

CURRICULUM VITAE
(Updated, Apr 05 2015)



Personal Information:

Name: Nasser Madani-Esfahani

DATE AND PLACE OF BIRTH: April 18, 1984 at Tehran (Iran)

Citizenship: Iranian

MARITAL STATUE: Single

Current Statue: Permanent Visa at Chile

PROFESIONAL AND ACADEMIC DEGREES:

- Ph.D. in Mining Engineering, Universidad de Chile, Santiago, Chile (2013-2016)
- M.Sc. in Mining Engineering, Mineral Exploration Engineering, South Tehran Branch, Islamic Azad University, Tehran, Iran (2007-2009)
- B.Sc. in mining Engineering, Mineral Exploration Engineering, South Tehran Branch, Islamic Azad University, Tehran, Iran (2003-2007)

CURRENT POSITION:

- PhD candidate in Mining Engineering at university of Chile, Santiago, Chile (March, 2013- Apr, 2016)
- Research assistant at Advanced Mining Technology Center (AMTC), University of Chile, Santiago, Chile (Jun, 2013- Apr, 2016) - Full time
- Research assistant at Advanced Laboratory for Geostatistical Supercomputing (ALGES). University of Chile, Santiago, Chile (March, 2013- Apr, 2016) - Part time
- Research assistant at NATIONAL FUND FOR SCIENTIFIC & TECHNOLOGICAL DEVELOPMENT (FONDECYTE). Education ministry of Chile, Chile (March, 2013- Apr, 2016) – Part time
- Research assistant at CSIRO- Chile Center of Excellency. (March, 2014- Apr, 2016)- in kind

PhD Dissertation:

- Plurigaussian Simulation of Non-Stationary Categorical Variables and its Application to Ore Body Modeling. Under supervision of full Prof. Xavier Emery
- Jury 1: Prof. Brian Townley (University of Chile, Santiago, Chile)
- Jury 2: Prof. Margaret Armstrong (Ecole de Mines, France)
- Jury 2: Prof. Grégoire Mariethoz (University of Lausanne, Switzerland)

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FIELDS OF INTEREST:

- Geostatistics
- Data Analysis
- Ore Reserve and Mineral Resource Evaluation
- Geological Modeling
- Risk Analysis

Publications:

International Journal (ISI):

- 1) Paravarzar, Sh., Emery, X., Madani, N. “**Comparing sequential Gaussian and turning bands algorithms for cosimulating grades in multi-element deposits**”. *Comptes Rendus Geoscience*. Vol. 347, Issue 2, March–April 2015, P. 84–93.
- 2) Afzal, P., Madani, N., Shahbeik, Sh., Yasrebi, AB. “**Multi-Gaussian kriging: a practice to enhance delineation of mineralized zones by Concentration-Volume fractal model in Dardevey iron ore deposit, SE Iran**”. *Journal of Geochemical Exploration*. Vol. 158, p. 10-21.
- 3) Sojdehee, M., Rasa, I., Nezafati, N., Vosoughi Abedini, M., Madani, N., Zeinedini, E (2014). “**Probabilistic modeling of mineralized zones in Daralu copper deposit (SE Iran) using sequential indicator simulation**”. *Arabian Journal of Geosciences*. Arab J Geosci (2015) Vol. 8, p. 8449–8459.
- 4) Madani, N., Emery, X. (2014). “**Simulation of geo-domains accounting for chronology and contact relationships: application to the Río Blanco copper deposit**”. *Stochastic Environmental Research and Risk Assessment*. Vol. 29, p. 2173-2191.
- 5) Sadeghi, B., Madani, N., Carranza, E.J.M. (2015). “**Combination of geostatistical simulation and fractal modeling for mineral resource classification**”, *Journal of Geochemical Exploration*. Vol. 149, p. 59-73.
- 6) Afzal, P. Alhoseini, S. Tokhmechi, B. Kaveh, D. Yasrebi, A. Madani, N. Wetherelt, A. (2014). “**Outlining of high quality coking coal by Concentration-Volume fractal model and Turning Bands Simulation in East-Parvadeh Coal Deposit, Central Iran**”. *International Journal of Coal Geology*. Vol. 127, p. 88-99.
- 7) Maleki, M. Madani, N. Emery, X. (2014). “**Capping and kriging grades with long-tailed distributions**”. *Journal of the South African Institute of Mining and Metallurgy*. Vol. 114 (3), p. 255- 263.
- 8) Barzegari, A. Madani Esfahani, N. Asghari, O. (2013). “**Application of sequential Gaussian simulation to quantify the surface wave magnitude uncertainty within the faulted regions, Case Study: Talgah Bridge, SW of Iran**”. *Arabian Journal of Geosciences (Springer)*. Vol. 7, p. 2991-3010.
- 9) Asghari, O. Madani Esfahani, N. (2013). “**A new approach for the geological risk evaluation of coal resources through a geostatistical simulation**”, *Arabian Journal of Geosciences (Springer)*. Vol. 6, p. 929-943.
- 10) Madani Esfahani, N. Asghari, O. (2013). “**Fault Detection in 3-D by Sequential Gaussian Simulation of Rock Quality Designation (RQD), Case Study: Gazestan Phosphate Ore Deposit (Central Iran)**”. *Arabian Journal of Geosciences (Springer)*. Vol. 6, p. 3737-3747.

