Amer A. Shehata

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Scopus: https://www.scopus.com/authid/detail.uri?authorId=57202942270

Web of Science: https://www.webofscience.com/wos/author/record/AGY-3678-2022

(1) Education:

2015 – 2019	Ph.D. in Geology: Port Said University, Port Said, Egypt.							
	PhD	Dissertation:	Cretaceous	Depositional	Patterns	and	Sequence	Stratigraphic
	Evolu	ition for The Hy	ydrocarbon Po	otentialities in	Beni Suef	Basir	n, Nile Valle	ey, Egypt

- 2010 2014 M.Sc. in Geology: Port Said University, Port Said, Egypt.
 M.Sc. Dissertation: Sequence Stratigraphy and Depositional History of the Upper Cretaceous Sediments at Gabal Nezzazat and Gabal Ekma, Southwestern Sinai, Egypt
- 2005 2009 B.Sc. in Geology (*Excellent with Honor*) Suez Canal University, Ismailia, Egypt. B.SC. Project: Wellsite Geology: Fundamentals with scope to wellsite geologist duties and responsibilities

(2) Appointments:

07/2024 - Now	Associate Professor: Geology Department, Faculty of Science, Port Said University,
	Port Said, Egypt

- 10/2024 Now Member of the Students Affairs Committee at, Faculty of Science, Port Said University
- **06/2024 Now** Coordinator of the International Ranking Committee at Port Said University
- 11/2023 06/2024 Visiting Assistant Professor: Department of Systems Innovation, Faculty of Engineering, The University of Tokyo, Japan
- 07/2023 11/2023 Assistant Professor: Geology Department, Faculty of Science, Port Said University, Port Said, Egypt
- 10/2022 07/2023 Fulbright Research Scholar (Research Associate): Department of Physical and Environmental Sciences, Texas A&M University Corpus Christi, USA.
- **02/2022 10/2022 Vice Manager:** Farouk El-Baz Research Center for remote Sensing and GIS, Faculty of Science, Port Said University, Egypt

06/2019 – 10/2022 Assistant Professor: Geology Department, Faculty of Science, Port Said University, Port Said, Egypt

12/2018 – 05/2019 Teaching and Research Assistant: Geology Department, Faculty of Science, Port Said University, Port Said, Egypt

12/2016 – 11/2018 Research Fellow: Department of Earth Sciences, Chiba University, Chiba, Japan

02/2010 – 11/2016 Teaching and Research Assistant: Geology Department, Faculty of Science, Port Said University, Port Said, Egypt

(3) Research Interests:

I apply integrated (seismic, sedimentology, sequence stratigraphy, petrophysics, machine learning) approaches to investigate Surface/Subsurface geology, model depositional evolution, map structural framework, and characterize reservoir properties, architecture, and quality. Currently, I'm integrating surface and subsurface datasets from sedimentology, sequence stratigraphy, basin analysis, and petrophysics to predict and improve reservoir characterization in both carbonate and siliciclastic sediments in addition to use the seismic data to detect/predict the geo-bodies (i.e., chimney & channels). Surface datasets include field observations of sedimentary successions whereas, subsurface datasets include seismic, well logs, and core data. Machine learning techniques (deep neural network, gradient boosting machine, generalized linear model, distributed random forest) are being used to enhance the quality and spatial coverage of surface and subsurface data for improved prediction of reservoir facies and properties. Additional geophysical datasets (e.g., GPR) are being used to characterize the subsurface conditions in coastal environments.

(4) Teaching Experience:

06/2019 – Now: I taught the following courses at the Geology Department, Faculty of Science, Port Said University for undergraduate and graduate students and the Faculty of Engineering, Port Said University for undergraduate students during the period from:

- General & Physical Geology,
- Sedimentary petrology,
- Sedimentary basin analysis,
- Sequence and Seismic Stratigraphy,
- Seismic and well logging interpretation,
- Petroleum and Gas Geology,
- Petroleum Provinces.
- Structural Geology,
- Subsurface Geology,
- Marine Geology, and
- Petroleum Geochemistry.

