



Professor Elkhedr Hassan Ibrahim – CV

- Ph.D. Geophysics, 1993, Joint supervision between the University of Plymouth, UK and Mansoura University, Egypt according to the Egyptian Joint Supervision Scientific System. Major advisor: Professor D. H. Tarling; Department of Geological Sciences, University of Plymouth, UK.
- M.Sc. Geophysics, 1988, Geology Department, Mansoura University, Egypt. Major advisor: Professor Mahmoud M. ElGamili, Department of Geology, Faculty of Science, Mansoura University, Egypt
- B.Sc. Geophysics, 1984, Dept. of Geology, Faculty of Science, Mansoura University, Egypt, Grade: Very good with honorable degree", Rank: first in the class.

Scientific Activities

- Editor of the Journal of Geoscience & Arab Development (1994 – 1998).
- Supervisor of the GIS and Remote Sensing Lab., Department of Geology, Mansoura University 2002 - 2008
- Coordinator of the 1st Training course on "GIS & Environmental applications" that held in the Department of Geology, Mansoura University in collaboration with Quality Standards for Information Technology and ESRI, 23-25 October 2003.
- Member of the organizing committee of the "3rd International Workshop on Seismic risk in North Africa" that held in the Department of Geology, Mansoura University in collaboration with North African Seismological Group (NASG) and the International Center of Theoretical Physics, Italy (ICTP), 20-22 May, 2003.
- Member and Head of magnetism subgroup in the IASPEI/IAGA Project entitled: Detailed study on the active tectonics of Afro-Arabian Rift Region using paleomagnetic and potential data and its incorporation with seismic activity".

Academic Appointments

- **October 2008 – Now:** Professor of Applied Geophysics, Department of Geology & Geophysics, King Saud University, Riyadh, KSA
- **April 2004 – Sept. 2008:** Professor of Geophysics, Department of Geology, Mansoura Univ., Egypt
- **June 1999 to April 2004:** Associate professor of Geophysics, Department of Geology, Mansoura Univ., Egypt.
- **Dec. 1993 to June 1999:** Lecturer of Geophysics, Department of Geology, Fac. of Science, Mansoura Univ., Egypt.

- **1989-1993:** Research associate, Department of Geological Sciences, University of Plymouth, UK.
- **1988-1990:** Assistant lecturer, Department of Geology, Fac. of Science, Mansoura University, Egypt.
- **19984-1988:** Demonstrator, Department of Geology, Faculty of Science, Mansoura University, Egypt.

Professional Experience

- Geophysical Field trips covering different terranes in Egypt, Portugal, England and Saudi Arabia.
- Interpretation of various sets of magnetic and gravity data.
- Geophysical data acquisition, processing and interpretation.
- Mineral exploration using geophysical methods.

Research Projects

- Co-PI of the research project entitled: **"New approach for identification of potential groundwater zones on the southern Red Sea coast, Saudi Arabia using integrated techniques"** Project number WAT922-02. Funded by NPST.
- Co-PI of the research project entitled: **" Quasi Geoid of Saudi Arabia: Gravity data and GPS leveling"** Project number SPA873-02-09, Funded by NPST.
- Co-PI of the research project entitled: **Monitoring of the Al-Ays volcanic activity using microseismicity, TDEM, 4D-microgravity and InSAR Techniques for eruption risk mitigation** " NPST project for two years.
- Senior Researcher in the research project entitled: **Exploration of Groundwater Potentialities of The Sinkholes In Rufa Graben, Ar-Riyadh Area, Using Geophysical Techniques"** 2 years Project Funded by NPST.
- **Shallow geophysical studies in Tell El Farain, Nile Delta, Egypt.** In collaboration with the Geology department, Faculty of Science, Mansoura University, Mansoura University, Egypt and Department of Geology, Phillips University, Marburg, Germany, 1988 -1990.
- **Investigative palaeomagnetic studies of rocks in Southern Portugal.** In collaboration with the Department of Geological Sciences, University of Plymouth, UK and Instituto Superior Technico, 1906 Lisbon, Portugal. 1992 - 1993.
- **International Geological Correlation Program (IGCP):** Geoenvironmental evaluation of coastal belts in the Arab Countries 1997- 2000.
- **IASPEI/IAGA Project entitled:** Detailed study on the active tectonics of Afro-Arabian Rift Region using paleomagnetic and potential data and its incorporation with seismic activity" 2000 - 2004.

