SAEED TELVARI

PHD APPLICANT

+98992-167-1643 | telvari.saeed@gmail.com | Tehran, Iran
Github | STelvari | Website

HIGHLIGHTS

- Reservoir Engineer: A solid foundation in reservoir simulation with proficiency in Eclipse and MRST
- ML Researcher: 2+ years of experience in developing and deploying deep learning models.
- Programmer: A proficient Python programmer with 3+ years experience.

RESEARCH INTERESTS

- AI Applications in Geo-energy
- CCUS
- Reservoir Simulation
- Pore-scale Modeling

EDUCATION

Ph.D. of Petroleum Engineering
Heriot-watt University
2024 - 2028

- Thesis:
  - Developing Vertical Equilibrium Models for Simulating CO2 Storage in Depleted Gas Reservoirs
  - Supervisor: Florian Doster

M.Sc. of Petroleum Engineering - Reservoir Engineering
Amirkabir University
2022 - 2024

- GPA: **3.65/4 (17.23/20)**
- Thesis:
  - Investigation of Machine Learning Methods in Upscaling Fine-scale Discrete Fracture Models
  - Supervisor: Mohammad Sharifi

B.Sc. of Petroleum Engineering
Amirkabir University
2018-2022

- GPA: **17.43/20**
- Thesis:
  - Prediction of two-phase flow properties for digital sandstones using 3D convolutional neural networks
  - Supervisor: Mohammad Sharifi

PUBLICATIONS

- Sayyafzadeh, M., **Telvari, S.**, Guerillot, D., & Sharifi, M. (2024). **Accelerated Permeability Upscaling: A CNN Approach**. (Submitted)
- **Telvari, S.**, Sayyafzadeh, M., Siavashi, J., & Sharifi, M. (2023). **Prediction of two-phase flow properties for digital sandstones using 3D convolutional neural networks**. Advances in Water Resources, 176, 104442.

TA EXPERIENCE

Advanced Naturally Fractured Reservoirs
Amirkabir University
2023 Autumn

- Delivering lectures on reservoir simulation by Eclipse
- Designing & grading home works

Advanced EOR
Amirkabir University
2024 Spring

- Delivering lectures on reservoir simulation by Eclipse & Petrel
- Designing & grading course projects

PROJECTS

Developing an extended local upscaling module in MRST

- Remodeled a local upscaling module with periodic boundary conditions into an extended local one
- Implemented and compared with local and fine scale pressure field

Automatic interpretation of well tests

- Implemented LSTM to predict reservoir properties from pressure derivative and dp
- Developed a script to match analytical model to data

Conjugate heat transfer between rock and fracture fluid using OpenFOAM v9

- Extracted and partitioned a micro-scale 3D image of a fractured granite rock
- Simulated injection of CO2 with a lower temperature into a fractured granite with high temperature

Identify formation lithology from well logs using ML

- Implemented FNN by pytorch and Decision Tree by tensorflow
- Implemented clustering algorithms such as SVM and k-means

HONORS AND AWARDS

- Granted direct admission for graduate study from Talented Student Office of Amirkabir University of Technology
- Ranked within the top 2% in Iranian University Entrance Exam for master's degrees
- Received national undergraduate scholarship (full tuition waiver)

SKILLS

- **Programming**: Python, C/C++, MATLAB, LATEX
- **Frameworks**: MRST, TensorFlow, PyTorch, OpenCV, OpenPNM
- **Software**: OpenFOAM, PerGeos, Eclipse, Petrel
- **Tools/IDE**: Linux, Docker, Jupyter, VSCode, Git

CERTIFICATES

- Python 3 Master Course — Udemy
- Machine Learning — Coursera
- Deep Learning & Neural Networks — Coursera
- The Basics of Transport Phenomena — Edx
- TensorFlow for Deep Learning with Python — Udemy

LANGUAGES

- English: Fluent
  - TOEFL: 108/120 (R:30, L:28, S:22, W:28)
- Persian: Native

REFERENCES

- Mohammad Sharifi
  - Supervisor (m_sharifi@aut.ac.ir)
- Mohammad Sayyafzadeh
  - Advisor (mohammad.sayyafzadeh@adelaide.edu.au)
- Javad Siavashi
  - Research Associate (javad.siavashi@aut.ac.ir)

EXTRA-CURRICULAR EXPERIENCE

SPE Student Chapter *Amirkabir University*

2019 & 2022

- Web Development Coordinator: Led the design and development of the chapter's official website
- Event Technology Coordinator: Collaborated with event organizers to identify and fulfill IT and AV requirements for seminars and workshops