(5) Technical Experience:

• **Programming Languages**: Python

• Software:

• Seismic: Petrel

• Well Logging: Techlog

• GIS: ArcGIS

• Others: Coral Draw and Adobe Illustrator

(6) Field Experience:

I have field experience dated back to 2010 until now in Egypt, Japan, and USA. Throughout this time, I dealt with different types of sedimentary rocks ranging in age from Cambrian to Recent: -

2010-2014 & 2019-Now (Egypt): - Many field work dealing with the Upper Cretaceous and Miocene sedimentary successions by describing, sequencing, and collecting samples from different profiles in southwestern Sinai, Western and Eastern Desert, Egypt.

2016-2018 (Japan): - Many field work dealing with the Recent sedimentary successions by describing, sequencing, and collecting samples from different profiles in Tokyo Bay areas, Japan.

2022-2023 (USA): - Many field work dealing with the Recent sedimentary successions of Padre Island, South Texas, USA. We apply different geological and geophysical methods to collect datasets.

2023-2024 (Japan): - Field work dealing with the geophysical/ geological studies in different fields. We apply different geological and geophysical methods to collect datasets.

(7) Professional Services:

- 2023: Member at the scientific and organization Committee of the International Conference & Expo on green science, Egypt' in the Port Said, Egypt, September 2023
- 2023-Present: Review Editor in Economic Geology at Frontiers in Earth Science journal. https://www.frontiersin.org/my-frontiers/overview
- **2023-Present: Guest Editor** at Frontiers in Earth Science for Special Issue "Advanced Techniques and Applications for Characterizing the Hydrocarbon Potential in Carbonate Reservoirs". https://www.frontiersin.org/research-topics/33728/advanced-techniques-and-applications-for-characterizing-the-hydrocarbon-potential-in-carbonate-reser
- 2019-Present: Associate Editor at Alfarama Journal of Basic & Applied Sciences (AJBAS). (https://ajbas.journals.ekb.eg/)
- **Reviewer** for the following Journals:
 - Marine and Petroleum Geology
 - Journal of African Earth Sciences,
 - Acta Geologica Sinica-English Edition,

- Journal of Asian Earth Sciences,
- Journal of Petroleum exploration and production technology,
- Energies,
- Processes,
- Lithosphere,
- Journal of GeoEnergy,
- Iraqi Geological Journal,
- Geofluids,
- Engineering Applications of Artificial Intelligence,
- Journal of Hydrology,
- Euro-Mediterranean Journal for Environmental Integration,
- Acta Geochimica,
- Scientific Reports,
- Journal of Marine Science and Engineering,
- Petroleum Science and Technology
- Geological Journal,
- Marine Geophysical Research, and
- Open Geosciences
- Geoenergy science and engineering
- Petroleum Science
- Petroleum
- Journal of GeoEnergy

(8) Student Supervision

- 2025 Raafat M. Morsy: PHD. (Main Supervisor, Faculty of Science, Port Said University): Sequence stratigraphy and sedimentological analysis of the Late Cretaceous reservoirs, Central Gulf of Suez, Egypt
- 2025 Ahmed Nabil: MSc. (Member, Faculty of Science, Suez Canal University):
 Reservoir Characterization applying seismic data and well data analysis in Geisum offshore field, South Gulf of Suez, Egypt.
- 2021 2024: Heba Ismail: MSc. (Member, Faculty of Science, Port Said University): Subsurface geology and gas potentialities evaluation using geochemical, seismic and petrophysical data integration in the western offshore area, Nile Delta, Egypt
- 2021 2024: Ethar Abdelsamea: MSc. (Member, Faculty of Science, Port Said University): Hydrocarbon potential of the Jurassic Succession in the Darag Basin, Gulf of Suez as demonstrated by palynology and organic geochemistry
- **2019-2025** 12 undergraduate students

(9) Research Grants

Funded Grants

- 2025- 2027 Amer A. Shehata, Co-PI (Sarhan, M., PI): Petrophysical evaluation of the Pre- and Syn-rift hydrocarbon reservoirs in the Southern Gulf of Suez Basin: Machine Learning Approach, Science, Technology & Innovation Funding Authority (STDF), Egypt, Total: \$80000. (Project ID: 50689)
- 09/2011 Amer A. Shehata, Co-PI (Sultan A., PI): Environmental digital mapping laboratory, 05/2012 Ministry of Higher Education, Egypt, Total: \$6000.

