Mohammad Darbor

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Research Interests

Rock Mechanics, Tunnelling, Wear, Artificial Intelligence, Monitoring Plans and Data Processing, Numerical Modelling, Mining Engineering.

Educations

2013-2018 **PhD**, Rock Mechanics Engineering, **Isfahan University of Technology**, Isfahan, Iran.
Thesis Title: Study of anisotropy effect on mechanical properties, drilling penetration rate and specific energy of rocks, (GPA: 18.98).

2016-2017 **Sabbatical**, Rock Mechanics Engineering, **Curtin University**, Kalgoorlie, WA, Australia.

2008-2010 **MSc**, Rock Mechanics Engineering, **Amirkabir University of Technology**, Tehran, Iran.

Thesis Title: Vulnerability and estimation of safety factors in the upstream walls of Latyan dam using numerical simulation, (GPA: 17.23).

2004-2008 **BSc**, Mining Engineering, **Shahid Bahonar University of Kerman**, Iran, (GPA: 18.90).

Work Experiences

- Dec 2023-Present, **Associate Professor**, Department of Mining Engineering, Sahand University of Technology, Tabriz, Iran.
- March 2021-March 2025, **Dean of The College of Varzeghan Engineering**, Department of Mining Engineering, Sahand University of Technology, Iran.
- April 2018-Dec 2023, **Assistant Professor**, Department of Mining Engineering, Sahand University of Technology, Tabriz, Iran.
- Oct 2024-Present, **Advisor of the Scientific Association**, The college of Varzeghan Engineering, Varzeghan, Iran.

- Aug 2024-Present, **Expert of the Mining Engineering Organization of East Azerbaijan**, Tabriz, Iran.
- Jan 2023-May 2023, **The scientific manager of the employment test**, Sungun Copper Complex, Varzeghan, Iran.
- Sep 2022-Sep 2023, **Central member of the Rock Mechanics Committee**, Iranian Mining Engineering Organization.
- Sep 2022-Present, **Mining technical responsible person**, Mining Engineering Organization of East Azerbaijan, Tabriz, Iran.
- Sep 2020-Sep 2023, **Advisor of the Scientific Association**, The College of Varzeghan Engineering, Varzeghan, Iran.
- Feb 2020-April 2020, **The scientific manager of the employment test**, Tabriz Oil Refining Company, Tabriz, Iran.
- August 2015- Sep 2022, **Mining technical responsible person**, Mining Engineering Organization of Isfahan, Isfahan, Iran.
- Sep 2012-Sep 2013, **Lecturer**, Department of Mining Engineering, Sahand University of Technology, Tabriz, Iran.
- May 2011-Sep 2012, **Senior Mining Engineer**, Shargh Cement Co., Mashhad, Iran.
- Feb 2011-May 2011, **Geotechnical Engineer**, Kavoshgaran Consulting Engineers, Tehran, Iran.
- August 2008-August 2015, **Mining technical responsible person**, Mining Engineering Organization of Razavi Khorasan, Mashhad, Iran.

Honors and Awards

- Member of Iran's National Elites Foundation, 2008-Present.
- The leading educational professor, Sahand University of Technology, 2025.
- Top teaching professor of The College of Varzeghan Engineering, Sahand University of Technology, 2024.
- Top researcher, Appreciation festival of the top researchers and technologists of Sahand University of Technology, 2024.
- The leading educational professor, Sahand University of Technology, 2023.
- The best professor of student evaluation, Sahand University of Technology, 2023.
- Top teaching professor of Department of Mining Engineering, Sahand University of Technology, 2022.
- Top researcher, Appreciation festival of the top researchers and technologists of Sahand University of Technology, 2021.
- Iran's top graduate award, Iran's National Elites Foundation, 2019.
- 1st rank among all PhD students graduated at Department of Mining Engineering (GPA: 18.98), Isfahan University of Technology, 2018.
- Winner of a 12342 AUD scholarship from Ministry of Science, Research and Technology of Iran for sabbatical at the Curtin University, Kalgoorlie, WA, Australia, 2016.

