

Saeid Soltani-Mohammadi

Tel: +98 361-5591-2441(work)

E-mail: saeedsoltani@kashanu.ac.ir

Address: Ravand Street, Kashan, P.O.BOX: 87317-51167, Iran

ORCID ID: <https://orcid.org/0000-0002-8390-1917>

PROFILE

- **Date of Birth** : the 22th of Sep 1979
- **Marital Status** : Married
- **Current position** : Associate Professor
- **Nationality** : Iran
- **Country of residence** : Iran
- **Languages** : Persian (Native) – English

EDUCATION

- Sep. 2005- Dec. 2009** PhD in Mineral Exploration Engineering, Amirkabir University of Technology (Polytechnic of Tehran), Iran.
Thesis Title: Optimization of additional Boreholes site selection with the objective of maximization of the value of additional information.
Supervisor: Profs. Ardeshir Hezarkhani
Thesis grade: 'Excellent'.
- Sep. 2003- Sep. 2005** M.Sc. in mineral Exploration Engineering (Geostatistical deposit modeling), Amirkabir University of Technology(Polytechnic of Tehran), Iran.
Thesis title: Economic Geology, Geostatistical, Modeling and Evaluation of Sar-cheshmeh Copper deposit.
Supervisors: H. Madani & F. Alinia
Thesis grade: 'Excellent'.
- Sep 1999- Sep. 2003** B.Sc. Field: Mineral Exploration Engineering, Amirkabir University of Technology(Polytechnic of Tehran), Iran.
Thesis: Removing the effect of the syngenetic component from geochemical stream sediment data using fuzzy C-Means Clustering method: A case study from North of Takab
Supervisor: Dr. Alinia

SABBATICAL PERIOD:

- Feb. 2009- Aug. 2009** Associate Researcher, Department of Mining engineering, Hacettepe University, Ankara, Turkey

ACADEMIC EXPERIENCE

- | | | |
|--------------------------|--|---|
| May. 2017-present | Associate Professor,
University of Kashan,
Kashan, Iran. | <ul style="list-style-type: none">• Geostatistics• Advanced Geostatistics• Sampling• Operation research for mining engineers• Planning the geochemical projects |
| Dec. 2009- 2017 | Assistance Professor, University
of Kashan, Kashan, Iran. | <ul style="list-style-type: none">• Mineral exploration planning• mining economics• Mineral resource evaluation• Cartography and Geological maps |

WORK EXPERIENCES

- | | |
|------------------------------|--|
| Jun. 2018- present. | . Director of Research Affairs, University of Kashan, Kashan, IRAN |
| Sep. 2014- Sep. 2016. | Deputy Director of engineering faculty, University of Kashan, Kashan, IRAN |
| Aug. 2013- Sep. 2014 | Vice Chancellor in Planning and Development Affairs, University of Kashan, Kashan, IRAN. |
| Sep 2012- Aug 2013. | Deputy Director of engineering faculty, University of Kashan, Kashan, IRAN. |
| Mar. 2011- Feb. 2013 | Head of e-learning department, university of Kashan, Kashan, Iran. |
| Mar. 2007-Apr. 2008 | Secretary of 6th Iranian Students Conference of Mining Engineering, Tehran, Iran, 2008. |

HONORS & AWARDS

- Outstanding PhD Student, Dec. 2009, Amirkabir University of Technology, Tehran, Iran.
- Distinguished researcher of University of Kashan, 2015, 2013, 2011.
- Distinguished teacher of University of Kashan, 2017, 2014, 2012, 2011.

PROFESSIONAL ACTIVITIES

- | | |
|----------------------------|---|
| Sep 2005- Present | Member of Iranian Society of mining engineering, Iran. |
| Feb. 2010-Present | Member of Iranian mining engineering organization, Iran. |
| Mar. 2007-Apr. 2008 | Secretary of 6th Iranian Students Conference of Mining Engineering, Tehran, Iran. |

Articles refereed for Soft computing, Journal of Mining and Environment, Arabian journal of geosciences, Journal of Applied Statistics, and etc.

