

# Moein Bahadori

Assistant Professor in Mining Engineering  
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Gonabad, Khorasan-e-Razavi, I.R. Iran



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## PROFILE

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**Date of Birth:** the 23th of July 1987, Ilam, Iran  
**Marial Status:** Married  
**Current Possession:** Assistant Professor  
**Nationality:** Iran  
**Country of Residence:** Iran  
**Language:** Persian, English, Kurdish

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## EDUCATION

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**Sep. 2012 – Feb. 2017** PhD in Mining Engineering, University of Kashan, Isfahan, Iran.  
Thesis Title: Numerical analysis of Rock Fragmentation and the Blast-Induced Ground Vibrations in Open-Pit Mines.  
Supervisor: Dr. Hassan Bakhshandeh Amnieh  
Thesis grade: ‘Excellent’.

**Sep. 2009 – Sep. 2011** M. Sc. in Mining Engineering, University of Kashan, Isfahan, Iran.  
Thesis Title: Numerical Analysis of Blasting Wave Propagation in the Vicinity of Two Blast Holes  
Supervisor: Dr. Hassan Bakhshandeh Amnieh  
Thesis grade: ‘Excellent’.

**Sep. 2005 – Sep. 2009**      B. Sc. in Mining Engineering, Yazd University  
Thesis Title: Design the Pushbacks Considering the Grade Uncertainty in Chadormalu Iron Ore mine  
Supervisor: Dr. Javad Gholamnezhad  
Thesis grade: ‘Excellent’.

## **ACADEMIC EXPERIENCE**

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**Jun. 2017 – present**      Assistant Professor,  
University of Gonabad

- \* Rock Mechanics and laboratory
- \* Drilling and Blasting in Rocks
- \* Ventilating in Mines
- \* Surface Mining Methods
- \* Ground Control and Supporting systems
- \* Technical Services in Mining
- \* Mine mapping and operations
- \* Mine Design
- \* Statics
- \* Mechanic of Material
- \* Flotation
- \* Computer Programming (C language)

## **WORK EXPERIENCES**

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**Oct. 2018 – present**      Advisor to the vice-chancellor of Gonabad University  
**Jul. 2013 – Jun. 2015**      Founder and Chairman of the Board of Directors of Padra Madan Company  
**Jul. 2010 – Jul. 2013**      Technical manager of sand mines  
**Jul. 2009 – Jul. 2010**      Director of the affairs of the members of the Mining Engineering Organization of Ilam province

## **RESEARCH PROJECTS**

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**Sep. 2013 – Feb. 2014**      Reviewing and comparison of all types of blasting circuits, with a special look at NONEL system.  
**Sep. 2014 – Mar. 2016**      Determining the optimal delay time in different blasting patterns in Gol-e-Gohar Sirjan Iron Mine  
**Feb. 2015 – Feb. 2016**      Numerical Analysis of Rock Fragmentation and the Blast-induced Ground Vibrations in Midouk Copper Mine  
**Sep. 2016 - Jan. 2017**      Zoning of Midouk Copper Mine based on Fragmentation capability due to Blasting Operations and its Effect on Milling Efficiency  
**Oct. 2021- Apr. 2022**      Modifying the Blasting Pattern to Reduce the Risks of Blast-Induced Ground Vibrations

- Dec. 2021 – Feb. 2022** Investigation and Feasibility of using the Modern Technologies in the Drilling and Blasting Operations of Gol-e-Gohar Sirjan Iron Mine
- May. 2022 - Jun. 2022** Investigation and Feasibility of using the Modern Technologies in Mapping Operation of Gol-e-Gohar Sirjan Iron Mine

## **SOFTWARE INTERESTS & SKILLS**

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- UDEC
- SURPAC
- Rocscience
- Matlab
- AutoCAD

## **HONORS & AWARDS**

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- Distinguished researcher (Faculty members) of University of Gonabad, 2022.
- Admission to the doctoral course from the quota of brilliant talents, Sep. 2012.
- Distinguished researcher of University of Kashan, 2011

## **PROFESSIONAL ACTIVITIES**

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- Oct. 2021 – present** Member of Iranian Society of mining engineering, Iran
- Jan. 2010 – present** Member of Iranian mining engineering organization, Iran

## **JOURNAL REVIEWER**

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- Engineering Geology
- Rock Mechanics and Rock Engineering
- Geotechnical and Geological Engineering
- Journal of Analytical and Numerical Methods in Mining Engineering (ANM) – Yazd University – Iran
- Sustainability
- Journal of Research on Archaeometry
- International Journal of Geomechanics
- Mining, Metallurgy & Exploration
- Scientific Reports

# PUBLICATIONS

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## Journal Articles:

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1. M. Bahadori, E Khorasani, "Stability analysis and proposing supporting system of Water Diversion Tunnels of Zanjan Moshamapa Dam using Numerical, Empirical, and Convergence-Confinement methods" *Tunneling and Underground Space Engineering (TUSE)*, Vol. 11 No. 2., pp. 217-231, 2023.
2. X. Ding, **M. Bahadori**, M. Hasanipanah, and R. A. Abdullah, "Predicting the Rock Fragmentation in Surface Mines Using Optimized Radial Basis Function and Cascaded Forward Neural Network Models" *Geomechanics and Engineering, An International Journal* Vol. 33 No.6., 2023.
3. **M. Bahadori** and S. M. Mousavi, "Investigation of the Effects of Rock Dynamic Hardness on the Energy Consumption in the Crushing unit, case study: Midouk Copper Mine" *Applied Earth Science*, pp. 1-13, 2022.
4. **M. Bahadori** and H. Bakhshandeh Amnieh, "Numerical Analysis of the Pile Movement due to Rock Blasting in Open Pit Mines" (in en), *Journal of Mineral Resources Engineering*, 2022.
5. **M. Bahadori**, "Designing the Surface and Underground Blasting Operations to Avoid Damage to Concrete Structures in Gotvand Olya Dam Using Genetic Algorithm" *Geotechnical and Geological Engineering*, 2022.
6. **M. Bahadori**, P. Beiranvand, and H. Bakhshandeh Amnieh, "Optimization of Sardasht Dam Sealing System Using UDEC Software", *Journal of Analytical and Numerical Methods in Mining Engineering*, Vol. 11, No. 26, pp. 23-34, 2021.
7. M. Namvar-Mahboub, E. Khodeir, **M. Bahadori**, and S. M. Mahdizadeh, "Preparation of magnetic MgO/Fe<sub>3</sub>O<sub>4</sub> via the green method for competitive removal of Pb and Cd from aqueous solution" *Colloids Surfaces A: Physicochemical Engineering Aspects*, Vol. 589, p. 124419, 2020.
8. **M. Bahadori** and H. Bakhshandeh Amnieh, "Implementation of hyperbolic tangent function to estimate size distribution of rock fragmentation by blasting in open pit mines" *International Journal of Mining and Geo-Engineering*, Vol. 52, No. 2, pp. 187-197, 2018.
9. H. Mokhtari, **M. Bahadori**, and J. Gholamnezhad, "Designing of push backs in Chadormalu Iron Mine considering the Grade Uncertainty" *Journal of Modeling in Engineering*, Vol. 14, No. 47, pp. 229-241, 2017.
10. F. S. Hoseinian, **M. Bahadori**, M. Hashemzadeh, B. Rezai, and S. Soltani-Mohammadi, "Application of Mathematical Modeling on Copper Recovery Optimization of Oxide Ores" *JOM*, Vol. 69, No. 10, pp. 1939-1944, 2017.
11. H. Bakhshandeh Amnieh and **M. Bahadori**, "Numerical Analysis of the Primer Location Effect on Ground Vibration Caused by Blasting" *International Journal of Mining and Geo-Engineering*, Vol. 51, No. 1, pp. 53-62, 2017.

12. **M. Bahadori**, H. Bakhshandeh Amnieh, and A. Khajezadeh, "A new geometrical-statistical algorithm for predicting two-dimensional distribution of rock fragments caused by blasting" *International Journal of Rock Mechanics and Mining Sciences*, Vol. 86, pp. 55-64, 2016.
13. H. Bakhshandeh Amnieh and **M. Bahadori**, "Safe Vibrations of Spilling Basin Explosions at" Gotvand Olya Dam, Using Artificial Neural Network" *Archives of Mining Sciences*, Vol. 59, pp. 1087-1096, 2014.
14. H. Bakhshandeh and **M. Bahadori**, "Numerical and Field Analysis of Wave Propagation and Cracks Caused by Presplit Blasting in Conglomerate Rock-mass at Gotvand Olya Dam" *Iranian Journal of Geophysics*, Vol. 7, No. 3, pp. 49-65, 2013.
15. S. Soltani-Mohammadi, H. Bakhshandeh Amnieh, and **M. Bahadori**, "Investigating ground vibration to calculate the permissible charge weight for blasting operations of Gotvand-Olya dam underground structures" *Archives of Mining Sciences*, Vol. 57, No. 3, pp. 687-697, 2012.
16. H. Bakhshandeh Amnieh and **M. Bahadori**, "Numerical and Field Analysis of Single-hole Blasting Mechanism in Conglomerate Rock-mass of Gotvand Olya Dam" *Energy Engineering Management*, Vol. 2, No. 1, pp. 22-31, 2012.
17. H. Bakhshandeh Amnieh and **M. Bahadori**, "Numerical Analysis of the Effects of Single Blast-hole in Mudstone Rock-mass at Gotvand Olya Dam" *Iranian Journal of Geophysics*, Vol. 6, No. 2, pp. 56-72, 2012.
18. S. Soltani-Mohammadi, H. Bakhshandeh Amnieh, and **M. Bahadori**, "Predicting ground vibration caused by blasting operations in Sarcheshmeh copper mine considering the charge type by Adaptive Neuro-Fuzzy Inference System (ANFIS)" *Archives of Mining Sciences*, Vol. 56, No. 4, pp. 701-710, 2011.
19. H. Bakhshandeh Amnieh and **M. Bahadori**, "Investigating the Influence of Blasting Operations at the Surge Tanks and Storage Facilities on the Underground Structures of Gotvand Olya Dam" *Iranian Journal of Geophysics*, Vol. 5, No. 2, pp. 51-60, 2011.

