

Curriculum Vitae

Personal Details

First Name: Mahnaz

Last Name: Abedini

Date of Birth: 22/01/1992

Nationality: Iranian

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ResearchGate Address: https://www.researchgate.net/profile/Mahnaz-Abedini?ev=hdr_xprf



Education

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| 2018-2023 | Doctor of Philosophy, Mining Exploration Engineering, Shahrood University of Technology, Iran, GPA (19.33 out of 20) Ph.D. Project: Exploration Methods for Deep and Hidden Mineral Deposits in the Toroud-Chah Shirin Metallogenic Belt. |
| 2014-2017 | Master of Science, Petroleum Exploration Engineering, Shahrood University of Technology, Iran, GPA (18.17 out of 20) M.Sc. Project: Reservoir Rock Permeability Assessment Using Image Analysis and Results of NMR Log in the South of Iran. |
| 2010-2014 | Bachelor of Science, Mining Exploration Engineering, Shahrood University of Technology, Iran, GPA (16.57 out of 20) B.Sc. Project: Exploration and Processing of Lapis Lazuli. |

Honors

- Ranked 1st among B.Sc. students of Mining Exploration Engineering at Shahrood University of Technology (2014)
- Ranked 1st among M.Sc. student of Petroleum Exploration Engineering at Shahrood University of Technology (2017)
- Ranked 2nd among Ph.D. students of Mining Exploration Engineering at Shahrood University of Technology (2023)

Scientific Membership

- Iranian Mining Engineering Organization (Since 2017)
- Iranian Society of Economic Geology

Papers and Publications

- **Abedini, M.**, Ziiai, M. and Ghiasi-Freez, J., 2018. The application of Committee machine with particle swarm optimization to the assessment of permeability based on thin section image analysis. *International Journal of Mining and Geo-Engineering*, 52(2), pp.177-185. (<https://doi.org/10.22059/ijmge.2018.223076.594649>)
- **Abedini, M.**, Ziiai, M., Negahdarzadeh, Y. and Ghiasi-Freez, J., 2018. Porosity classification from thin sections using image analysis and neural networks including shallow and deep learning in Jahrum formation. *Journal of Mining and Environment*, 9(2), pp.513-525. (<https://doi.org/10.22044/jme.2018.6386.1458>)
- Timkin, T., **Abedini, M.**, Ziiai, M. and Ghasemi, M.R., 2022. Geochemical and hydrothermal alteration patterns of the abrisham-rud porphyry copper district, semnan province, Iran. *Minerals*, 12(1), p.103. (<https://doi.org/10.3390/min12010103>)
- **Abedini, M.**, Ziiai, M., Timkin, T. and Pour, A.B., 2023. Machine Learning (ML)-Based Copper Mineralization Prospectivity Mapping (MPM) Using Mining Geochemistry Method and Remote Sensing Satellite Data. *Remote Sensing*, 15(15), p.3708. (<https://doi.org/10.3390/rs15153708>)
- **Abedini, M.**, Ziiai, M., Timkin, T. and Pour, A.B., 2023. Big Data analytics for mining geochemistry of gold mineralization: The Gandy Gold Deposit, the Toroud-Chah Shirin (TCS) belt, north Iran. *Ore Geology Reviews*, p.105653. (<https://doi.org/10.1016/j.oregeorev.2023.105653>)

Conference Participations

- **Abedini, M.** and Abedi, A., 2015. A review on exploration methods of lapis lazuli deposits around the world. 22nd Symposium of Crystallography and Mineralogy of Iran, Shiraz, Iran. (In Persian)
- **Abedini, M.**, Ziiai, M. and Ghiasi-Freez, J., 2017. Reservoir Rock Permeability Assessment Using Thin Section Image Analysis and Intelligent Systems. 2nd National Conference on Petroleum Geomechanics, Tehran, Iran. (In Persian) (<https://civilica.com/doc/611506/>)
- Javani, S., Negahdarzadeh, Y., **Abedini, M.**, Ziiai, M., Kadkhodaie, A. and Ghiasi-Freez, 2017. Identification of Carbonate Layers with Reservoir Quality Using Intelligent Models. 2nd National Conference on Petroleum Geomechanics, Tehran, Iran. (In Persian) (<https://civilica.com/doc/611632/>)
- **Abedini, M.**, Ziiai, M. and Ghiasi-Freez., 2017. Permeability modeling of reservoir rock using petrographic image analysis and artificial neural network and comparing with the result of NMR log. 3rd Symposium of Sedimentological Society of Iran, Tehran, Iran. (In Persian)
- **Abedini, M.**, Shakoury, M., Ziiai, M., Pouyan, A. A. and Sohrabi, S., 2017. Textural identification of sedimentary facies of source and reservoir rocks with image analysis and neural network. 3rd Symposium of Sedimentological Society of Iran, Tehran, Iran. (In Persian)
- **Abedini, M.** and Ziiai, M., 2019. Reservoir Rock Permeability Prediction Using Image Analysis and Intelligent Systems. *Topical Issues of Rational Use of Natural Resources*, Russia.

