Abdelhamid Mohamed Abdelhamid Mohamed Salman
Associate Professor | *Sedimentology & Paleoclimatology*

Contact

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Education

Degree	Field	Institution	Year
Postdoctoral	Paleoclimatology	Institute of Geology and Geophysics, Chinese Academy of Sciences, Beijing, China	2023–2026
Ph.D.	Sedimentary rocks and Sedimentation	Geology Department, Faculty of Science, Assiut University, Egypt	2013–2017
M.Sc.	Sedimentary rocks	Geology Department, Faculty of Science, Assiut University, Egypt	2009–2013
B.Sc.	Geology	Geology Department, Faculty of Science, Assiut University, Egypt	2004–2008

Research Experience

Position	Institution	Duration
Associate Professor	Geology Department, Faculty of Science, Assiut University, Egypt	2023– Present
Postdoctoral Fellow	Institute of Geology and Geophysics, CAS, Beijing, China	2023– 2026
Assistant Professor	Geology Department, Faculty of Science, Assiut University, Egypt	2018 – 2022
Research Assistant / PhD	Geology Department, Faculty of Science, Assiut University, Egypt	2013 – 2017
Demonstrator	Geology Department, Faculty of Science, Assiut University, Egypt	2009– 2013

Research Interests

My research lies at the intersection of sedimentology, sequence stratigraphy, diagenesis, biostratigraphy, and organic geochemistry. Therefore, my work focuses on evaluating the sedimentary facies and sequence stratigraphy of key stratigraphic successions in Egypt by integrating outcrop observations, well-log analyses, and seismic data. This multidisciplinary approach aims to reconstruct sedimentary basin configurations and evaluate their hydrocarbon potential. Building on this foundation, my postdoctoral research focuses on the Paleocene–Eocene Thermal Maximum (PETM) hyperthermal event. By integrated biological, sedimentological, and geochemical datasets across Late Paleocene to Eocene strata in Egypt, I investigate paleoclimatic and paleoenvironmental shifts across the PETM. Specifically, I examine the potential triggers and environmental feedbacks of the PETM, as well as the physiological and evolutionary responses of marine organisms (particularly foraminifera) to rapid extreme warming.

Key Publications (selected)

- **Salman, A.M.,** Chen, Z., Wang, X.-T., Cui, L., Li, H., Wang, X., 2026. Multi-proxy evidence for environmental perturbations during the Paleocene-Eocene Thermal Maximum record on the southern Tethyan shelf. *Paleoceanography and Paleoclimatology* 41, e2026PA005428. https://doi.org/10.1029/2026PA005428
- **Salman, A.M.,** Chen, Z., Wang, X.-T., Cui, L., Li, H., Wang, X., 2026. Multi-stressor-driven biotic upheaval across the PETM: A perspective from elemental and isotope ratios of foraminiferal and bulk carbonate in the southern Tethyan shelf. Global and Planetary Change, 267, 105751. https://doi.org/10.1016/j.gloplacha.2026.105751.
- **Salman, A. M.,** Sarhan, M. A., Eltwargy, E., Elhossainy, M. M., 2026. Depositional sequence and hydrocarbon reservoir evaluation of the Cretaceous succession, Ras Budran Field, Gulf of Suez Basin, Egypt. Scientific Reports, 16, 28926. https://doi.org/10.1038/s41598-026-68530-6
- Wang, X.-T., **Salman, A. M.,** Jin, C.-S., Chen, Z., Lü, P., Wang, Y., et al., 2026. Spatial heterogeneity of global organic matter accumulation during the PETM. *Journal of Geophysical Research: Atmospheres* 131, e2026JD046787. https://doi.org/10.1029/2026JD046787
- **Salman, A.M.,** Wang, X.-T., Chen, Z., Cui, L., Li, H., Wang, X., 2026. Extreme warming and pulsed volcanism during the Paleocene-Eocene Thermal Maximum. Science China Earth Sciences, 69(7), 2561–2574. https://doi.org/10.1007/s11430-025-1944-y
- **Salman, A.M.,** Wang, X.-T., Chen, Z., Li, H., Cui, L., Obaidalla, N.A., et al., 2026. Nitrogen cycle suppression and enhanced carbon burial during the Paleocene-Eocene thermal maximum, recorded from Tarfa section, Egypt (Tethys Ocean). Global and Planetary Change, 261, 105408. https://doi.org/10.1016/j.gloplacha.2026.105408
- **Salman, A. M.,** Sarhan, M. A., Elhossainy, M. M., 2025. Matulla reservoir in the Ras Budran Field, Offshore Gulf of Suez Basin: Sequence stratigraphy and petrophysical evaluation. Euro-Mediterranean Journal for Environmental Integration, 10, 5455–5472. https://doi.org/10.1007/s41207-025-00915-x
- **Salman, A. M.,** Sarhan, M. A., Elhossainy, M. M., 2023. Sequence stratigraphy and petrophysical investigation of fluvial sediments: A case study Nubia Sandstone Ras Budran Field, Gulf of Suez, Egypt. Journal of Iberian Geology 49, 365–385. https://doi.org/10.1007/s41513-023-00221-x
- **Salman, A. M., 2023**. The upper cretaceous carbonate sediments of the Ras Budran Field, Gulf of Suez, Egypt: stacking patterns and depositional controls. Carbonates Evaporites 38, 71. https://doi.org/10.1007/s13146023-00896-4
- **Salman, A. M**., Mahfouz, K. H., El-Sheikh, I., Metwally, A. A., 2021. Facies analysis, cyclicity and biostratigraphy of the Upper Cretaceous Sudr Formation, Wadi El Dakhl, West Gulf of Suez, Egypt: Implications for sea-level changes and tectonics. Carbonates Evaporites 36, 68. https://doi.org/10.1007/s13146-021-00736-3
- Elhossainy, M. M., **Salman, A. M.,** Sarhan, M. A., Al-Areeq, N. M., Alrefaee, H. A., 2021 Sequence stratigraphic analysis and depositional evolution of the Upper Cretaceous deposits in Ras Budran oil field, Gulf of Suez, Egypt. Arabian Journal of Geosciences 14, 1189. https://doi.org/10.1007/s12517-021-07470-z
- El-Younsy, A.-R.M., **Salman, A.M.,** 2021. Sequence stratigraphic framework of the Upper Eocene–Oligocene succession, northwest Birket Qarun, Fayum-Egypt. Environmental Earth Sciences 80(9), 350. https://doi.org/10.1007/s12665-021-09646-y.
- **Salman, A. M.,** 2021. Diagenetic characteristics and sequence stratigraphy on carbonate deposits: A case study from Wadi El Dakhl, West Gulf of Suez, Egypt. Arabian Journal of Geosciences 14(12), 1133. https://doi.org/10.1007/s12517-021-07472-x

