conference Abstracts*, 2167
16. Mokhles K. Azera, Hisham A. Gahlanb, Paul D. Asimow, **Hussain J. Alfaiifi** (2018): Prehnite as an indicator mineral in the Wadi Nasb uralitized gabbro, South Sinai, Egypt. *Journal of Asian Earth Sciences* 160 (2018) 107–117
17. HE Nour, AS El-Sorogy, M Abdel-Wahab, S Almadani, **H Alfaiifi**, M Youssef (2018): Assessment of sediment quality using different pollution indicators and statistical analyses, Hurghada area, Red Sea coast, Egypt. *Marine Pollution Bulletin* 133 (2018) 808–813
18. Ali Y. Kahala, Abdelbaset S. El-Sorogya,b,*, **Hussain J. Alfaiifi**, Sattam Almadania, Habes A. Ghrefat (2018): Spatial distribution and ecological risk assessment of the coastal surface sediments from the Red Sea, northwest Saudi Arabia. *Marine Pollution Bulletin* 137 (2018) 198–208
19. **HJ Alfaiifi**, K Abdel Rahman, EKE Ibrahim, AY Kahal, F Zaidi, SM Alhumidan, NM Alotibi (2018): Groundwater Quality Assessment in Southern Saudi Arabia Using Physico-Chemical Water Analysis. *AGU Fall Meeting Abstracts 2018*, H23I-2003
20. **Hussain J. Alfaiifi** (2019): Combined graphical and geostatistical technique to determine the hydrochemical processes affecting groundwater chemistry in coastal areas, Western Saudi Arabia. *Accepted in Arabian Journal of Geosciences*.
21. Ali K. Abdelfattaha,*, Sattam Almadania, Mohamad Fnaisa, **Hussain J. Alfaiifi**, Nassir Al-Arifia, Abdullah Al-amria, Basem Al-Qadasia, Salvatore de Lorenzo (2018): Rupture characteristics of a small-sized earthquake (MW 4.2), onshore the south Red Sea, Saudi Arabia. *Journal of African Earth Sciences* 151 (2019) 315–323
22. Mohammed Hail Hakimi, Abdulwahab S Alaug, **Hussain J Al Faiifi**, Gamal A Alramisy, Aref A Lashin (2019). Late Jurassic Safer Salt Member in the Al-Jawf sub-basin of NW Sabatayn Basin, Yemen: geochemical evaluation of organic-rich oil-source rock potential. *PETROLEUM SCIENCE AND TECHNOLOGY* 2019, VOL. 37, NO. 6, 645–654.
23. Adel Al-Johi, Elkhedr Ibrahim, **Hussain J Al Faiifi**, Mostafa M Kinawy, Nassir S Al Arifi, (2019): Investigating deep geological reservoirs using seismic reflection and well logs, Tawila oil field, Yemen: Implications for structural setting and reservoir properties. *Journal of Petroleum Science and Engineering*, Volume 176, May 2019, Pages 1018-1040.