PUBLICATIONS

1. Rodrigo Alfaro, Mohammad Maleki, Nasser Madani & Saeed Soltani-Mohammadi (2023) [Comparing the accuracy of two approaches to account for internal dilution: A case study from a porphyry copper deposit](#), *International Journal of Mining, Reclamation and Environment*, 37:6, 441-459, DOI: 10.1080/17480930.2023.2192030
2. Sohrabian, B.; Soltani-Mohammadi, S.; Pourmirzaee, R.; Carranza, E.J.M. [Geostatistical Evaluation of a Porphyry Copper Deposit Using Copulas](#). *Minerals* 2023, 13, 732. <https://doi.org/10.3390/min13060732>
3. B Sohrabian, S Soltani-Mohammadi, AE Tercan, [Joint simulation of coal quality attributes using a new simulated annealing-based method of diagonalization](#), *International Journal of Mining, Reclamation and Environment*, 1-27
4. E Ghadiri Sufi, S Soltani-Mohammadi, H Mokhtari, [Optimizing the exploratory drilling rig route based on the Multi-Objective Multiple Traveling Salesman Problem](#), *International Journal of Mining and Geo-Engineering* 56 (4), 331-337
5. B Sohrabian, S Soltani-Mohammadi, [Multivariate simulation through minimum/maximum autocorrelation factors versus sequential Gaussian co-simulation: A case study on geochemical data from soil](#), *Zeitschrift der Deutschen Gesellschaft für Geowissenschaften*, 333-344
6. M Maleki, N Mery, S Soltani-Mohammadi, F Khorram, X Emery, [Geological control for in-situ and recoverable resources assessment: a case study on Sarcheshmeh porphyry copper deposit, Iran](#), *Ore Geology Reviews*, 105133
7. N Madani, M Maleki, S Soltani-Mohammadi, [Geostatistical modeling of heterogeneous geo-clusters in a copper deposit integrated with multinomial logistic regression: An exercise on resource estimation](#), *Ore Geology Reviews*, 105132
8. M Esmaeili, S Soltani-Mohammadi, SA Banitaba, [Quantitative Assessment of Podiform chromite Deposits, based on Three-Part Assessment Method in Naeen's Ophiolites](#), *Journal of Mineral Resources Engineering*
9. M Abbaszadeh, S Soltani-Mohammadi, AN Ahmed, [Optimization of support vector machine parameters in modeling of Iju deposit mineralization and alteration zones using particle swarm optimization algorithm and grid search method](#), *Computers & Geosciences* 165, 105140
10. Saeed Soltani-Mohammadi, Babak Sohrabian, Mohammad Safa & Abdullah Erhan Tercan (2022) [A Monte Carlo Simulation-based algorithm for updating Combined Variance cost function in optimally locating additional drillholes](#),

11. Soltani-Mohammadi, S., Hoseinian, F.S., Abbaszadeh, M., Khodadadzadeh, M., 2022. **Grade estimation using a hybrid method of back-propagation artificial neural network and particle swarm optimization with integrated samples coordinate and local variability.** *Comput. Geosci.* 159, 104981. <https://doi.org/https://doi.org/10.1016/j.cageo.2021.104981>
12. Soltani-Mohammadi, S., Abbaszadeh, M., Hezarkhani, A. et al. **Uncertainty Analysis of Thermodynamic Variables of Fluid Inclusions: A Deposit-Scale Spatial Exploratory Data Modeling through Fuzzy Kriging.** *Nat Resour Res* 31, 51–65 (2022). <https://doi.org/10.1007/s11053-021-09969-4>
13. Babak Sohrabian, Saeed Soltani-Mohammadi, Ezzeddin Bakhtavar, Arash Taherinia, **Joint simulation through orthogonal factors generated by the L-SHADE optimization method,** *Spatial Statistics*, Volume 43, 2021, <https://doi.org/10.1016/j.spasta.2021.100521>.
14. Saeed Soltani-Mohammadi, M Safa, B Sohrabian, **Reducing Uncertainty in Mineralization Boundary by Optimally Locating Additional Drill Holes Through Particle Swarm Optimization,** *Natural Resources Research*, 1-17, First online 2021
15. A Taherinia, Saeed Soltani Mohammadi, **Comparison ore and waste classification based on the result of Log-kriging and localized uniform conditioning (LUC),** *Journal of Analytical and Numerical Methods in Mining Engineering*, First online, 2020
16. Z Shafiee, M Abbaszadeh, S Soltani-Mohammadi, M Dehghani, **Comparison of artificial neural networks and support vector machine classifiers for 3D modeling of mineralization zones (Case study: Miduk copper Deposit),** *Iranian Journal of Mining Engineering* 14 (45), 13-24, 2020
17. M Abbaszadeh, A Hezarkhani, S Soltani-Mohammadi, **Potassic and Phyllic Alteration Zoning Based on the Results of 3D Modeling of Fluid Inclusion Data by Artificial Neural Networks,** *Journal of Geoscience* 29 (113), 115-122, 2019
18. B Sohrabian, HH Gharegheshlagh, S Soltani-Mohammadi, JA Sharif, **Evaluation of Tailings from a Porphyry Copper Mine based on Joint Simulation of Contaminants,** *Natural Resources Research*, 1-23, 2019
19. S Soltani-Mohammadi, A Soltani, B Sohrabian **Fuzzy tonnage-average grade model based on extension principle,** *Journal of Mining and Environment* 10 (3), 659-666, 2019
20. A Aalianvari, S Soltani-Mohammadi, M Miri, **Estimation of water seepage from Azad dam foundation using multivariate geostatistic and comparison with observed flow,** *Journal of Geoscience* 28 (111), 195-202, 2019

