CURRICULUM VITE

Name: Fardous Mohamed Abdel Hamid Zarif

AGE: 43

DESIGNATION: DR. (Associate professor)

ORGANIZATION: DESERT RESEARCH CENTER (DRC)

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Marital status: Married

Education

Undergraduate Institution	Geophysics	B.S., 2003
Graduate Institution	Geophysics	M.S., 2009
Graduate Institution	Geophysics	Ph.D., 2017

Work experience

2023 to Now	Desert Research center **Associate professor**
2017-2023	Desert Research center **Researcher**
2015-2017	Rutgers university (New jersey, USA) **PhD Visitor student** **(Channel mission)**
2009 - 2017	Desert Research center **Assistant Researcher**
2005 - 2009	Desert Research center **Researcher assistant**

Collaborators & Other Affiliations

- Member of the scientific team in the project of "Critical Zone Observatory "which was funded by NSF Critical Zone Observatory program grants to C. Duffy (EAR 07-25019) and S. L. Brantley (EAR 12-39285, EAR 13-31726).

- Conference of The Environmental and engineering [SAGEEP] under this title 1D -Resistivity, 2D-ERT and VLF Electromagnetic Surveys for Groundwater Evaluation in Fractured Limestone at SAGEEP 2016—March 20-24, 2016 Symposium on the Application of geophysics to engineering and environmental problems Denver, Colorado USA

- The conference of 2016 AGU on 12-16 December 2016 at the Moscone Center in San Francisco, California. I participate by a poster under this title “Electrical Resistivity Imaging is Consistent with Shallow Interflow within the Garner Run sub catchment of the Susquehanna Shale Hills CZO”

MEMBERSHIP OF PROFESSIONAL SOCIETIES

- Egyptian Geophysical Society (EGS)
- American Geophysical union (AGU),
- Member of the scientific team in the project of "Critical Zone Observatory "which was funded by NSF Critical Zone Observatory program grants to C. Duffy (EAR 07-25019) and S. L. Brantley (EAR 12-39285, EAR 13-31726).

RESEARCH INTEREST

- Having a good experience as geophysicist interpreter and writing technical report.
- I have a good experience in the field of geophysical data acquisition (1D& 2D &3D Geoelectrical resistively methods, Electromagnetic [VLF, TEM], Seismic and GPR).
- I have a good experience in the field data acquisition, processing and interpretation of Time domain induced polarization (IP) (1D,2D&3D) and spontaneous potential (SP).
- Analysis, processing and interpretation of the acquired geophysical data using computer programs
- Full Acquaintance with solving the environmental and engineering problems as well as hydrogeological evaluation.
- Preparing and writing technical and research reports.
- Qualitative and quantitative interpretation of Geoelectrical and Electromagnetic measurements including Vertical Electrical and electromagnetic Sounding, Geoelectrical profiling and Geoelectrical Tomography.
- Identification of the parameters of the water bearing layers.
- Identification the shear and alteration zones for mineral exploration.

TRAINGS RECEIVED

- **Desert Research Center, Egypt.**
  Workshop & training program on “Statistical analysis by Using SPSS program”.
  21 Dec- 25Dec.2014 Sponsored by media communication Unit.
- **Desert Research Center, Egypt.**
  Workshop on “Technology innovation commercialization Office “31 March 2019
- **Desert Research Center, Egypt.**
  Workshop on “Water Desalination & Renewable Energy for sustainable development “25 November 2018
- **The Institute of Statistical Studies and Research, Egypt.**
  Training course “MATLAB “ [Level 1] from 20/5/2018 to 24/5/2018
- **Desert Research Center, Egypt.**

Workshop on "Raising the capabilities of researchers in the field of writing and scientific publishing
"29/4/2018.

- **Desert Research Center, Egypt.**
  Workshop on "Design of agricultural experiments using different statistical programs 11-12 April 2018

- **National Research Centre, Giza, Egypt.**
  Workshop on "Meteorites in Egypt & the Middle East" March 17th, 2019

- **Desert Research Center, Egypt**.
  Workshop on "Monitoring and evaluation of natural resource degradation factors and methods of control" 24-28/2/201

Other skills and abilities

Language proficiency: very good speaker
Native speaker

Other skills

Technical Skills:

- I have an extensive international experience where I was in Rutgers University in USA as a PhD visitor student Newark, New Jersey state, USA.
- I have an experience in my scientific branch in groundwater exploration, Environmental problems and mineral exploration.
- I have experiences in mineral exploration especially gold mining where I have an opportunity to be one of the team worked to Lotus Gold Company in um Samra site of south part of Central Eastern Desert, Egypt.
- I like working in groups to exchange knowledge's and gain more information.
- Expertise in 1D,2D and 3D Electrical resistivity methods and electromagnetic methods
- Expert knowledge of different programing software including Surfer, Excel, Res2Dinv., R2 code, Zond TEM 1D, Zond 2DRES, Interpex 1D, REFLEXW and IPI, SPSS.
- Excellent interpersonal skills, demonstrated by communication with colleges

Other professional experiences, references

SELECTED PUBLICATIONS:

1. Elfky M. &**Fardous Zarif** (2009)"Geoelectrical Exploration of The Groundwater Potentiality Around the Middle Part of Wadi El Natrun- Al Alamain Road, Western Desert, Egypt", Egyptian Geophysical Socity, EGS Journal, Vol. 2, No. 1, pp.75-84 (2009).