(10) Awards and Honors:

- 2025: Scientific Research Excellence Award, Port Said University, Port Said, Egypt.
- **2024**: Scientific Research Excellence Award, Port Said University, Port Said, Egypt.
- 2023: International Funding Opportunities for Interdisciplinary Research (Certificate of completion).
- 2023: Evaluating Interdisciplinary Project Proposals and Research Results (Certificate of completion).
- 2023: Publishing Interdisciplinary Research Results (Certificate of completion).
- 2023: Design Interdisciplinary Research Projects and Programs (Certificate of completion).
- 2023: Postdoctoral research grant, University of Tokyo- Japan (\$ 18000).
- 2023: Scientific Research Excellence Award, Port Said University, Port Said, Egypt.
- 2022: Fulbright Postdoctoral research grant, Texas A&M University-Corpus Christi, USA (\$ 35000).
- 2022: Scientific Research Excellence Award, Port Said University, Port Said, Egypt.
- 2021: Interdisciplinary Excellence: Education Design (Certificate of completion)
- **2021**: Scientific Research Excellence Award, Port Said University, Port Said, Egypt.
- **2020**: Scientific Research Excellence Award, Port Said University, Port Said, Egypt.
- 2019: Scientific Research Excellence Award, Port Said University, Port Said, Egypt.
- **2018**: Scientific Research Excellence Award, Port Said University, Port Said, Egypt.
- **2016:** Joint supervision scholarship, Chiba University, Japan (\$ 60000).

(11) Symposia, Conferences & Outreach Talks:

I attended the following events:

- "International Conference & Expo on green science, Egypt" in the Port Said, Egypt, September 2023
- "Excellence in Scientific Research Conference: The Future of the Production of Knowledge in Egypt," in the New Capital, Egypt, August, 2023
- Machine learning applications in the engineering and geological sciences, 2022, Port Said University, Port Said Egypt.
- Turbidities workshop, international meeting, 2018, Chiba university, Chiba, Japan
- Egyptian Sedimentology association, 2012, 2013, 2014. Ain Shams University, Egypt
- International conference of geology of Sinai 2007, 2008, 2009, Ismailia, Egypt

I gave the following Outreach Talks:

- * "Integration of multiscale datasets for reservoir characterization: Implementation to prediction processes and development plans/strategies (*Gulf of Suez and Western Desert, Egypt*)" at Corpus Christi Geological Society (CCGS)
- * "Facies analysis and sequence stratigraphic controls on reservoir architecture " at Department of Physical and Environmental Sciences, Texas A&M University Corpus Christi
- * "Assessment of Multiple Machine Learning Techniques in Predicting Permeability and Porosity in Reservoirs and Aquifers" at Department of Systems Innovation, Faculty of Engineering, The University of Tokyo, Japan

(12) Publications and Abstracts:

(Student: [*]; Corresponding Author: [©])

