


Ali Mohamed

GRA at the University of Texas at Austin
(512) 947-5596 | ali.mohamed@austin.utexas.edu | 
[210 E 24th St, Austin, TX 78712. Office: GLT 4.214](#)

EDUCATION

Ph.D., Petroleum Engineering, Dec. 2026

The University of Texas at Austin.

I'm Interpreting the sequence stratigraphy and margin physiography as well as characterizing methane and methane-hydrates around the Cape Fear slide, offshore North Carolina, USA. I developed a hybrid optimization approach for evaluating gas-hydrate saturation through seismic inversion using the effective medium theory. Ongoing work includes assessment of hydrate dissociation-triggered tsunami that may endanger the East US coast.

CGPA: 3.4/4.00

M.Sc., Petroleum Geo-Engineering, Jul. 2020

Miskolc university, Hungary.

Characterized the petrophysical parameters of a Polish field using the pore network modelling on core CT images.

GPA: 4.55/5.00 (Summa Cum Laude)

B.Sc. Geology, Jul. 2015

Aswan university, Egypt.

GPA: 85/100 (Excellence with honor)

INDUSTRY EXPERIENCE

Reservoir Geologist, O&GD (Sand Hill Petroleum) Company, Budapest, Hungary. Jul. 2020-Aug. 2020

- Interpreted the 4 Szolnok reservoirs horizons through 3D seismic survey and seismic to well tie
- Built a static geological model and recommended development well locations.

Geologist, the AAPG Imperial Barrel Award 2019 competition. March 2019

- Geologist in Miskolc University team, Europe Region Semifinal.

ACADEMIC EXPERIENCE

Graduate Research Assistant, The university of Texas at Austin. Jan 2023-Dec. 2026

- Interpreting seismic sequence stratigraphy and processes shaping the US Atlantic margin morphology.
- Developed hybrid optimization for seismic inversion.
- Evaluating Methane and Methane-hydrate saturations and their host's elastic and petrophysical properties.

Visiting Scholar, The University of Texas at Austin. Jun 2022- Oct 2022

- I developed and published a scale-independent algorithm for classifying homogeneous and heterogeneous rocks based on their 2D or 3D CT images.

Assistant Lecturer, Aswan University, Egypt. Sept 2020 – Jan 2023

- Taught sedimentary petrography under the microscope.
- Created an in-house GUI for practicing thin section images during COVID lockdown.

Teaching Assistant, Aswan University, Egypt. Feb 2016 – Aug 2018

- Taught sedimentary petrography under the microscope.

SKILLS

Geology software: Petrel, Arc GIS, ENVI, Golden Software Surfer, Image J, Paraview.

Programming languages: Python; data analytics, processing and visualization, object-oriented coding, mapping.

Documentation tools: Microsoft Office Suite.

English: IELTS (Listening 7.5; Reading 7.5; Writing 6.5; Speaking 6.5; Overall 7)

AWARDS AND ACTIVITIES

- S.P. Yates Memorial Endowment for Graduate Fellowships in Petroleum Engineering. Sept 2024
- Graduate Student Professional Development Award from the University of Texas at Austin. Dec 2023
- Research fellowship at the University of Texas at Austin. Granted through the United States Agency for International Development. Jun 2022-Oct 2022
- Stipendium Hungaricum Scholarship for M.Sc. degree at University of Miskolc, Hungary. (Joint program between Egypt and Hungary). June 2018-Aug 2020
- Faculty award for scientific distinction for 4 consecutive years. 2011-2015
- Ministry of Higher Education award for distinguished students. 2012

Professional membership and student organizations: SPE, AGU, ARMA.

SELECTED PUBLICATIONS

Mohamed, A., Prodanović, M., 2023. Scale-Independent Rock Heterogeneity Classification Algorithm Applied to Microtomography Images. *Transp. Porous Media*. <https://doi.org/10.1007/s11242-023-02008-1>

Mohamed, A., Emam, A., Zoheir, B., 2023. SAM-HIT: A Simulated Annealing Multispectral to Hyperspectral Imagery Data Transformation. *Remote Sens.* 15, 1154. <https://doi.org/10.3390/rs15041154>

González-Guzmán, R., Weber, B., **Elabd, M.A.**, Solís, C., Bernard-Romero, R., Velasco-Tapia, F., Marín-Camacho, P., 2022. Petrogenesis of Holocene siliceous sinters from the Los Geysers geothermal field, northern Trans-Mexican Volcanic Belt. *J. Volcanol. Geotherm. Res.* 431, 107640. <https://doi.org/10.1016/j.jvolgeores.2022.107640>

SELECTED CONFERENCES

Mohamed, A., Gibson, J., Daigle, H., Miller, N.C., Bécel, A., Baldwin, W., 2024. Cenozoic sequence stratigraphy of the Cape Fear region, central US Atlantic margin. American Geophysical Union (AGU) poster presentation.

Mohamed, A., Daigle, H., Gibson, J., Bécel, A., Miller, N.C., 2024. Cenozoic evolution of the Cape Fear region, U.S. Atlantic margin. American Geophysical Union (AGU) poster presentation.

Mohamed, A., Daigle, H., Bécel, A., Miller, N.C., Gibson, J., Grall, C., Shukla, K., Sharma, S., 2023. A hybrid optimization approach for seismic-derived petrophysical characterization of gas hydrates around the Cape Fear Slide. American Geophysical Union (AGU) poster presentation.

Daigle, H., Bécel, A., Grall, C., Miller, N.C., Gibson, J., Acquisto, T., Baldwin, Wayne, Danforth, W., Dupuis, L.-M., Farnsworth, M., Foster, D., Le Gall, E., **Mohamed, A.**, 2023. Subsurface gas occurrence near the Cape Fear submarine landslide complex on the U.S. Atlantic margin. American Geophysical Union (AGU) poster presentation.

Prodanović, M., Esteva, M., Ketcham, R., McClure, J.E., Chang, B., Santos, J.E., **Mohamed, A.**, Turhan, C., 2023. Open Science Tools to Democratize Use of 3D Geomaterial Data. American Geophysical Union (AGU) poster presentation.