2. **Fardous M. Zarif**, Karam S.I. Farag, Ayman M. Al Temamy, Mohamed A. Mabrouk, Ahmed M.A. Yousse, and Salah A. Mousa (2016): “Imaging subsurface water-bearing zones within the fractured carbonate rocks at El Salloum basin –North western coast– Egypt using very low frequency electromagnetic surveying technique", Egy. J. of Applied Geophysics, Vol. 15, No.1, 197-215.

3. **Fardous Zarif**, Pauline Kessouri, and Lee Slater (2018).” Recommendations for Field-Scale Induced Polarization (IP) Data Acquisition and Interpretation.” JEEG, 22(4), 395-410.

4. **Zarif, Fardous**; Slater, Lee; Mabrouk, Mohamed; Youssef, Ahmed; Altemamy Ayman; Mousa, Salah; Farag, Karam; Robinson, Judy (2018)” Groundwater resources evaluation in calcareous limestone using Geoelectrical and VLF-EM surveys", Hydrogeology Journal, https://doi.org/10.1007/s10040-017-1710-1.

5. Roman DiBiase, Joanmarie Del Vecchio, Gregory Mount, Jorden L Hayes, Xavier Comas, Li Guo, Henry Lin, **Fardous Zarif**, Brandon Forsythe, and Susan L Brantley (2019): Integrated geophysical surveys reveal architecture of a headwater sandstone catchment at the Susquehanna Shale Hills Critical Zone Observatory, Earth Surface Processes and Landforms, in press.

6. M.S. Geoshy, M. A. Mabrouk, S. A. Mousa, S. H. Abd El Nabi, **F. M. Zarif**, (2019): Application of Transient Electromagnetic method (TEM) for groundwater exploration In El-Gallaba Plain, West of Kom Ombo, Upper Egypt. Egyptian geophysical society (EGS).

7. **Zarif, Fardous Mohamed**. "The impact of conductive layers on depth of investigation estimation in 2D geoelectrical imaging: A case study of West Bani Mazar, El Minia, Egypt." Journal of African Earth Sciences 173 (2021): 104045.

8. **Zarif, Fardous M.**, Ahmed M. Elshenawy, and Mohamed A. Mabrouk. "Integrated TEM and 2DERI techniques to delineate groundwater bearing zones in fractured carbonate rocks at the upstream portion of wadi Halazeen, Northwestern Coast, Egypt." Journal of African Earth Sciences 182 (2021): 104288.

9. Metwally, Safi, Elska Shimaa, **Fardous Zarif**, and Abdallah Saad. "Applications of Well logging Techniques to Evaluate the Groundwater aquifers in the Area between Southwest Bani Sweif and West Asyoute governorate, Upper Egypt." Kuwait Journal of Science (2021).

10. Twfiq, M. Z., **Zarif, F. M.**, Massoud, A., & Al-Temamy, A. M. (2021). Determination the petrophysical and natural radioactivity properties of Nubian sandstone aquifer at the area of northwest El Ain Village, Sharq El-Oweinat Area, Southwestern Desert, Egypt. Asian J Environ Ecol, 15(4), 37-55.

11. **Zarif, F.,** Isawi, H., Elshenawy, A., & Eissa, M. (2021). Coupled geophysical and geochemical approach to detect the factors affecting the groundwater salinity in coastal aquifer at the area between Ras Sudr and Ras Matarma area, South Sinai, Egypt. Groundwater for Sustainable Development, 15, 100662.

12. **Zarif, Fardous M.**, et al. "Evidence of geoelectrical resistivity values on groundwater conditions in Wadi El Natrun and its vicinities, West Delta, Egypt (cases studies)." Scientific Reports 12.1 (2022): 1-16.

13. Abdel Rahman, A. M., **Zarif, F. M.**, & Elshenawy, A. M. (2022). Geophysical approach to delineate groundwater potentials in the northwestern part of Wadi Dara, Eastern Desert, Egypt. Egyptian Journal of Desert Research, 72(1), 157-178.

14. Shimaa. M. Elska, Safi Eldein.M. Mentally, Abdallah. F. Saad, **Fardous. M. Zarif** (2023). Formation Evaluation of Bahariya Groundwater Aquifer Using Nuclear Logs at the Southwest area of Bani Sweif, Upper Egypt, (A Case Study). Bulletin of Faculty of Science, Zagazig University, 2023(1), 10-23.

15. Gomaa, M. M., **Zarif, F.**, ELShenawy, A. E., Ramah, M., & Kotb, A. D. M. (2024). Modelling and simulating the geoelectrical attributes of near-surface buried objects to optimizing its discovery. Modeling Earth Systems and Environment, 10(5), 5969-5981.

16. **Zarif, F.**, Barseem, M., Elshenawy, A., & Ulugergerli, E. U. (2024). 2D nonlinear inversion of DC resistivity measurements, a case study; southeastern part of Ras El Dabaa, Northwestern coast, Egypt. Environmental Earth Sciences, 83(21), 1-15.

17. Elghandour, E**., Zarif, F.**, Elshenawy, A., Afify, W., & Mansour, N. (2024). Evaluation of Groundwater Quality Using the Water Quality Index (WQI) in Delta Wadi Sudr, South Sinai, Egypt. Journal of Basic and Environmental Sciences, 11(4), 918-941.

18. Ketkat, A. M., El Shenawy, A. M., **Zarif, F. M.**, Afify, W. E., El Kaliouby, H. M., & Mansour, N. M. (2024). Groundwater Potential Assessment Using Analytic Hierarchy Process (AHP), Remote Sensing, and GIS: A Case Study from the Zaafarana Region, Western Coast of the Gulf of Suez, Egypt. Journal of Basic and Environmental Sciences, 11(4), 626-653.

SIGNATURE

FARDOUS ZARIF