- 1. Shehata©, A.A., Ismail, A., Ahmed, M., Tsuji, T., 2025, Automatic gas chimney detection from 3D seismic reflection data using seismic attributes. Natural Resources Research, *in preparation*.
- 2. Shehata©, A.A., Ahmed, M., 2025, Integration of multiscale datasets for reservoir characterization: Implementations for prediction processes and development plans. Natural Resources Research, *in preparation*.
- **3. Shehata**©, **A.A.**, Kassem, A.A., **2025**, Sedimentology and lithofacies prediction of the pre-rift Matulla reservoirs at the Central Gulf of Suez, Egypt. Sedimentary Geology, *in preparation*.
- **4. Shehata**©, **A.A.**, Fathy, M., Abdelrehim, R., Abdelrahman, K., Fnais, M.S, Jain, S. (Under Review). Seismic Interpretation, Sequence Stratigraphy and Property Modeling of the Cenomanian Siliciclastic Reservoirs (El Diyur Field, NW Desert, Egypt): Insights to reservoir architecture, distribution and evaluation. Submitted to Arabian Journal for Science and Engineering (Manuscript ID: AJSE-D-25-07202).
- 5. Fathy, M., Shehata©, A.A., Sadoun, M., Abdelrehim, R., Abdelrahman, K., Fnais, M.S., Reda, M. (2025). Seismic Interpretation, Structural and Property Modeling of Cenomanian Siliciclastic/Carbonates Reservoirs (El Diyur Field, NW Desert, Egypt): Insights to reservoir architecture, distribution and evaluation. Submitted to Journal of African Earth Sciences, 231, 105772. https://doi.org/10.1016/j.jafrearsci.2025.105772.
- **6.** Ismail©, A., Semary, H.E., Edress, N.A., Gad, A.S., Hadded, A., Abdelkawy, M.A., Abdelwahab, M.M., Safa, M.G., **Shehata, A.A.**, (2025). Seismic data interpretation and 3D static reservoir modeling in the Temsah area, eastern offshore Nile Delta, Egypt. Journal of African Earth Sciences, 229, 105709. https://doi.org/10.1016/j.jafrearsci.2025.105709
- 7. Abdel-Fattah, M.I., Aboulmagd, M.A., Sarhan, M.A., Hamdan, H.A., Shehata©, A.A., (2025). Multi-scale datasets integration for thinly-bedded reservoir characterization: An example from Abu Roash reservoir, East Beni Suef Basin, Egypt. Petroleum Geoscience, 31, petgeo2024-104, https://doi.org/10.1144/petgeo2024-104.
- 8. Shehata, A.A., Ahmed, M., Kassem©, A.A., Abdelrehim, R., Tsuji, T., Ismail, A., (2025). Optimizing Permeability and Porosity Prediction with Advanced Machine Learning: A Case Study Unlocking the Complexities of Late Cretaceous Reservoirs, Gulf of Suez, Egypt. Journal of African Earth Sciences, 228, 105670. https://doi.org/10.1016/j.jafrearsci.2025.105670

- 9. Ismail©*, H., Shehata, A.A., Ismail, A., Attia, T.E. (2025). Facies analysis and depositional environments interpretation and Petrophysical evaluation of the Pliocene Kafr El-Sheikh Reservoirs at Sapphire Field, West Delta Deep Marine, Egypt. Alfarama Journal of Basic and Applied Sciences, 6(2), 184-498. https://doi.org/10.21608/ajbas.2025.361285.1250
- 10. Shehata©, A.A., Sarhan, M.A., Abdelrehim, R., Abdelrahman, K., Fnais, M.S., Ismail, A. (2025). Sequence Stratigraphy and Petrophysical Evaluation Controls on Fluvial to Fluvio-Marine Reservoirs in the Syn- and Post-Rift Sediments: Insights into in the Kharita and Bahariya Formations, West Beni Suef Basin. Journal of African Earth Sciences, 226, 105568. https://doi.org/10.1016/j.jafrearsci.2025.105568
- 11. El-Dossoki, F., Hassan, M., **Shehata, A.** (Eds.). (2024). Proceedings of The First International Conference on Green Sciences: Environmental Science for Green and Sustainable Environment. Springer Cham. https://doi.org/10.1007/978-3-031-62672-2
- 12. Mansour© S., Abdelfadil, K.M., Hasebe, N., Tamura, A., Abdelrahman, K., Gharib, M.A., Fnais, M.S., Shehata, A.A., 2024. Thermochronological Constraints on the Tectonic History of the Arabian–Nubian Shield's Northern Tip, Sinai, Egypt. Minerals, 14(12), 1246. https://doi.org/10.3390/min14121246
- 13. Sarhan©, M.A., Shehata, A.A., Abdel-Fattah, M.I., (2024). Sequence stratigraphic and petrophysical controls on the oil-reservoirs architecture: A case study from the Cretaceous meqasequence, Gulf of Suez region, Egypt. Journal of African Earth Sciences, 219, 105412. https://doi.org/10.1016/j.jafrearsci.2024.105412
- **14.** Turner, R., Ahmed©, M., Bissell, R., Prothro, L.O., **Shehata, A.A.,** Coffin, R., (**2024**). Structural and Stratigraphic Controls on Reservoir Architecture: A Case Study from the Lower Oligocene Vicksburg Formation, Brooks County, Texas. Marine and Petroleum Geology, 160, 106627. https://doi.org/10.1016/j.marpetgeo.2023.106627.
- 15. Shehata, A.A., Abdel-Fattah, M.I., Hamdan, H.A., Sarhan©, M.A. (2023d). Seismic Interpretation and Sequence Stratigraphic Analysis of the Bahariya Formation in the South Umbaraka Oilfields (Western Desert, Egypt): Insights into Reservoir Distribution, Architecture, and Evaluation. Geomechanics and Geophysics for Geo-Energy and Geo-Resources, 9:135. https://doi.org/10.1007/s40948-023-00673-6
- 16. Mansour© S., Hasebe, N., Khedr, M.Z., Tamura, A., Shehata, A.A., 2023. Tectonic-Thermal Evolution of the Wadi El-Dahal Area, North Eastern Desert, Egypt: Constraints on the Suez Rift Development. Minerals, 13(8):1021. https://doi.org/10.3390/min13081021
- 17. Nabawy©, B.S., Abd El Aziz, E.A., Ramadan, M. Shehata, A.A., (2023). Implication of the micro- and lithofacies types on the quality of a gas-bearing deltaic reservoir in the Nile Delta, Egypt. Sci Rep 13, 8873. https://doi.org/10.1038/s41598-023-35660-0
- **18. Shehata**©, **A.A.**, Ahmed, M., Kassem, A.A., (**2023-Accepted Abstract**). Predicting horizontal permeability in siliciclastic-dominated reservoirs using an automated machine learning approach. Submitted Abstract (ID:3910883) to SEG | AAPG International Meeting for Applied Geoscience & Energy (IMAGE) 2023 (Aug. 28 to Sept. 1 in Houston, Texas)
- 19. Abdelreheem*©, R., Ahmed, M. Shehata, A.A., (2023-Abstract). Controls of subsurface Geology on the response of Barrier Islands to Flooding and Hurricanes: Constrains from Ground Penetrating Radar and Sedimentological Datasets. Accepted Abstract in The Texas A&M University System (TAMUS) Pathways Student Research Symposium at The Texas A&M University -Galveston, March 2023.