21. Saeed Soltani, Abbas Soltani, Emad Chamanifard, **Grade estimation of Zu2 Jajarm deposit by considering imprecise variogram model parameters based on the extension principle**, International Journal of Mining and Geo-Engineering, Accepted
22. Elham Ghadiri Sousi, Saeed Soltani Mohammadi, Hadi Mokhtari, **Model of a Work Breakdown Structure (WBS) Framework and AOA Diagram for Efficient Project Management of Lead and Zinc Skarn Exploration with Exploratory Data**, Journal of Modeling in Engineering, Sep 2018,
23. Abbaszadeh M., Soltani-Mohammadi, S., Yousefi, M., **Modelling Spatial Variation of Arsenic Pollutant Using Empirical Bayesian Kriging in the Southern Part of Kerman Province**. Iran South Med J. 2018; 20 (6) :584-594
24. Alianvari, Ali, Soltani-Mohammadi, saeed, Miri, Maryam, **Estimation of water seepage from Azad dam foundation using multivariate geostatistic and comparison with , observed flow**, Scientific Quarterly Journal of Geosciences, Accepted
25. Maliheh Abbaszadeh, Ardeshir Hezarkhani, Saeed Soltani-Mohammadi, **Potassic and Phyllic Alteration Zoning Based on the Results of 3D Modeling of Fluid Inclusion Data by Artificial Neural Networks**, Scientific Quarterly Journal of Geosciences, Accepted
26. Mohammad Safa, Saeed Soltani-Mohammadi, **Distance function modeling in optimally locating additional boreholes**, Spatial Statistics, Volume 23, March 2018, Pages 17-35, ISSN 2211-6753, <https://doi.org/10.1016/j.spasta.2017.11.001>.
27. AAlianvari, Ali, Soltani-Mohammadi, saeed, Zeynab Rahemi, **Estimation of geomechanical parameters of tunnel route using geostatistical methods**, Geomechanics and Engineering, An International Journal”, 2018, 14 (5), 453-458
28. Fatemeh Sadat Hoseinian, Bahram Rezai, Saeed Soltani Mohamadi, **Perdition of semi-autogenous mill power using radial artificial neural network based on principal component Analysis**, Amirkabir Journal of Civil Engineering, 2017
29. Fatemeh Sadat Hoseinian, Moein Bahadori, Mohsen Hashemzadeh, Bahram Rezai, Saeed Soltani Mohamadi, **Application of Mathematical Modeling on Copper Recovery Optimization of Oxide Ores**, The Journal of The Minerals, Metals & Materials Society (TMS), 2017.
30. Fatemeh Sadat Hoseinian, Roohollah Shirani Faradonbeh; Aliakbar Abdollahzadeh, Bahram Rezai; Saeed Soltani-Mohamadi, **Semi-autogenous mill power model development using gene expression programming**, Powder Technology, 2017
31. Saeed Soltani-Mohammadi, Mohammad Safa, **A Simulated Annealing Based Optimization Algorithm for Automatic Variogram Model Fitting**, Archives of Mining Sciences, Vol 61, No 3 (2016).