- 5th rank at the PhD entrance exam of Iran universities, 2013.
- The top young man of North Khorasan province, North Khorasan Governorate, 2011.
- Research and Innovation Award of the Iran's National Elites Foundation, 2010.
- A Patent confirmed at Iran's National Elites Foundation, 2010.
- Exceptional talent during the Master of science at Department of Mining Engineering (GPA: 17.23), Amirkabir University of Technology, 2010.
- 1st rank among all BSc students graduated at Department of Mining Engineering (GPA: 18.90), Shahid Bahonar University of Kerman, 2008.

Patents

- The Simulation Process of Slope Stability in Rock Structures, Iranian State Organization of Lands and Deeds Registration, No. & Date of Patent: 62421-15/12/2009.

Memberships

- Iran's National Elites Foundation
- Iranian Mining Engineering Organization
- Central member of the Rock Mechanics Committee of East Azerbaijan Mining Engineering Organization.

Publications (Peer-Reviewed Journal Papers)

- Naghizadeh Safa, M., Chakeri, H., **Darbor, M.,** Khodaei, S. (2026). Experimental and numerical analysis of foamed concrete as a damping interlayer in metro sub-track systems, *Scientific Reports*, 15, Accepted.
- Bazargan, SSh., **Darbor, M.,** Chakeri, H., Mirzaei, R. (2026). Machine learning-based time prediction of tunnel boring machine using a static ring-based framework, *Journal of Mining and Environment*, Accepted.
- Mousapour, H., **Darbor, M.,** Chakeri, H., Zarieh, M. (2026). Effect of moisture content and applied load on cutting tool wear and clogging in mechanized tunneling, *Rudarsko-geološko-naftni zbornik*, Accepted.
- Barri, F., Azad Sola, H., Chakeri, H., **Darbor, M. (Corresponding Author).** (2026). Investigating the feasibility of using basalt powder instead of cement in two-component backfilling grout in mechanized tunneling, *Journal of Rock Mechanics*, 9(4), 45-56.
- Khodaei, S., Chakeri, H., **Darbor, M.,** Nickjouye Tabrizi, AH. (2025). The Effect of foam concrete grouting on urban structure vibrations in Tabriz metro lines 1 and 2, *Scientific Reports*, 15.
- Kouhi, H., Chakeri, H., **Darbor, M.,** Baghali, H., Mousapour, H. (2025). Investigation into the effect of the grout properties injected behind the segment on surface settlement in mechanized tunneling, *International Journal of Geo-Engineering*, 16.

- Chakeri, H., Bazargan, Sh., Mirzaei, R., **Darbor, M. (Corresponding Author),** Karimi Ansari, H. (2025). The Estimation of TBM Penetration Rate using Artificial Neural Network Optimized with Particle Swarm Optimization and Firefly Algorithms, Case Study: Tabriz Metro Line 2, *Journal of Rock Mechanics*, 9(1), 47-60.
- Chakeri, H., Maleki, A., Shakeri, H., **Darbor, M. (Corresponding Author),** Mousapour, H. (2025). Laboratory and numerical investigation of cutting tool performance using a new small-scale linear cutting machine, *Scientific Reports*, 15.
- Maleki, A., Chakeri, H., Shakeri, H., Khoshzaher, E., **Darbor, M. (Corresponding Author).** (2025). Experimental study of the effects of mechanical properties of rocks on wear of cutting tools using a new small-scale linear cutting machine (LCM), *Journal of Mining and Environment*, 16(5), 1809-1826.
- **Darbor, M. (Corresponding Author),** Chakeri, H., Tabarmaye, M., Baghali, H., Talebinejad, A. (2025). Risk analysis and reducing measures in tunneling project of Tabriz metro line 2, *Journal of Analytical and Numerical Methods in Mining Engineering*, 15(43), 11-20.
- Khoshzaher, E., Miri Darmarani, Sh., Chakeri, H., **Darbor, M.,** Haghkish, H. (2025). The influence of fiber-reinforced shotcrete on the ground settlement in tunnel excavation: A case study of Tabriz metro line 2, *International Journal of Mining and Geo-Engineering*, 59(1), 21-29.
- **Darbor, M. (Corresponding Author),** Chakeri, H., Manafi, M., Balani, A. (2025). Stability analysis and design of support system for adits of the gold deposits of Mazraeh-Shadi using numerical modeling, *Journal of Analytical and Numerical Methods in Mining Engineering*, 14(41), 1-11.
- Chakeri, H., **Darbor, M. (Corresponding Author),** Shakeri, H., Mousapour, H., Mohajeri, V. (2024). Experimental and numerical investigation of the TBM disc cutter wear using a new tunnel boring machine laboratory simulator, *Heliyon*, 10(17), e37148.
- Barri, F., Chakeri, H., **Darbor, M.,** Haghkish, H. (2024). The effect of soil and grout mixture on the ground surface settlement in mechanized excavation, *Journal of Mining and Environment,* 15(4), 1607-1626.
- Ansari, T., Chakeri, H., **Darbor, M.,** Amoun, S., Shakeri, H. (2024). Investigating effect of soil grading parameters on tool wear in mechanized tunneling using EPB-TBM machine, *Journal of Mining and Environment,* 15(1), 301-321.
- Khodaee Ashestani, S., Chakeri, H., **Darbor, M. (Corresponding Author),** Khoshzaher, E., Bazargan, Sh. (2024). Estimating penetration rate of excavation machine using geotechnical parameters and neural networks in Tabriz metro, *Journal of Analytical and Numerical Methods in Mining Engineering,* 13(37), 1-9.
- Chakeri, H., **Darbor, M. (Corresponding Author),** Sh. Maleki, F., Minaee, T. (2023). Experimental investigation of steel fibers' effect on the improvement of mechanical properties of concrete segmental lining in mechanized tunneling, *Rudarsko-geološko-naftni zbornik*, 38(3), 55-63.