Technical Skills

- **Isotope geochemistry:** Clumped isotopes (Δ_{47}), $\delta^{13}C$, $\delta^{18}O$, $\delta^{15}N$, Hg analysis
- **Elemental analysis:** Major/trace elements (ICP-MS, XRF), SEM
- **Sedimentology:** Identifications sedimentary minerals and rocks, and diagenetic processes
- **Foraminiferal techniques:** picking, investigations, analysis
- **Data processing:** RStudio, Excel, Adobe (Illustrator, Photoshop), CorelDraw Graphics Suite (2022), Interactive Petrophysics (IP; v4.2), Schlumberger petrel software package (2017 version)

Grants, Awards & Fellowships

- Postdoctoral Fellow/Researcher, State Key Laboratory of Lithospheric and Environmental Coevolution, Institute of Geology and Geophysics, Chinese Academy of Sciences (IGGCAS), Beijing, China, June 2023-June 2026

Conference Presentations (selected)

- **Salman, A.M.**, et al. (2026). Integrated Seismic, Petrophysical, and Sequence Stratigraphic approaches of Cretaceous Successions in the Ras Budran Field, Gulf of Suez, Egypt. ***13rd International Conference on the Geology of Africa, Assiut University,*** Assiut, November 4-5, Egypt
- **Salman, A.M.**, et al. (2026). Constraining hyperthermal warming and pulsed volcanism during the PETM using clumped isotope thermometry and mercury concentrations. ***4th National Symposium on Gas Isotope Technology and Its Applications in Earth Sciences***, Xi'an May 7-10, China
- **Salman, A.M.**, et al. (2025). Nitrogen cycle suppression and enhanced carbon burial during the Paleocene-Eocene Thermal Maximum, recorded from Tarfa section-Egypt (Tethys Ocean). ***International Symposium on the Tethys Evolution and Biotic and Environmental Responses***, Beijing September, 20-23, China
- **Salman, A.M.**, et al. (2024). A drastic environmental change across the Paleocene Eocene Thermal Maximum (Tethyan water, Egypt). ***6th International Conference on Paleogeography ICP6***, Nanjing May, 17-20, China

Teaching & Mentoring

- Teaching courses including sedimentary rocks and depositional environments, basin Analysis, diagenesis, paleoecology and biostratigraphy for undergraduate, Geology Department, Assiut University
- Supervised master and PhD students essentially in sedimentology and sequence stratigraphy.

Languages

- Arabic: Native
- English: Very good
- Chinese/French: Basic

Professional Memberships

- Member in Egyptian Syndicate of Scientific Professions (ESSP)
- Member in Geological Society of Egypt (GSE)
- Member in Paleontological Society of Egypt (PSE)