- Djawadi, M., **Abedini, M.**, Ziaii, M. and Ziaei, M., 2020. Application of Mining Geochemistry Methods for Exploration of Hydrothermal Copper Deposits in Milooyeh Region Northeast of Sirjan. 8th Iranian Mining Engineering Conference, Birjand, Iran. (In Persian)

- Ebrahimi, M., Kamkar-Rouhani, A., Sadat, S. and **Abedini, M.**, 2020. Exploration of Silica Mineralization Using GPR Geophysical Method in South Toroud Area, Shahrood Region. ACIMD-Conference on Iranian Gemstone Deposits, Shahrood, Iran. (In Persian)
(<https://conf.isc.ac/fa/article.php?paperId=532836&cnfId=3485>)

- Shakoei, M., Abedi, A. and **Abedini, M.**, 2020. Investigation of silica mineralization chemistry in the agate-jasper plain of Chah Andoo, SW Damqan by X-Ray Microprobe. ACIMD-Conference on Iranian Gemstone Deposits, Shahrood, Iran. (In Persian)
(<https://conf.isc.ac/fa/article.php?paperId=532848&cnfId=3485>)
(<https://cnf.shahroodut.ac.ir/fa/article.php?lrId=28&cnfId=7>)

Practical Internship

- Gemology course at Science and Technology Park (2011)
- Job training at East Alborz Coal Company, department of exploration, Acquaintance with the main topics of mining engineering (2014)

Technical Workshops

- 1st Workshop on Iranian Metallogeny presented by Dr. Karimpour and Dr. Ghorbani (2016).
- 2nd Workshop on Iranian Metallogeny (Copper deposit) presented by Dr. Malekzadeh Shafaroudi, Dr. Meshkani, Dr. Mousivand and Dr. Rajabi (2016).
- 3rd Workshop on Iranian Metallogeny (Iron Deposit) presented by Mr. Samani, Dr. Jafari-Tehrani, Dr. Shafaie, Mr. Norian, Dr. Gol-Mohamadi and Dr. Meshkani (2017).
- 4th Workshop on Iranian Metallogeny (Gold Deposit) presented by Dr. Alaminia, Dr. Malekzadeh Shafaroudi, Dr. Asadi and Dr. Tajeddin (2018).
- Workshop on Gemology Colored Gemstones presented by Mr. Pishbin (2020).
- Workshop on Key Geological Indicators for the Exploration of Lead and Zinc Deposits presented by Dr. Alaminia and Dr .Mahmoodi (2022).

Computer Skills

- Matlab programming and its toolboxes (Neural Networks, Fuzzy Logic, Optimization Algorithm, Deep Learning)
- Basic computer literacy (ICDL 1, ICDL 2)
- Skilled at mining exploration software programs: Surfer, SeisImager, GIS.
- Skilled at petroleum engineering software programs: Geolog.

Technical Membership

- Iranian Mining Engineering Organization (IMEO)

Work Experience

January 2018 - September 2018: Project Engineer at ThinkXpert Company, Iran.

December 2024 - Now: Project Engineer at Faravar Kanyab Gisoum Company, Iran.

Language Proficiency

| | Competence | Level |
|-----------|------------|--|
| ▪ English | Reading | Basic <input type="checkbox"/> Intermediate <input checked="" type="checkbox"/> Advance <input type="checkbox"/> |
| | Writing | Basic <input type="checkbox"/> Intermediate <input checked="" type="checkbox"/> Advance <input type="checkbox"/> |
| | Speaking | Basic <input type="checkbox"/> Intermediate <input checked="" type="checkbox"/> Advance <input type="checkbox"/> |
| | Listening | Basic <input type="checkbox"/> Intermediate <input checked="" type="checkbox"/> Advance <input type="checkbox"/> |