- Nickjouye Tabrizi, AH., Chakeri, H., **Darbor, M.,** Amoun, S. Shakeri, H. (2023). Evaluating the effect of tool wear in soft soil using new TBM tunneling simulator device, *Journal of Testing and Evaluation,* 51(6).
- Mousapour, H., Chakeri, H., **Darbor, M. (Corresponding Author),** Hekmatnejad, A. (2023). Evaluating the wear of cutting tools using a tunnel boring machine laboratory simulator, *Mining of Mineral Deposits*, 17(2), 28-34.
- Khoshzaher, E., Chakeri, H., **Darbor, M.,** Shakeri, H. (2023). The effects of water content and grain size on the clogging and abrasivity of fine-grained soils in mechanized excavation, *Rudarsko-geološko-naftni zbornik*, 38(2), 65-74.
- Nikjou Tabrizi, AH., Chakeri, H., **Darbor, M. (Corresponding Author),** Shakeri, H. (2023). The effect of TBM operational parameters on the wear of cutting tools using a tunnel boring machine laboratory simulator, *Journal of Analytical and Numerical Methods in Mining Engineering*, 12(33), 55-63.
- Faramarzi, L., **Darbor, M. (Corresponding Author),** Ebrahimi, B., Hoseinie, S. H. (2023). The effect of anisotropy on the mechanical properties of artificial rock mass based on laboratory physical modelling, *Journal of Analytical and Numerical Methods in Mining Engineering*, 13(35), 51-62.
- **Darbor, M. (Corresponding Author),** Chakeri, H., Ansari, T. (2022). The influence of soil particle size distribution on the abrasion of EPB machine cutting tools, *Ferdowsi Civil Engineering*, 35(4), 17-34, (In Persian).
- Chakeri, H., Aghababaei, H., **Darbor, M.**, Mostafaei Daneshmand, H. (2022). Evaluation of reliability, availability and maintainability of back-up locomotives in earth pressure balance tunnel boring machine (EPB-TBM): A case study: Tabriz metro line 1, *Iranian Journal of Mining Engineering*, 17(57), 68-88, (In Persian).
- Shamsoddin Saeed, M., Jalalifar, H., Shamsoddini, H., **Darbor, M. (Corresponding Author)** (2022). A comparative study on the application of Regression-PSO and ANN methods to predict backbreak in open-pit mines, *Journal of Analytical and Numerical Methods in Mining Engineering*, 11(29), 55-66.
- **Darbor, M**. **(Corresponding Author)**, Chakeri, H., Asgharzadeh Dizaj, M. (2021). Investigation of the effect of different parameters on the penetration rate of earth pressure balance boring machine using fuzzy and neuro-fuzzy methods, and metaheuristic algorithms (A case study: Tabriz metro line 2), *Journal of Analytical and Numerical Methods in Mining Engineering*, 10(25), 43-60.
- **Darbor, M.,** Shakeri, H. (2021). Experimental study of the effects of sample geometry on hydraulic fracturing under triaxial stresses, *Journal of Engineering Geology*, 15(1), 67-94, (In Persian).
- Ashrafi, J., Faramarzi, L., **Darbor, M. (Corresponding Author)**, Sharifzadeh, M., Ferdosi, B. (2020). The effects of temperature on the mechanical properties of rocks. *International Journal of Mining and Geo-Engineering*, 54(2), 147-152.
- **Darbor, M.**, Shakeri, H. (2019). A laboratory study of the effects of stress regimes on hydraulic fracturing. *Journal of Petroleum Geomechanics*, 3(3), 45-59, (In Persian).

