Mostafa Tabatabaei

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Education

University of Tehran   **Sep 2018 – Sep 2022**
Bachelor of Science in Petroleum Engineering   *GPA: 3.6/4*

Research Interest

- Machine Learning | Deep Learning
- Optimization
- Underground Gas Storage (UGS)
- Enhance Oil Recovery (EOR)

Experience

Internship   **July 2021 – Sep 2021**
Persia Oil and Gas Company   *Tehran, Iran*
- Analyzing the effect of various operational parameters on multi-phase flow behavior by OLGA software

Research Assistant   **Jan 2021 – Present**
Institute of Petroleum Engineering (IPE), Tehran University   *Tehran, Iran*
- Supervisor: Dr. Behnam Sedaee

Teaching Assistant   **Jan 2022 – Jun 2022**
Institute of Petroleum Engineering (IPE), Tehran University   *Tehran, Iran*
- Reservoir Engineering II
- Instructor: Dr. Behnam Sedaee

Publications

- Mostafa Gilavand, Zahra Almahmoodi, **S. Mostafa Tabatabaei**, Fatemeh Eghbali, Behnam Sedaee, Shahrzad Sajadi, "New dynamic methods of reservoir cut off determination at heterogeneous reservoir: Azadeghan field case study", 3rd International Conference on the New Technologies in the Oil, Gas and Petrochemical Industries.

Projects

Carbon Capture and Storage | *Python, Curve Fit*   **Sep 2021 – Present**
- Collecting all the experimental data available in the CO_2 - brine system
- Investigation of various capillary pressure and relative permeability models to identify appropriate model for simulation and prediction of flow behavior in the CO_2 - brine system
- **S. Mostafa Tabatabaei**, Nikta Attari, S. Amirali Panahi, Mohsen Faramarzi-Palangar, Behnam Sedaee, "A comprehensive study of capillary pressure and relative permeability models in CO_2–brine system", Journal of Natural Resources Research (NRR), 2022. (*Under review*)

EOR Screening | *Python, Machine Learning, Optimization*   **Nov 2021 – Aug 2022**
- Implementation of Sparrow Search Optimization Algorithm (SSA)
- Training an artificial neural network (ANN) with deep learning for EOR screening
- Optimization of ANN by SSA
- **S. Mostafa Tabatabaei**, Nikta Attari, S. Amirali Panahi, Mojtaba Asadian-Pakfar, Behnam Sedaee, "EOR screening using optimized artificial neural network by Sparrow Search Algorithm", Journal of Petroleum Science and Engineering (JPSE), 2022. (*Under review*)

Well Placement Optimization | *Python, Eclipse, Optimization*   **Sep 2022 – Present**
- Optimization of production and injection well locations with Sparrow Search Algorithm
- Using a new index for creating Quality map
- Case Study: Yadavaran Oil Field

Oil and Gas Field Development Strategy   **Nov 2022 – Present**
- A study on the recovery factor of successful fields in the world
- Investigating the laws and policies of governments regarding to oil and gas field development

Material Balance For Hydrate-capped Gas Reservoirs | *Coure Project*   **Mar 2021 – May 2021**
- A study on the formation of gas hydrate
- Material balance analysis in hydrate-capped gas reservoirs

Sudoku Solver Application | *Course Project*   **Jan 2019**
- A GUI based application for solving Sudoku

Honors and Awards

Top Rank Certification at Faculty of Engineering (FOE)   **Sep 2021**
- Ranked 4th among 25th student

Technical Skills

Programming/Scripting: Python, Visual Basic, LaTeX
Developer Tools: VS Code, Linux, GitHub
Frameworks: Numpy, Pandas, Tensorflow, Scikit-learn, Matplotlib
Softwares: Saphir, OLGA, Microsoft Office
Soft skills: Teamwork, Project Management, Fast Learner

Languages

Persian: Native
English: Fluent

Relevant Course

- Reservoir Rock Properties (4/4)
- Reservoir Engineering I, II (4/4)
- Enhanced Oil Recovery (4/4)
- Well Testing (4/4)
- Well Loging (4/4)
- Production Engineering (4/4)

References

🛈 **References, Further information, and Proofs are available upon Request**