24. E Ibrahim, H Ghazala, E Elawadi, H Alfaifi, K Abdelrahman (2019): Structural depocenters control the Nubian sandstone aquifer, Southwestern Desert, Egypt: inferences from aeromagnetic data. *Arabian Journal of Geosciences*. (2019) 12 (11), 1-10
25. H Alfaifi, A Kahal, A Albassam, E Ibrahim, K Abdelrahman, F Zaidi, S Alhumidan (2019): Integrated geophysical and hydrochemical investigations for seawater intrusion: a case study in southwestern Saudi Arabia. *Arabian Journal of Geosciences* 12 (12), 1-14
26. AK Abdelfattah, S de Lorenzo, S Almadani, M Fnais, H Alfaifi, N Al-Arifi (2019): Another look at the 2009 seismic activity, Harrat Lunayyir, Saudi Arabia. *Journal of Seismology* 23 (4), 801-818
27. FK Zaidi, A Salman, S Hag-Elsafi, HJ Alfaifi (2019): Assessment of hydrological processes operating in a multi-layered sedimentary aquifer system in Saudi Arabia using integrated chemical and statistical approach. *Environmental monitoring and assessment* 191 (7), 1-18
28. HJ Alfaifi, SM Alhumidan, K Abdel Rahman (2019): Quality assessment of groundwater in Hail region, northwestern Saudi Arabia using physicochemical water analysis. *AGU Fall Meeting Abstracts* 2019, H23L-2064
29. AJ Al-Khafaji, MH Hakimi, EK Ibrahim, AA Najaf, H Al Faifi, A Lashin (2020): Organic geochemistry of oil seeps from the Abu-Jir Fault Zone in the Al-Anbar Governorate, western Iraq: Implications for early-mature sulfur-rich source rock. *Geological Journal* 55 (2), 1380-1390
30. AY Kahal, AS El-Sorogy, HJ Alfaifi, S Almadani, OM Kassem (2020): Biofacies and diagenetic alterations of the Pleistocene coral reefs, northwest Red Sea coast, Saudi Arabia. *Geological Journal* 55 (2), 1380-1390
31. MH Hakimi, WH Abdullah, HJ Al Faifi, KA Mustapha, AY Kahal, AA Lashin (2020): Source rock evaluation and hydrocarbon generation potential of Mid-Late Cretaceous sediments from Mintaq-01 well in the Wadi Hajar of Southern Sabatayn Basin, Yemen. *Petroleum Science and Technology* 38 (3), 216-224
32. HJ Alfaifi, AY Kahal, K Abdelrahman, FK Zaidi, A Albassam, A Lashin (2020): Assessment of groundwater quality in Southern Saudi Arabia: case study of Najran area. *Arabian journal of geosciences* 13 (3), 1-15
33. HAH Musaed, AM Al-Bassam, FK Zaidi, HJ Alfaifi, E Ibrahim (2020): Hydrochemical assessment of groundwater in mesozoic sedimentary aquifers in an arid region: a case study from Wadi Nisah in Central Saudi Arabia. *Environmental Earth Sciences* 79 (6), 1-12
34. AK Adegoke, MH Hakimi, WH Abdullah, EK Ibrahim, BMS Yandoka, H Al Faifi, A Lashin (2020): Geochemistry and oil-gas generation modeling of the Late Cretaceous shales from the Chad (Bornu) Basin, Northeast Nigeria. *Journal of Natural Gas Science and Engineering* 79, 103341
35. MH Hakimi, AY Kahal, A Ahmed, HJ Al Faifi (2020): Organic geochemistry of Late Cretaceous Mukalla shales from the Mukalla-Sayhut Basin, Southern Yemen—terrestrial organic matter inputs and gas-resource potential. *Arabian Journal of Geosciences* 13 (19), 1-17

36. BS Nabawy, E Ibrahim, A Kahal, **HJ Alfaiifi**, AA Lashin (2020): Impact of authigenic iron oxides, clay content and grain size on the aquifer quality properties of the Cambrian-Ordovician Wajid Sandstone, southwest Saudi Arabia. *Journal of African Earth Sciences* 172, 104000
37. MH Hakimi, A Ahmed, AY Kahal, OS Hersi, **HJ Al Faiifi**, S Qaysi (2020): Organic geochemistry and basin modeling of Late Cretaceous Harshiyat Formation in the onshore and offshore basins in Yemen: Implications for effective source rock potential and hydrocarbon generation. *Marine and Petroleum Geology* 122, 104701
38. E Ibrahim, E Abd El-Motaal, A Lashin, **H Alfaiifi**, S Qaysi, A Kahal (2021): Faulting intersections and magma-feeding zones in Tihamat-asir, Southeast red sea rift: Aeromagnetic and structural perspective. *Journal of African Earth Sciences* 173, 104044
39. A Olaniyan, AFA Bakar, I Yusoff, A Abd Ghani, S Qaysi, A Kahal, **H Alfaiifi**, H Alzahrani (2021): Physical, geochemical, and clay mineralogical properties of unstable soil slopes in the Cameron Highlands. *Open Geosciences* 13 (1), 880-894
40. **H Alfaiifi**, AS El-Sorogy, S Qaysi, A Kahal, S Almadani, F Alshehri, FK Zaidi (2021): Evaluation of heavy metal contamination and groundwater quality along the Red Sea coast, southern Saudi Arabia. *Marine Pollution Bulletin* 163, 111975
41. AY Kahal, K Abdelrahman, **HJ Alfaiifi**, MMA Yahya (2021): Landslide hazard assessment of the Neom promising city, northwestern Saudi Arabia: An integrated approach. *Journal of King Saud University-Science* 33 (2), 101279
42. AY Kahal, **HJ Alfaiifi**, K Abdelrahman, FK Zaidi (2021): Physio-chemical properties of groundwater and their environmental hazardous impact: Case study of Southwestern Saudi Arabia. *Journal of King Saud University-Science* 33 (2), 101292
43. MH Hakimi, AN Abas, YT Hadad, **HJ Al Faiifi**, M Kinawy, A Lashin (2021): Bulk pyrolysis and biomarker fingerprints of Late Cretaceous Galhak Shale Formation in the northern Melut Basin, Sudan: implications on lacustrine oil-source rock. *Arabian Journal of Geosciences* 14 (6), 1-17
44. F Alshehri, S Almadani, AS El-Sorogy, E Alwaqdani, **HJ Alfaiifi**, T Alharbi (2021): Influence of seawater intrusion and heavy metals contamination on groundwater quality, Red Sea coast, Saudi Arabia. *Marine Pollution Bulletin* 165, 112094
45. H Ghrefat, AY Kahal, K Abdelrahman, **HJ Alfaiifi**, S Qaysi (2021): Utilization of multispectral landsat-8 remote sensing data for lithological mapping of southwestern Saudi Arabia. *Journal of King Saud University-Science* 33 (4), 101414
46. OMK Kassem, **HJ Al Faiifi**, HA Gahlan, AAM Al Bassam, BA Zoheir, FK Zaidi (2021): Evolution of the Al Amar-Idsas suture, eastern Arabian Shield: a strain analysis perspective. *Arabian Journal of Geosciences* 14 (13), 1-17
47. E Ibrahim, M Arfaoui, S Mogren, S Qaysi, A Lashin, **H Alfaiifi** (2021): Disposition of magmatic eruptions and fault distribution in northwestern Saudi Arabia using pseudo-depth slice magnetic anomaly. *Journal of Geophysics and Engineering* 18 (4), 463-481
48. AY Kahal, K Abdelrahman, **HJ Alfaiifi**, S Qaysi, AN Aldossari (2021): Geophysical assessment of open dumpsite nearby Khamis Mushait industrial zone, Southwestern Saudi Arabia. *Journal of King Saud University-Science* 33 (6), 101518

