Amir Hossein Mardan

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Research Interest

- Seismic data interpretation
- Machine learning
- Numerical modeling
- Geomechanics

Education

INRS (Quebec, Canada) *Sep./2018-Now*
Ph.D. Geoscience
GPA: 4/4

Amirkabir University of Technology (Tehran, Iran) *Sep./2014-Sep./2016*
M.Sc. Petroleum engineering (Exploration seismology)
GPA: 3.83/4

Science and Research Branch of Islamic Azad University (Tehran, Iran)
B.Sc. Petroleum engineering (Exploration) *Sep./2009-Sep./2013*
GPA: 3.75/4

Research Experience

Application of pattern recognition in detecting buried channels in seismic data
(M.Sc. Thesis)
Petroleum Engineering Department *July/2015-Sep./2016*
Amirkabir University of Technology
Supervisor*: Dr. Abdolrahim Javaherian*
Grade*: 20/20*

Porosity measurement using NMR well logging
(B.Sc. Thesis)
Petroleum Engineering Department *July/2012-July/2013*
Science and Research Branch of Islamic Azad University of Tehran
Supervisor*: Dr. Kamyar Ahmadi*
Grade*: 19.25/20*

Teaching Experience

- *Autumn 2017,* **"Vista (Seismic Data Processing) and MATLAB and its application in seismology"**
  MSc. students, Amirkabir University of Technology
- *Autumn 2017,* **"Reservoir Engineering, Well logging, Geomechanics, and Drilling Engineering"**
  BSc. students, Islamic Azad University
- *Autumn 2016,* **"Evaluation and estimation of petroleum reservoirs"**
  BSc. students, Islamic Azad University
- *Autumn 2015,* **"MATLAB and its application in seismology"**
  MSc. students, Amirkabir University of Technology

Work Experience

- **Lecturer at University**
  Islamic Azad University, Tehran South and Meymeh Branches *Sep/2016 - Jan/2018*
- **Representative of European Association of Geoscience and Engineering (EAGE)**
  4^{th} YES Congress, Tehran *Aug/2017*
- **Representative of Iranian Geophysical Society (IGS)**
  79^{th} EAGE Conference and Exhibition, Paris *June/2017*

Major Graduate Courses

- *Advanced Petroleum Organic Geochemistry*
- *Digital Filters*
- *Interpretation of Seismic Reflection Data*
- *Sedimentary Basin Analysis*
- *Seismic Data Acquisition*
- *Seismic Signature in Anisotropic Media*
- *Seismic Data Processing*
- *Subsurface Geology*
- *Finite Element*
- *Advanced Petrophysics*
- *Exploration Seismology*
- *Machine Learning (Online Course)*
- *Seismic Attributes*
- *Seismic Inversion for Acoustic Impedance Recovery*
- *Seismic Rock Physics*
- *Application of Advanced Rock Mechanics in Petroleum Engineering*

Softwares

- **MATLAB (Advanced)**
- **Petrel (Intermediate)**
- **Python (Intermediate)**
- **HampsonRussell (Elementary)**
- **OpendTect (Advanced)**
- **LaTeX(Intermediate)**
- **Vista (Intermediate)**

Publications

- **Mardan, A. H.**, *Javaherian, A., and Mirzakhanian, M., 2018, Channel detection using unsupervised learning techniques, 80^{th} EAGE Conference and Exhibition 2018, Copenhagen.*
- **Mardan, A. H.**, *Javaherian, A., and Mirzakhanian, M., 2017, The use of self-organizing maps to identify channel facies in one of the Iranian oilfields, Journal of Exploration and Production, 146, 46-51.*
- **Mardan, A. H.**, *Javaherian, A., and Mirzakhanian, M., 2017, Channel characterization using support vector machine, 79^{th} EAGE Conference and Exhibition 2017, Paris.*
- **Mardan, A. H.**, *Javaherian, A., and Mirzakhanian, M., 2017, Principal and independent components analysis for channel detecting, 3^{rd} Seminar of Petroleum Geophysical Exploration, Tehran.*
- **Mardan, A. H.**, *Javaherian, A., and Mirzakhanian, M., 2016, Channel detection using unsupervised learning algorithms, The 17^{th} Iranian Geophysical Conference, Tehran.*
- **Mardan, A. H.**, *Javaherian, A., and Mirzakhanian, M., 2015, A comparison of unsupervised learning techniques for channel detection in 3D seismic data acquired over the Strait of Hormuz, Journal of Research on Applied Geophysics,* **1**, *2, 90-102.*
- **Mardan, A. H.**, *and Javaherian, A., 2015, Improvement of k-means clustering algorithm for fault detection in seismic data, The 3^{rd} National Iranian Petroleum Conference, University of Kerman.*

Languages

- **Farsi**
- **English**
- **French**

Award and Honor

- *Ranked 4^{th} in MSc Entrance Exam 2014 of Petroleum Exploration Engineering in Iran.*