- **Darbor, M.**, Shakeri, H., Faramarzi, L. (2019). Experimental study of the perforation effect on hydraulic fracturing under triaxial stresses using physical modeling. *Journal of Analytical and Numerical Methods in Mining Engineering*, 9(20), 89-104, (In Persian).
- **Darbor, M.**, Faramarzi, L., Sharifzadeh, M. (2019). Performance assessment of rotary drilling using non-linear multiple regression analysis and multilayer perceptron neural network. *Bulletin of Engineering Geology and the Environment*, 78(3), 1501-1513.
- **Darbor, M.**, Faramarzi, L., Sharifzadeh, M. (2019). Size-dependent compressive strength properties of hard rocks and rock-like cementitious brittle materials. *Geosystem Engineering*, 22(4), 179-192.
- **Darbor, M.**, Faramarzi, L., Sharifzadeh, M., Rezaee, H. (2019). Evaluation of specimen size-effect in sedimentary rocks and grain size effect in concrete specimens on uniaxial compressive strength. *Journal of Analytical and Numerical Methods in Mining Engineering*, 8(16), 57-70, (In Persian).
- Behzadi Nezhad, H., Faramarzi, L., **Darbor, M.** (2017). Stability analysis and support system design of penstock tunnels bifurcation with headrace tunnel of Rudbare-Lorestan dam project. *Journal of Analytical and Numerical Methods in Mining Engineering*, 7(13), 113-123, (In Persian).
- Rahmati, A., Faramarzi, L., **Darbor, M.** (2017). Squeezing rock conditions at phyllite-slate zone in the Golab water conveyance tunnel, Iran: a case study. *Journal of Central South University*, 24(10), 2475-2485.

Publications (Conference Papers)

- Mousapour, H., **Darbor, M.,** Chakeri, H. (2025). Design of the support system of tunnel and classification of the rock mass in the initial section of the tunnel using classification methods, *14th Iranian Mining Engineering Conference,* Sahand University of Technology, Tabriz, Iran.
- **Darbor, M.,** Baghali, H., Chakeri, H. (2025). Feasibility study of producing autoclaved aerated concrete (AAC) using mineral waste (copper and iron) in order to reduce environmental risks, *5th International Conference on Seismic Strengthening of the Country & the International Conference on New Technologies in Civil Engineering, Architecture and Urban Planning,* University of Tabriz, Tabriz, Iran.
- **Darbor, M.,** Bazargan, Sh., Chakeri, H. (2025). Systematic analysis of methods of stabilization of open pit mines with emphasis on the role of discontinuities, *5th International Conference on Seismic Strengthening of the Country & the International Conference on New Technologies in Civil Engineering, Architecture and Urban Planning,* University of Tabriz, Tabriz, Iran.
- **Darbor, M.,** Baghali, H., Chakeri, H. (2025). The use of mineral waste and stone cutting waste in the production of decorative stones and building materials, *5th International Conference on Seismic Strengthening of the Country & the International Conference on*

New Technologies in Civil Engineering, Architecture and Urban Planning, University of Tabriz, Tabriz, Iran.