49. MH Hakimi, NSZ Abidin, A Kahal, A Ahmed, ***H Al Faifi***, S Qaysi (2021): Source rock characteristics of organic-rich shales in the Late Jurassic Lam Member and their contribution to oil and gas generation potentials in Al-Jawf exploration region, NW Yemen. *Arabian Journal of Geosciences* 14 (23), 1-19
50. BA Zoheir, HA Gahlan, ***HJ Al Faifi***, O Kassem, AAM Al Bassam, FK Zaidi (2022): Field and remote sensing studies of the eastern Arabian Shield: implications for base and precious metals prospectively of the Ar Rayn terrane. *Arabian Journal of Geosciences* 15 (6), 1-21
51. ***HJ Al Faifi***, L Mohammed, AAM Al Bassam, OMK Kassem (2022): Petrology and kinematic vorticity constraints of the Al Amar region, Northern Ar-Rayn terrane, Eastern Arabian shield, Saudi Arabia. *Journal of King Saud University-Science* 34 (3), 101836
52. MH Hakimi, MA Varfolomeev, AY Kahal, AF Gharib, F Alshehri, A Rahim, ***HJ Al Faifi***, AA Al-Muntaser, S Qaysi, K Abdelmohsen (2022): Conventional and unconventional petroleum potentials of the Late Jurassic Madbi organic-rich shales from the Sunah oilfield in the Say'un–Masilah Basin, Eastern Yemen. *Journal of Asian Earth Sciences* 231, 105221
53. RA Alyousef, ***HJ Alfaifi***, FK Zaidi, M Al-Hashim (2022): Geostatistical and pollution index-based approach for assessing heavy metal pollution in the Cambro-Ordovician Saq Aquifer in Central Saudi Arabia. *Environmental Earth Sciences* 81 (14), 1-16
54. ***Alfaifi, H. J.***, Ekwok, S. E., Ulem, C. A., Eldosouky, A. M., Qaysi, S., András, P., & Akpan, A. E. (2023). Exploratory assessment of geothermal resources in some parts of the Middle Benue Trough of Nigeria using airborne potential field data. *Journal of King Saud University-Science*, 35(2), 102521.

SCIENTIFIC MEMBERSHIP:

- General Secretary of Saudi Society of Geosciences (SSG), King Saud University, Riyadh, KSA
- American Geophysical Union (AGU), USA

ACHIEVED PROJECTS:

- **Numerical Modeling of Saq aquifer in Bukairiyah region of Qassim, City, Ministry of Environment, Water and Agriculture**
- **Geophysical study of Al-Lith dam in Makkah area, City, Ministry of Environment, Water and Agriculture**

- **Evaluation of ore deposits in the Al-Amar Region, Eastern Arabian Shield, Saudi Arabia: Implication of Structural and Remote sensing Techniques, National Saudi plan for science and innovation**
- **Updating the Geological Map of Riyadh City, Royal commission for Riyadh city**
- **Updating the Hydrogeological Map of Riyadh City, Royal commission for Riyadh city**
- **UNDERACHIEVMENT PROJECTS:**
- **Study of surface and subsurface water resources in Buraidah City, Ministry of Environment, Water and Agriculture**

Dr. Hussain J. Al-Faifi

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