- 20. Shehata©, A.A., Tahoun, S.S., Kassem, A.A., Abdelsamea*, E.G., Hassan, H.F., 2023c. Palynostratigraphy and paleoenvironmental inferences of the Jurassic successions, Darag Basin, Gulf of Suez, Egypt. Journal of African Earth Sciences, 200, 104890. https://doi.org/10.1016/j.jafrearsci.2023.104890
- **21.** Shehata, A.A., Sarhan©, M.A., Abdel-Fattah, M.I., Mansour S., **2023b**. Geophysical assessment for the potentiality of the Abu Roash "G" reservoir in West Beni Suef Basin, Western Desert, Egypt. J. African Earth Sciences, 199, 104845. https://doi.org/10.1016/j.jafrearsci.2023.104845
- 22. Shehata, A.A., Sarhan©, M.A., Abdel-Fattah, M.I., Assal, E.M., 2023a. Sequence stratigraphic controls on the gas-reservoirs distribution and characterization along the Messinian Abu Madi incision, Nile Delta Basin. Marine and Petroleum Geology, 147, 105988. https://doi.org/10.1016/j.marpetgeo.2022.105988
- 23. Hassan, H.F., Shehata, A.A., Morsy*©, R., 2023. Microfacies Analyses, Depositional Interpretation and Sequence Stratigraphic Delineation of the Miocene Rocks at Cairo-Suez Road, Egypt. Alfarama Journal of Basic & Applied Sciences, 4(1), 132-154. https://dx.doi.org/10.21608/ajbas.2022.140511.1104
- 24. Radwan©, A.E., Husinec, A., Benjumea, B., Kassem, A.A., Abd El Aal, A.K., Hakimi, M.H., Thanh, H.V., Abdel-Fattah, M.I., Shehata, A.A., 2022. Diagenetic overprint on porosity and permeability of a combined conventional-unconventional reservoir: Insights from the Eocene pelagic limestones, Gulf of Suez, Egypt. Mar. Pet. Geol., 146, 105967. https://doi.org/10.1016/j.marpetgeo.2022.105967
- **25. Shehata**, **A.A.**, Sarhan©, M.A., **2022**. Seismic interpretation and hydrocarbon assessment of the post-rift Cenomanian Bahariya reservoir, Beni Suef Basin, Egypt. J. Petrol. Expl. Prod. Tech., 12, 3243-3261. https://doi.org/10.1007/s13202-022-01520-2
- **26.** Kassem*©, A.A., Osman, O., Nabawy, B., Baghdady, A., **Shehata, A.A., 2022**. Microfacies Analysis and Reservoir Discrimination of Channelized Carbonate Platform Systems: An Example from the Turonian Wata Formation, Gulf of Suez, Egypt. J. Petrol. Sci. Eng., 212, 110272. https://doi.org/10.1016/j.petrol.2022.110272
- 27. Shehata, A.A., Kassem*, A.A., Brooks, H.L., Zuchuat, V., Radwan©, A.E, 2021b. Facies analysis and sequence-stratigraphic control on reservoir architecture: Example from mixed carbonate/siliciclastic sediments of Raha Formation, Gulf of Suez, Egypt. Mar. Pet. Geol., 131, 105160. doi.org/10.1016/j.marpetgeo.2021.105160
- **28. Shehata, A.A.**, Osman, O., Nabawy©, B. **2021a**. Neural network application to petrophysical and lithofacies analysis based on multi-scale data: An integrated study using conventional well log, core and borehole image data. J. Nat. Gas Sci. Eng., 93, 104015. doi.org/10.1016/j.jngse.2021.104015
- 29. Kassem*©, A.A., Hussein, W.S., Radwan, A.E., Anani, N., Abioui, M., Jain, S., Shehata, A.A., 2021. Petrographic and diagenetic study of siliciclastic Jurassic sediments from the northeastern margin of Africa: Implication for reservoir quality. J. Petrol. Sci. Eng., 200, 108340. https://doi.org/10.1016/j.petrol.2020.108340
- **30.** Shehata©, A.A., El Fawal, F.M., Ito, M., Aboulmagd, M.A., Brooks, H.L., **2020**. Senonian platform-to-slope evolution in the tectonically-influenced Syrian Arc sedimentary belt: Beni Suef Basin, Egypt. J. Afr. Earth Sci. 170, 103934. https://doi.org/10.1016/j.jafrearsci.2020.103934
- 31. Sakran, Sh, Shehata©, A.A., Osman, O., El Sherbiny, M., 2019. Superposed tectonic regimes in West Beni Suef basin, Nile Valley, Egypt: implications to source rock maturation and