- **Darbor, M.,** Khodaei, S., Chakeri, H. (2025). Systematic Analysis of Monitoring Methods of Earth Dams Using Instrumentation Data, *National Conference on Civil Engineering, Design and Construction Technologies, Energy, Materials & Advanced Machinery,* East Azarbaijan Science and Technology Park, Tabriz, Iran.
- **Darbor, M.,** Khodaei, S., Chakeri, H. (2025). Evaluation of instrumentation and monitoring systems in open pit mine stability monitoring, *National Conference on Civil Engineering, Design and Construction Technologies, Energy, Materials & Advanced Machinery,* East Azarbaijan Science and Technology Park, Tabriz, Iran.
- **Darbor, M.,** Khodaei, S. (2025). Investigating tunnel control and monitoring methods using instrumentation, *National Conference on Civil Engineering, Design and Construction Technologies, Energy, Materials & Advanced Machinery,* East Azarbaijan Science and Technology Park, Tabriz, Iran.
- **Darbor, M.,** Seyfi Azar, A., Chakeri, H. (2025). Slope stability analysis and landslide management in the alternative road of northern shore of lake, *1st International & 7th National Conference on Mechanical-Civil Engineering and Advanced Technologies*, Esfarayen University, Esfarayen, Iran.
- **Darbor, M.,** Khodaei, S., Chakeri, H. (2025). Design and rehabilitation of the access road to the dam crest, *1st International & 7th National Conference on Mechanical-Civil Engineering and Advanced Technologies*, Esfarayen University, Esfarayen, Iran.
- **Darbor, M.**, Seyfi Azar, A., Chakeri, H. (2025). Stability analysis of tunnel entrance trench using kinematic methods, *1st International & 7th National Conference on Mechanical-Civil Engineering and Advanced Technologies*, Esfarayen University, Esfarayen, Iran.
- Mousapour, H., **Darbor, M.** (2024). Investigation of instability in limestone mining stopes: A case study, *4th. International Conference on Architecture, Civil Engineering, Urban Development and Environment*, Tabriz Islamic Art University, Tabriz, Iran.
- Khoshzaher, E., Chakeri, H., **Darbor, M.,** Mousapour, H. (2024). Laboratory study of the effect of clogging in mechanized excavation, *2nd International conference & 5th National Conference on laboratory Equipment and Technologies,* Sahand University of Technology, Tabriz, Iran.
- Mousapour, H., Chakeri, H., **Darbor, M.,** Khoshzaher, E. (2024). Analyzing the wear of cutting tools using a tunnel boring machine laboratory, *2nd International conference & 5th National Conference on laboratory Equipment and Technologies,* Sahand University of Technology, Tabriz, Iran.
- Kouhi, H., Baghali, H., Chakeri, H., **Darbor, M.** (2024). The effect of slurry injection and soil properties on ground surface settlement in mechanized excavation, *14th National Congress on Civil Engineering*, University of Zanjan, Zanjan, Iran.
- **Darbor, M.,** Chakeri, H., Mousapour, H., Khoshzaher, E. (2023). Slope stability analysis of open pit mine by limit equilibrium analysis method, *3rd. International Conference on*

Architecture, Civil Engineering, Urban Development and Environment, Tabriz Islamic Art University, Tabriz, Iran.