32. Ghadiri Soufi, E., Soltani Mohammadi, S., Yousefi, M., Aalianvari, A. (2017). 'Assessing arsenic contamination affected by mining activities in Kerman province by using indicator Kriging method', *Journal of Geoscience*, 26(103), pp. 219-226. doi: 10.22071/gsj.2017.46613
33. Fatemeh Sadat Hoseinian, Moein Bahadori, Mohsen Hashemzadeh, Saeed Soltani Mohamadi, Bahram Rezai, **Recovery prediction of copper oxide ore column leaching by a hybrid neural genetic algorithm**, *Transactions of Nonferrous Metals Society of China*, 2016.
34. Saeed Soltani-Mohammadi, Mohammad Safa, Hadi Mokhtari, **Comparison of particle swarm optimization and simulated annealing for locating additional boreholes considering combined variance minimization**, *Computers & Geosciences*, Volume 95, October 2016, Pages 146–155
35. Mohammad Safa, Saeed Soltani-Mohammadi , Milad Kurdi, **Optimal design of additional sampling pattern for drinking-water quality control**, *Environment, Development and Sustainability*, 2016
36. Mehdi Amini, Emad Khorasani, Saeed Soltani-Mohammadi, **A New Analytical Solution for Determination of Acceptable Overall settlement of Heap Leaching Structures Foundation**, *Int. Journal of Mining & Geo-Engineering*, 2016
37. Maliheh Abbaszadeh, Ardeshir Hezarkhani, Saeed Soltani-Mohammadi, 2016, **Proposing Drilling Locations Based on the 3D Modeling Results of Fluid inclusion Data Using the Support Vector Regression Method**, *Journal of Geochemical Exploration*, 2016.
38. Saeed Soltani-Mohammadi , Mohammad Safa, 2015, **Optimally Locating Additional Drill holes to Increase the Accuracy of Ore/Waste Classification**, *Mining Technology*, 12/2015; 124(4):213-22..
39. Saeed soltani-Mohammadi,2015, **FuzzyKrig: A Comprehensive Matlab Toolbox for Geostatistical Estimation of Imprecise Information**, *Earth sciences Informatics*, DOI:10.1007/s12145-015-0240-4
40. Soltanimohammadi, S., Zamzam, M. S. b., bakhshandeh amnieh, H. Mousavi, E., mokhtari, **Risk Evaluating for Mechanized Tunneling in the Tehran Metro line 7 by MADM Methods**, *Sharif Journal of Civil Engineering*, 2017; 33.2(1.1): 81-88. doi: 10.24200/j30.2017.1105
41. Soltani-Mohammadi, S., Soltani, A., 2015, **Considering the Epistemic Uncertainties of the Variogram Model in Locating Additional Exploratory Drillholes**, *International Journal of Mining and Geo-Engineering*, Volume 49, Issue 1, Spring 2015, Page 67-74.
42. Maliheh Abbaszadeh, Ardeshir Hezarkhani, Saeed Soltani-Mohammadi, **Classification of Alteration Zones Based on Whole-Rock Geochemical Data Using**

Support Vector Machine, journal of Geological Society of India, Volume 85, issue 4, 2015

43. Soltani-Mohammadi S, Lak M, Mohammadi S, Karbala M A., **Estimation of the Water Table on Different Days of Year by Using Artificial Neural Network GRNN-Case Study: Behbahan Plain**. SCJ. 2014; 3 (1) :82-93

44. Gholamzadeh, M., Masoudi arani, M., Soltani mohammadi, S. (2016). 'Analysis of grout pressure in grouting stages of dam structure to achieve optimum pressure', Amirkabir Journal of Civil Engineering, 47(3), pp. 1-8. doi: 10.22060/ceej.2016.609

45. Hoseinian, F., Irannajad, M., Hashemzadeh, M., Soltani mohammadi, S., **Study of parameters affecting on copper recovery from oxide ores by column leaching using Artificial Neural Network**. Amirkabir Journal of Civil Engineering, 2016; 47(3): 47-53. doi: 10.22060/ceej.2016.507

46. Soltani-Mohammadi, S., Bakhshandeh Hassan, Zamzam, M.S., Mokhtari, H., 2015, **Risk Evaluating for Mechanized Tunneling in the Tehran Metro-Line 7 by Multi-Criteria Decision-Making Method**, Sharif Journal- Civil Engineering, under publication

47. Soltani, S., Hezarkhani, (2013), **A Simulated Annealing Based Algorithm to Locate Additional Drill-holes for Maximizing the Realistic Value of Information**, Natural Resources Research, DOI: 10.1007/s11053-013-9212-x,

48. Soltani, S., Hezarkhani, (2013), **Optimum locating of additional drillholes to optimize the statistical value of information**, Journal of Mining and Metallurgy, accepted for

49. Soltani, S., Amini, M., 2012, **Optimal site ion of heap leaching structures by analytic hierarchy process (case study: Taft heap leaching structure, Iran)**, Gospodarka Surowcami Mineralnymi (Mineral Resources Management), accepted for publication

50. Soltani, S., Tercan, E., (2012), **Constrained multiple indicator kriging using sequential quadratic programming**, Computer & Geosciences, DOI: 10.1016/j.cageo.2012.01.003

51. H. Bakhshandeh Amnieh, A. Siamaki, S. Soltani, **Design of blasting pattern in proportion to the peak particle velocity (PPV): Artificial neural networks approach**, Safety Science, Volume 50, Issue 9, November 2012, Pages 1913–1916.