Visited Countries

- United Kingdom, Plymouth 1989-1993, Ph.D. postgraduate student in the Department of Geological Sciences, University of Plymouth, Plymouth, UK.
- Portugal, 1992 (45 days), Research visit to collect palaeomagnetic samples from southern Portugal as part of a research project between the Department of Geological Sciences, University of Plymouth, UK and Instituto Superior Technico, 1906 Lisbon, Portugal.
- USA, Houston, Texas, Oct. 1995 – February 1996, a research visit to the Society of Exploration Geophysicists (SEG), and Honesty Environmental Services Co. (HES).
- Italy, Trieste, 28 Sept. - 09 Oct. 1998, attending the 4th Workshop on 3D Modeling of Seismic Waves Generation, Propagation and their Inversion: Organized by the ICTP.
- Sweden, Lund 1 – 13 June, 1999, Research visit to the Department of Quaternary Geology, University of Lund, with a kind invitation from Professor Dr. Barbara Wohlfarth.

LIST OF PUBLICATIONS (Published more than 50 papers). The following selected publications:

1. K Zaidi, S Mogren, M Mukhopadhyay, E Ibrahim (2016): Evaluation of groundwater chemistry and its impact on drinking and irrigation water quality in the eastern part of the Central Arabian graben and trough system, Saudi Arabia . Journal of African Earth Sciences 120, 208-219.
2. MK Jafri, A Lashin, EK Ibrahim, K Hassanein, N Al-Arifi, M Naeem (2016): Improved reservoir characterization using Fuzzy logic platform: An integrated petrophysical, seismic structural and Post-stack inversion Study. Exploration Geophysics (online publication).
3. MK Jafri, A Lashin, E Ibrahim, M Naeem (2016): Petrophysical Evaluation of the Tensleep Sandstone Formation Using Well Logs and Limited Core Data at Teapot Dome, Powder River Basin, Wyoming, USA. Arabian Journal for Science and Engineering 41 (1), 223-247.
4. S Almadani, A Al-Amri, M Fnais, K Abdelrahman, E Ibrahim, (2015): Seismic hazard assessment for Yanbu metropolitan area, western Saudi Arabia. Arabian Journal of Geosciences 8 (11), 9945-9958
5. M Al-Harbi, E Ibrahim, A Al-Amri, K Abdelrahman, EA El-Motaal (2015): Structure of the Yanbu suture zone in Northwest Saudi Arabia inferred from aeromagnetic and seismological data. Arabian Journal of Geosciences 8 (10), 8741-8752
6. S Almadani, A Al-Amri, M Fnais, K Abdelrahman, E Ibrahim, EA El-Motaal (2015): Evaluation of geotechnical parameters for urban site in southern Khamis Mushait city, southwest Saudi Arabia, using seismic refraction method Arabian Journal of Geosciences 8 (8), 6225-6236
7. S Almadani, K Abdelrahman, E Ibrahim, A Al-Bassam, A Al-Shmrani (2015): Site response assessment of an urban extension site using microtremor measurements, Ahud Rufeidah, Abha District, Southwest Saudi Arabia. Arabian Journal of Geosciences 8 (4), 2347-2357
- S Almadani, E Ibrahim, K Abdelrahman, A Al-Bassam, A Al-Shmrani (2015): Magnetic and seismic refraction survey for site investigation of an urban expansion site in Abha District, Southwest Saudi Arabia. Arabian Journal of Geosciences 8 (4), 2299-2312
8. Hafez, I, Ibrahim, E. and Al-Amri, A. (2013). Mapping shallow groundwater aquifer by performing high-resolution seismic reflection technique in Wadi Nesah. CSIRO publishing, ASEG extended abstract, 2013 (1), 1-4.
9. Mohamed, A., Ibrahim, E and Sabry, A. (2013). Petrophysical characteristics of Wakar Formation, Port Fouad marine field, north Nile Delta, Egypt. Arab J Geosci, vol. (6), 1485-1497, DOI 10.1007/s12517-011-0446-9.
10. Taha, Abdel Hamid A.; Ibrahim, Elkhedr H.; Shalaby, Ahmed S.; Shawky, Mohamed (2013). Evaluation of Geological Hazards for Landuse Planning in Nabq Protectorate, Southeastern Sinai Using GIS Techniques. International Journal of Geosciences, Vol. 4 Issue 4, p816-836. 21p.
11. Ibrahim, E. H. (2013). Geoelectric Resistivity Survey for Site Investigation in East Matruh Area, North Western Desert, Egypt. World Applied Sciences Journal vol. 21 (7), p. 1008-1016. DOI:10.5829/idosi.wasj.2013.21.7.2871.
12. Shaaban, S., Ibrahim, E., Elawadi, E., Metwaly, M., El Agami, N. (2012). Seismic refraction and resistivity imaging for assessment of groundwater seepage under a dam, southwest Saudi Arabia. International Journal of the Physical Sciences, Vol. 7(48), p. 6230-6239.
13. Elawadi, E., Mogren, S., Ibrahim, E., Batayneh, A. (2012). Utilizing potential field data to support

delineation of groundwater aquifers in the southern Red Sea coast, Saudi Arabia. *J. Geophysics and Engineering*, vol. 9, p. 1-9.