- **Darbor, M.,** Khoshzaher, E., Mousapour, H. (2023). The stability analysis of Masjid Daghi copper mine by kinematic method, *3rd. International Conference on Architecture, Civil Engineering, Urban Development and Environment*, Tabriz Islamic Art University, Tabriz, Iran.
- Khodaee, S., **Darbor, M.,** Chakeri, H. (2023). Investigating the liquefaction potential of the western shaft up to E2 station of Tabriz metro line 2, *3rd. International Conference on Architecture, Civil Engineering, Urban Development and Environment*, Tabriz Islamic Art University, Tabriz, Iran.
- **Darbor, M.** (2023). Slope stability analysis and determining the required support system of unstable structures, a case study, *10th National Conference on Modern Studies and Research in Civil Engineering, Architecture and future city*, Tehran, Iran.
- **Darbor, M.,** Khoshzaher, E., Manafi, M. (2023). Rock mass engineering classification of the tunnel route, a case study, *10th National Conference on Modern Studies and Research in Civil Engineering, Architecture and future city*, Tehran, Iran.
- **Darbor, M.,** Mousapour, H., Manafi, M. (2023). Stability analysis of mineral access tunnels using numerical modeling, a case study, *10th National Conference on Modern Studies and Research in Civil Engineering, Architecture and future city*, Tehran, Iran.
- Amoun, S., Chakeri, H., **Darbor, M.** (2022). A new approach for tunnel support system design, *13th National Congress on Civil Engineering*, Isfahan University of Technology, Isfahan, Iran.
- Amoun, S., Chakeri, H., **Darbor, M.** (2022). Evaluation of wear in Tehran metro tunnel line 7, Iran, *13th National Congress on Civil Engineering*, Isfahan University of Technology, Isfahan, Iran.
- Khoshzaher, E., Mousapour, H., **Darbor, M.**, Chakeri, H. (2022). The effect of soil conditioning using foam on reducing clogging and wear of cutting tools of EPB machines, *2nd. International Conference on Architecture, Civil Engineering, Urban Development and Environment*, Tabriz Islamic Art University, Tabriz, Iran.
- Mousapour, H., Khoshzaher, E., **Darbor, M.**, Chakeri, H., Haghkish, H. (2022). Evaluation of liquefaction potential in Tabriz Metro Lines 2 and 4, *2nd. International Conference on Architecture, Civil Engineering, Urban Development and Environment*, Tabriz Islamic Art University, Tabriz, Iran.
- Samimi Namin, F., Chakeri, H., **Darbor, M.**, Taheri, E., Khoshzaher, E., (2022). Numerical study of the effect of mechanized excavation on the subsidence rate of Tabriz Metro Line 2, *2nd. International Conference on Architecture, Civil Engineering, Urban Development and Environment*, Tabriz Islamic Art University, Tabriz, Iran.
- **Darbor, M.**, Nikjou Tabrizi, AH., Chakeri, H., Shakeri, H. (2020). Comparative study of soil abrasion tests, *The Second National Conference on Modeling in Mining Engineering and Related Sciences*, Imam Khomeini International University, Ghazvin, Iran.

- **Darbor, M.**, Manafi, M., Shakeri, H. (2020). Modelling of geotechnical boreholes required for open pit mines, Case study: Sungun copper-molybdenum deposit, *Second National Conference on Knowledge-Based Research in Earth Sciences*, Shahid Chamran University of Ahvaz, Ahvaz, Iran.
- **Darbor, M.**, Moarefvand, P. (2018). The numerical simulation of the Lar dam site using 3DEC software. *5th International Mine and Mining Industries Congress*, Tehran, Iran.
- **Darbor, M.**, Salari-Rad, H., (2018). Hydraulic and dynamic analysis of the left abutment of Latyan dam and determination of stabilization plan using numerical simulation, *National Conference on New Approaches in Civil Engineering, Architecture and Geographic Sciences*, Tehran, Iran.
- **Darbor, M.** (2018). Estimation of strength properties of rocks using block index test, *National Conference on New Approaches in Civil Engineering, Architecture and Geographic Sciences*, Tehran, Iran.
- **Darbor, M.**, Faramarzi, L. (2018). The scale effect on uniaxial compressive strength of rock and concrete specimens using specimen size effect models, *National Conference on New Approaches in Civil Engineering, Architecture and Geographic Sciences*, Tehran, Iran.
- **Darbor, M.**, Salari-Rad, H., Moarefvand, P. (2012). Study of safety factors, distribution of pore pressure and stabilization plan of left abutment of Latyan dam using limit equilibrium and numerical modelling methods, *International Mining Congress*, Tehran, Iran.
- **Darbor, M.**, Salari-Rad, H., Moarefvand, P. (2011). Vulnerability, estimation of safety factors and stabilization method of left abutment of Latyan dam using numerical simulation, *4th Iranian Rock Mechanics Conference*, Tehran, Iran.
- **Darbor, M.**, Jalalifar, H., Moarefvand, P. (2010). A developed technique to predict support system for plane failure, *ISRM International Symposium and 6th Asian Rock Mechanics Symposium*, New Delhi, India.
- **Darbor, M.**, Jalalifar, H., Moarefvand, P. (2010). Software design for direct determination of the required support system for prevention of planar failure; case study: Lead and zinc mine of Angoran, Zanjan, *International Mining Congress*, Tehran, Iran.
- **Darbor, M.**, Jalalifar, H., (2008). Slope stability analysis using S.S.A software, *2nd Iranian Mining Engineering Conference*, University of Tehran, Tehran, Iran.