52. Saeed Soltani Mohammadi , Hassan Bakhshandeh Amnieh, Moein Bahadori, 2012, **Investigating Ground Vibration to Calculate the Permissible Charge Weight for Blasting Operations of Gotvand-Olya Dam Underground Structures**, Archives of Mining Science (accepted for publication on Sep 2012)

53. S. Soltani Mohammadi, M. Amini, M. Shafiee Alavijeh, F. Bahrami

Samani,2012, Locating the portal of Moshampa dam diversion tunnels using AHP approach, Journal of Engineering geology, (accepted).

54. **A.Aalianvari, M.Malekitehrani, S.Soltani, 2012, Estimation of water flow upper reservoir of Azad pumped storage power plant**, using geostatistical methods, Arabian Journal of Geosciences, DOI: 10.1007/s12517-012-0528-3.

55. **Soltani, S., Amini, M., 2012, Optimal site ion of heap leaching structures by analytic hierarchy process (case study: Taft heap leaching structure, Iran)**, Gospodarka Surowcami Mineralnymi (Mineral Resources Management), accepted

56. **Soltani, S., Hezarkhani, A., Tercan, E, (2011), LOCATING ADDITIONAL DRILLHOLES OPTIMALLY USING SPATIAL SIMULATED ANNEALING.** Journal of the Geological Society of India, (accepted) ISI

57. **Soltani, S., Hezarkhani, A., (2011), "Determination of realistic and statistical value of the information gathered exploratory drilling"**, Natural Resources Research, DOI: 10.1007/s11053-011-9148-y.

58. **Soltatni, S., Bakhshandeh-Amnieh, H., Bahadori, M., (2011), "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 Science, Vol. 56 (2011), No 4, p. 701–710 (ISI)

59. **Soltani, S., Hezarkhani, A., (2011), Proposed algorithm for optimization of directional additional exploratory drillholes and computer coding**, Arabian Journal of Geosciences, DOI: 10.1007/s12517-011-0323-6.

60. **Soltani, S., Hezarkhani, A., Tercan, E, Karimi, B., (2011), USE OF GENETIC ALGORITHM IN OPTIMALLY LOCATING ADDITIONAL DRILL HOLES.** Journal of mining science, Volume 47, Number 1, 62-72, DOI: 10.1134/S1062739147010084.

61. **Saeed Soltani; Maliheh Abbaszadeh; Ardeshir Hezarkhani, Optimization of environmental additional sampling using spatial simulated annealing in Sepahan-Shahr area**, Iranian Journal of Environmental Geology, 2009

62. **Soltani, S., Hezarkhani, A., (2009), ADDITIONAL EXPLORATORY BOREHOLES OPTIMIZATION BASED ON THREE-DIMENSIONAL MODEL OF ORE DEPOSIT**, Archives of Mining Science, V. 54 (3) (ISI).

63. **S. Soltani-Mohammadi; H. Seidee; A. Hezarkhani; D. Kaviani, 2005, " Removing the effect of the syngenetic component from geochemical stream sediment data using fuzzy c-means clustering method: a case study from Yamaghan"**, Amir kabir Journal.

PhD and Masters Theses Supervision

No.	THESIS TITLE	STUDENT	Year
1	Grade estimation of Zu2 Jajarm deposit by considering imprecise variogram model parameters based on the extension principle	Abbas Soltani	2013
2	Uncertainty management of drilling bits life	Majid Fakhrian	2013
3	PRACTICAL APPLICATION OF MULTIPLE INDICATOR KRIGING TO RECOVERABLE RESOURCE ESTIMATION FOR THE Zu2 Bauxite Deposit	Fatemeh Soltani	2014
4	Evaluation of geostatistical methods for estimating the seepage (Case study: Azad Kordestan dam)	Maryam Miri	2014
5	Grade estimation of Zu3 Jajarm deposit by Geostatistical methods	Mohammad Mokhtari	2015
6	Evaluation of Internal Dilution Based on the Geostatistical Methods (Case study: Sarcheshme Copper Deposit)	Tina Saeed	2016
7	Petrophysical Evaluation And Reservoir Analysis of Mozduran Formation	Hatef Arbabi	2016
8	Estimation of geomechanical parameters of tunnel route using geostatistical methods	Zeinab Rahemi	
9		Mohammad Majdodin	
10			
11		Zahra Taheri	