14. Batayneh, A., Elawadi, E., Mogren, S., Ibrahim, E., Al-Bassam, A., and Qaisy, S. (2012). Groundwater quality of the shallow alluvial aquifer of wadi Jazan (southwest Saudi Arabia) and its suitability for domestic and irrigation purpose. *Scientific Research and Essays*, p. 352 – 364.
15. Ibrahim, E. , Kassem, O. and Al Bassam, A. (2012). Aeromagnetic data interpretation to locate buried faults in Riyadh Region, Saudi Arabia. *Scientific Research and Essays*, Vol. 7(22), p. 2022-2030.
16. Mogren, S., Batayneh, A., Elawadi, E., Al-Bassam, A., Ibrahim, E. and Qaisy, S. (2011) Aquifer boundaries explored by geoelectrical measurements in the Red Sea coastal plain of Jazan area, Southwest Saudi Arabia; *International Journal of the Physical Sciences*; vol. 6(15); 3768-3776.
17. Ibrahim, E., Mohamed, S., Atwan, A. (2011). Combining fuzzy analytic hierarchy process and GIS to select the best location for a wastewater lift station in Elmahala El-Kobra, North Egypt. *International Journal of Engineering & Technology IJET-IJENS*, vol. 11(5), 44 – 50.
18. Hussain, A., Ibrahim, E., Asem, A. (2011). Mobile geographic Information systems: A case study on Mansoura University. *International Journal of Computer Science & Information Technology, IJET-IJENS*, vol. 3(6), 173 – 181.
19. Abdallatif, T., El Emam, A., Suh, M., El Hemaly, I., Ghazala, H., Ibrahim, E., Odah, H., and Deebes, H. (2010). Discovery of the causeway and the mortuary temple of the Pyramid of Amenemhat II using near-surface magnetic investigation, Dahshour, Giza, Egypt, *Geophysical Prospecting*, vol. 58, 307–320.
20. E. H. Ibrahim, A. A. Taha, G. ElSaidi, and A. AbuElela (2008). Integration of geoelectric, remote sensing and GIS for detecting groundwater pollution in 10th of Ramadan Industrial area, Eastern Nile Delta, Egypt. 1st Environmental Week, 16 – 21 Feb. 2008, Mansoura University, Egypt.
21. Z. M. Zaghloul, E. H. Ibrahim, A. A. Mostafa and A. E. Rakha (2008). Environmental hazard of sea level rise with global warming, north Nile Delta: A case study. *J. Environmental Sciences*, vol. 35, 2008.
22. Z. M. Zaghloul, E. H. Ibrahim, A. A. Mostafa and A. E. Rakha (2006). Remote sensing and GIS for detecting environmental changes in Burulus Environ, Nile Delta. 4th International Symposium on Geophysics, 22 – 24 November, Tanta, Egypt.
23. Z. M. Zaghloul, E. H. Ibrahim, A. A. Mostafa and A. E. Rakha (2005). Geomorphologic Study using GIS & Remote sensing for the benefit of the sustainable development of the northern Coast of Nile Delta. 1st Conference of Education of Space & Earth Science, 13th September, Ain Shams, Cairo.
24. Ibrahim, E. H.; Shereef, M. R.; Bederson, L. and ElMetwally, A. (2004), Geoelectric study for Quaternary groundwater aquifers in northwest Sinai, Egypt. *Journal of Egyptian Geophysical Society*, p. 283-292 Egypt.
25. Ibrahim, E. H.; Shereef, M. R. and ElMetwally, A. 2003, Groundmagnetic survey for archaeological prospecting in old Pelusium city, NW Sinai, Egypt. *Bull. Of the 3rd International Conference on the Geology of Africa*, Assuit, Egypt, 7 – 9 December, Vol. 1, p. 863-872.
26. Ibrahim, E. H., Odah, H. H. and El-Agami, N. L. 2003, Magnetic and mineralogical studies of Manzala Lake sediments: A preliminary environmental investigation. 3rd International Symposium of Geophysics, 14 – 16 October, , Tanta, Egypt