Teaching Experiences

- PhD: Advanced fracture mechanics, Mechanics of strata and methods of control, Subsidence engineering
- MSc: Advanced rock mechanics, Continuous and discontinuous mechanics in rock, Advanced strength of materials
- BSc: Geotechnical engineering, Drilling methods, Statics (Engineering mechanics), Strength of materials, HSE, Technical services in mines.

Supervised MSc Theses

- Kolsoum Miri Bonab, (2026). Prediction of pollution at the Sarcheshmeh copper mine tailings disposal site using intelligent modeling approaches, (Chakeri and **Darbor**).
- Tohid Jesarati Khajeh, (2025). Experimental investigation of wear of cutting tool of tunnel boring machine (TBM) in rock, (Chakeri and **Darbor**).
- Mehrad Zarieh, (2025). Laboratory investigation of cutting tool wear in fine-grained soils, case study: line 2 of Tabriz metro, (Chakeri and **Darbor**).
- Alireza Siyadat, (2025). Selection of transportation fleet in Sungun copper mine using a discrete event simulation method, (Mirzaei Nasirabad and **Darbor**).
- Vahid Mohajeri, (2023). Laboratory study of wear of cutting tools of excavation machines in rock, (Chakeri and **Darbor**).
- Amin Maleki, (2023). Laboratory and numerical investigation of TBM disc cutter life in different rocks, (Chakeri and **Darbor**).
- Haniyeh Kouhi, (2023). The effects of backfill grout on the ground surface settlement in mechanized excavation, (Chakeri and **Darbor**).
- Erfan Khoshzaher, (2022). Laboratory study of the effect of clogging in mechanized excavation, (Chakeri and **Darbor**).
- Hamid Mousapour, (2022). Investigation of the effect of machine performance parameters on wear of cutting tools in mechanized excavation (Chakeri and **Darbor**).
- Taha Ansari, (2021). Investigation of soil gradation effects on the abrasivity of EPB machine tools, (Chakeri and **Darbor**).
- Amir Hossein Nickjou Tabrizi, (2021). Effect of soil shear properties on the abrasivity of EPB machine tools, (Chakeri and **Darbor**).
- Mohammad Asgharzadeh Dizaj, (2019). Prediction performance of tunnel boring machine using fuzzy logic intelligent method (case study Tabriz metro line 2), (Chakeri and **Darbor**).

Journal Reviews

- ❖ Tunnelling and Underground Space Technology
- ❖ Journal of Rock Mechanics and Geotechnical Engineering
- ❖ Bulletin of Engineering Geology and the Environment
- ❖ Scientific Reports
- ❖ Results in Engineering
- ❖ Archives of Computational Methods in Engineering
- ❖ Géotechnique
- ❖ Structural Concrete
- ❖ Geotechnical and Geological Engineering
- ❖ Earth Science Informatics
- ❖ Geotechnical Engineering (Proceedings of the ICE)

- Geotechnical Research
- Structural Engineering and Mechanics
- Journal of Mining and Environment
- Geomechanics and Engineering
- Structures and Buildings (Proceedings of the ICE)
- Science Progress
- Rudarsko-geološko-naftni zbornik
- Transport (Proceedings of the ICE)
- International Journal of Mining and Geo-Engineering
- Ferdowsi Civil Engineering (In Persian)
- Journal of Petroleum Geomechanics (In Persian)
- Iranian Journal of Rock Mechanics (In Persian)
- Journal of Analytical and Numerical Methods in Mining Engineering (In Persian)
- Journal of Engineering Geology (In Persian).

Software Skills

- Rocscience Software Programs (SWEDGE, UNWEDGE, SLIDE, DIPS, RocFALL, RocPlane)
- Itasca Packages (Flac 2D, Flac 3D, UDEC, 3DEC and PFC)
- Mining Operations Software (Datamine)
- AutoCAD
- GIS (ArcView).

International Invitations

- Invitation for Sabbatical, Pontificia Universidad Católica de Valparaíso, Valparaíso, Chile, 2023.
- Sabbatical at The Western Australian School of Mines, Curtin University, Kalgoorlie, WA, Australia, 2016/11-2017/5.
- Invitation for Sabbatical, University of Porto, Portugal, 2016.
- Invitation for Sabbatical, Hacettepe University, Turkey, 2015.