- hydrocarbon entrapment. J. Afr. Earth Sci. 154, 1–19. https://doi.org/10.1016/j.jafrearsci.2019.03.010
- **32.** Shehata©, A.A., El Fawal, F.M., Ito, M., Abdel Aal, M.H., Sarhan, M.A., **2019**. Cenomanian—Turonian depositional history of a post–Gondwana rift succession in the west Beni Suef basin, Egypt. J. Afr. Earth Sci. 150, 783–798. https://doi.org/10.1016/j.jafrearsci.2018.10.006
- **33.** Shehata©, A.A., El Fawal, F., Abdel Aal, M.H., Aboulmagd, M.A., 2018: Seismic Facies Interpretations and Depositional Sequences of the Cretaceous Sediments in Beni Suef Basin, Nile Valley, Egypt. IOSR Journal of Applied Geology and Geophysics., Volume 5, Issue 5 Ver. II., PP 57-69.
- **34. Shehata**©, **A.A.**, El Fawal, F.M., Ito, M., Abdel Aal, M.H., Sarhan, M.A., **2018**. Sequence stratigraphic evolution of the syn-rift early cretaceous sediments, west Beni Suef basin, the Western Desert of Egypt with remarks on its hydrocarbon accumulations. Arab. J. Geosci. 11, 313–331. https://doi.org/10.1007/s12517-018-3688-y
- **35.** El Fawal, F., Hassan, H., **Shehata**©, **A., 2014**: Depositional Trends and Sedimentary Environments of the Cenomanian-Turonian Sediments along G. Nezzazat-G. Ekma, South-West Sinai, Egypt. IOSR Journal of Applied Geology and Geophysics., Volume 2, Issue 2 Ver. II. (Mar-Apr. 2014), PP 27-38.