## Conference Articles:

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1. **M. Bahadori**, "Zoning of Midouk Copper Mine and Determining the Relationship between the Energy Consumption in the Milling unit and the dynamic Hardness of the rock mass" The 10<sup>th</sup> Iranian Mining Engineering Conference, Zahedan, University of Sistan and Baluchestan, 22 & 23 Feb. 2022.
2. **M. Bahadori**, "Prediction of Results of Blasting Operations of Gotvand Olya Dam, using NIOSH Relationships" The 10<sup>th</sup> Iranian Mining Engineering Conference, Zahedan, University of Sistan and Baluchestan, 22 & 23 Feb. 2022.
3. **M. Bahadori** and M. Amiri, "Field Analysis of the Effect of the Inter-hole Delay Times on the Rock Fragmentation by Blasting, Case study: Gol-e-Gohar Sirjan iron Mine" The 10<sup>th</sup> Iranian Mining Engineering Conference, Zahedan, University of Sistan and Baluchestan, 22 & 23 Feb. 2022.
4. **M. Bahadori** and E. Tadayon, "Investigation of the Effect of Substitution of Petroleum Derivatives Instead of Gasoline on ANFO" presented at the The 1<sup>st</sup> National Conference on Applied Chemistry & Nanochemistry; from Research to technology University of Gonabad, Razavi Khorasan, I.R.Iran, 2018.
5. **M. Bahadori**, H. Bakhshandeh Amnieh, P. Beiranvand, and S. M. Mousavi, "Selection of Appropriate Empirical function in the Estimation of Rock Fragmentation by Blasting in Miduk Copper Mine" presented at the 6th Iranian Rock Mechanics Conference (IRMC6), Tehran, I.R.Iran, 2017.
6. **M. Bahadori**, A. H. Mazandarani, H. Bakhshandeh Amnieh, and M. Sarallahi, "Investigation and Comparison of Hazardous Gases Control Methods in Underground Spaces of Zagros Region" The 4<sup>th</sup> National Conference on Industrial Ventilation and Health, Sharif University of Technology, I.R.Iran, 2014.
7. **M. Bahadori**, H. Bakhshandeh Amnieh, and M. Aliakbari, "Numerical and field analysis of crack propagation velocity in the conglomerate rock mass of Gotvand Olya Dam" presented at the The 1<sup>st</sup> National Conference on Soil Mechanics and Engineering, Faculty of Civil Engineering, Shahid Rajae Teacher Training University, Tehran, I.R.Iran, 2014.
8. **M. Bahadori** and H. Bakhshandeh Amnieh, "Investigation of the Effect of Rows Number on Ground Vibration Caused by Blasting Operation in the Sarcheshmeh Copper Mine" The 16<sup>th</sup> Iranian National Conference, University of Tehran, I.R.Iran, 2014.
9. P. Beiranvand, H. Bakhshandeh Amnieh, M. Rahimi Dizaji, and **M. Bahadori**, "Numerical Analysis of Leakage Control of Sardasht Dam Using UDEC Software" presented at the The 1<sup>st</sup> Iranian Geotechnical Engineering Conference, University of Mohaghegh Ardabili, Ardabil, I.R.Iran, 2013.
10. **M. Bahadori** and H. Bakhshandeh Amnieh, "Numerical Analysis of Convergence Rate of Ilam-Hamil 3rd Tunnel" presented at the The 7<sup>th</sup> National Congress of Civil Engineering, Shahid Nikbakht School of Engineering, Zahedan, I.R.Iran, 2013.
11. **M. Bahadori** and H. Bakhshandeh Amnieh, "Numerical Analysis of the Impact of Decoupling on the Crack Propagation in Watery and Dry Blast holes" presented at

the The 1st Iranian Mining Technologies Conference-IMT2012, Yazd, I.R. Iran, 2012.

12. H. Bakhshandeh Amnieh, E. Khorasani, **M. Bahadori**, and M. Amini, "Stability analysis of the diversion tunnels at Moshampa dam in Zanjan using discrete element method" The 1<sup>st</sup> Asian and 9<sup>th</sup> Iranian Tunneling Symposium, Tehran, 2011.
13. **M. Bahadori** and H. Bakhshandeh Amnieh, "Investigation of the Effect of Charge Type on Ground Vibration Caused by Blasting Operation in Sarcheshmeh Copper Mine" presented at the The 4<sup>th</sup> Iranian Rock Mechanics Conference (IRMC4), Tehran, 2011.
14. M. Amini, S. Moattari, and **M. Bahadori**, "Determination of shear parameters between smooth geomembrane liner and synthetic clay layer" The 1<sup>st</sup> Copper World Congress, Tehran, 2011.
15. **M. Bahadori**, H. Bakhshandeh Amnieh, and S. M. Vahidipour, "Prediction of Blast-induced vibration in Sarcheshmeh copper mine by GA numerical algorithm " presented at the The 1<sup>st</sup> conference on Blasting engineering and its importance in Iranian, Tehran, 2010.