27. Ibrahim, E. H. and Ghazala, H. H. 2003, Basement structure and sandstone Nubian Aquifer, northwest Toshika, W. Desert, Egypt: Implication of aeromagnetic data. 3rd International Symposium of Geophysics, 14 – 16 October, , Tanta, Egypt
28. Ibrahim, E. H.; El Gamili, M. M.; Hassanain, A.; Ismael, A. M. (2002), Geoelectrical seeing beneath Behbeit ElHigara and ElKom ElAkhder archeological sites, samannud area, Nile Delta, Egypt. *Archaeological Prospection*, vol. 9, p. 105 – 113, John Wiley & Sons, UK.
29. El Gamili, M. M.; Ibrahim, E. H.; Hassanain, A.; Ismael, A. M. (2001), Defunct Nile branches inferred from a geoelectric resistivity survey on Samannud area, Nile Delta, Egypt. *Archaeological Sciences*, vol. 28, p. 1339 – 1348, Academic Press, UK.
30. Ghazala, H. H. and Ibrahim, E. H. Aeromagnetic and gravity study on Zafarana area and the rifting of the Gulf of Suez. *Proced. of the 5th International Conference on the Geology of the Arab World (GAW-5)*, February 21 -24, p.1051-1064, (2001), Cairo.
31. Ibrahim, E. H.; Odah, H.; El Agami, N. and Abu Elenen, M. Palaeomagnetic and geologic investigations into some volcanic rocks, southern Sinai, and the rifting of the Gulf of Suez. *Tectonophysics*, vol 321, p. 343-358, (2000), Elsevier, Amsterdam.
32. N. L. El Agami, Ibrahim, E. H. and H. H. Odah. Sedimentary origin of the Mn-Fe ore of Um Bogma, southwest Sinai: Geochemical and paleomagnetic evidence. *Economic Geology*, vol 95, p. 607-620, (2000), USA.
33. Ibrahim, E. H. Palaeomagnetism and the Afro-Arabian Rift System. *Journal of Geology of Egypt*, vol. 42, No. 2, 182 – 191, (1999), Geological Society of Egypt, Egypt.
34. N. L. El Agami, Ibrahim, E. H. and H. H. Odah. Paleomagnetic and geologic inferences, and probable origin of the Mn-Fe ore of Um Bogma, SW Sinai, Egypt. *J. Sedimentology of Egypt*, vol. 7, 167-183, (1999), Sedimentological Society of Egypt, Egypt
35. Ibrahim, E. H. Palaeomagnetism and the Afro-Arabian Rift System. *Journal of Geology of Egypt*, vol. 42, No. 2, 182 – 191, Geological Society of Egypt, (1999), Egypt.
36. Ibrahim, E. H. Credibility of using electric resistivity and seismic refraction techniques in detecting Quaternary sedimentary variations in the Nile Delta, Egypt. *J. Sedimentology of Egypt*, vol 6, 129-139, (1998), Sedimentological Society of Egypt, Egypt.
37. Ibrahim, E. H.; El Agami, N. and Odah, H. Diagenetic Tertiary remnant magnetization in the Cretaceous Nubian sandstone, north Sinai, Egypt. *J. Sedimentology of Egypt*, vol. 6, 51-62, (1998), Sedimentological Society of Egypt, Egypt.
38. Ibrahim, E. H.; Sherief, M. R. and Al-Metwally, A. Shallow geophysical investigations on Tell el Farama, northwest Sinai, Egypt. *Archaeological Prospection*, vol. 5, p. 91 – 100, (1998), John Wiley & Sons, UK.
39. H. H. Odah, Ibrahim, E. H. and N. L. El Agami. Geophysical and geological contribution to the tectonics of Sinai, Egypt. *Proceed. EAGO /EAGE/SEG International Geoscience Conference and Exhibition*, 15-18 September 1997, Moscow, Russia
40. Kafafy, A. M.; Tarling, D.H.; El Gamili, M. M.; Hamama, H. H. and Ibrahim, E. H. Palaeomagnetism of some Cretaceous Nubian Sandstone, Northern Sinai, Egypt. In: *Palaeomagnetism and Tectonics of the Mediterranean Region*, edited by Morris, A. and Tarling, D.H., Geological Society special publication No. 105, p.325 – 332, (1995), Geological Society of London, UK.

41. Ibrahim, E. H.; Tarling, D. H.; El Gamili, M. M.; Hamama, H. H. and Kafafy, A. M. Palaeomagnetism of some Cretaceous rocks from the Nile Valley, Egypt. Ann. Geophys. Suppl., vol. 10, C92, (1992), United Kingdom Geophysical Assembly (UKGA), UK.
42. El Gamili, M. M. and Ibrahim, E. H. Geophysical investigations for Holocene palaeohydrography in the northern Nile Delta, Egypt. Colloq. of Archaeology and History of the Egyptian Delta in Pharaonic times, Oxford, Wadham College, UK, p. 134 – 142, (1988), UK