Iranian Journal (Scientific & Research):

- 12) Paravarzar, Sh. Madani, N. Maghsoudi, A. Afzal, P. (2014) **“Testing the Exactitude of Estimation Methods in the Presence of Outliers: An accounting for Robust Kriging”**. Iranian Journal of Earth Sciences, Department of Geology, Faculty of Sciences, Islamic Azad University, Mashhad Branch, Mashhad. Iran. Vol. 6, p. 24-30.
- 13) Asghari, O. Madani Esfahani, N. (2011). **“Coal resource estimation by geological uncertainty and analysis of fault presence effect (Parvadeh III region)”**. Iranian Journal of Environmental Geology, University of Islamshahr, Islamshahr, Iran. Vol. 15, p. 1-16.

International Conference Papers:

- 14) Paravarz, Sh. Maghsudi, A. Maarefvand, P. Madani Esfahani, N. Afzal, P. (2014). **“Weighted-Probabilistic Modeling by uncertainty assessment of geological units in Zarshuran ore deposit”**. In the proceeding of 1st National Symposium on the Application of Mathematics in the Earth sciences. Oveisi, B. Faghih, A. (eds.), Shiraz, Iran. P 32.
- 15) Paravarz, Sh. Maghsudi, A. Maarefvand, P. Madani Esfahani, N. Afzal, P. (2014). **“Gold deposit estimation in presence of Outliers by using Robust Kriging”**. In the proceeding of the 32th international Conference of Geology, Geological Survey of Iran. Mohammadi, B. (ed.), Tehran, Iran, 7 p.
- 16) Madani Esfahani, N. Emery, X. (2013). **“A comparison of three approaches to calculate the variogram of regionalized data”**. In Proceedings of the 3th International Seminar on Geology for the Mining Industry GEOMIN 2013. Ambrus, J. Beniscelli, J. Brunner, F. Cabello, J. Ibarra, F. (eds.), Gecamin Ltda, Santiago, Chile, 7 p.
- 17) Madani Esfahani, N. Asghari, O. (2011). **“RQD exploration by Sequential Gaussian Simulation Approach in Gazestan Ore Deposit”**. In Proceedings of the Annual Conference of the International Association for Mathematical Geology International Association of Mathematical Geosciences (IAMG). Marschallinger, R. Zobl, F. (eds.), Salzburg, Austria, p. 190-207.

Iranian Conference Papers:

- 18) Paravarzar, Sh. Madani, N. (2014). **“The Implementation of Multivariate Simulation in Polymetal deposit exploration”**. In Proceedings of the 1th National Conference on Mining Science. Mining institution of Sari. Shahriar, K. Kave, D. Afzal, P. (eds), Mazandaran, Iran, 8 p.
- 19) Paravarz, Sh. Maarefvand, P. Madani, N. Maghsudi, A. Afzal, P. (2013). **“Geostatistical simulation of Continuous Variables by Turning Band Algorithm (Case Study: Zarshouran Ore Deposit)”**. In Proceedings of the 1th National Conference on Exploration engineering of Underground Resources. University of Shahrood. Arab-Amiri, A. Kamkar, A. (eds), Shahrood, Iran, 6 p.

- 20) Kor, H. Madani, N. Khojam, Al. (2013). “**Approaches of incorporate the geological and grade uncertainty models in the mineral resources evaluation**”. In Proceedings of the 1th National Conference on Exploration engineering of Underground Resources. University of Shahrood. Arab-Amiri, A. Kamkar, A. (eds), Shahrood, Iran, 6 p.
- 21) Paravarz, Sh. Madani, N. (2013). “**Probabilistic facies modeling using Geostatistical simulation**”. In Proceedings of the 9th Iranian Student Mining Engineering Conference, University of Birjand. Javashir Giv, M. Hossein pour, M. (eds), Birjand, Iran, 11p.
- 22) Madani Esfahani, N. Heidari, B. (2011). “**Evaluation of Core Drilling Machinery by Mathematical Programming (DEA)**”. In the proceeding of the 1th National Conference in Copper Industries, May 2011, Tehran, Iran.
- 23) Madani Esfahani, N. Heidari, B. (2010). “**Optimization of core drilling operation by Fuzzy Analytical Hierarchy Process (FAHP)**”. In the proceeding of THE 29th SYMPOSIUM ON GEOSCIENCES, Tehran, Iran.
- 24) Madani Esfahani, N. Mahvi, M. Parvaresh, A. (2009). “**Coal spatial distribution estimation in parvadeh III Tabas and exploration grid analysis by geostatistical simulation**”. In Proceedings of The 14th Symposium of Geological Society of Iran and the 28th Symposium of Earth Sciences, Geological Survey of Iran, Urmia, Iran. 10 p.
- 25) Madani Esfahani, N. Mahvi, M. Parvaresh, A. (2009). “**Drilling Pattern Design in Parvadeh III Coal Ore Body: a Comparative Study between Russian Method and Geostatistical Simulation**”. In the proceeding of the 2th mine, Wheel of Industry, Islamic Azad University, South Tehran branch, Tehran, Iran.

Professional Experiences:

- Ore Body Evaluation of Phosphate and Iron in Sphordi ore deposit-Hampa Behineh Company- Iran (2014- to date)

Language:

- **Foreign:**
English: Fluent in Speaking, Reading and Writing
Spanish: Fluent in Speaking
- **Native:**
 Persian (Farsi)

Honors and Awards:

- Big Data and Environment conference participation, Argentina, Buenos Aires. Nov, 2015. 1000 Euros.
- Hot Paper: 8th, Journal of Geochemical Exploration, March to Jun 2015 for the paper “Combination of geostatistical simulation and fractal modeling for mineral resource classification”, Journal of Geochemical Exploration. Vol. 149, p. 59-73.”
- IAMG Student Research Grants linked to Mathematical Geosciences Students awards Journal: 2500 US\$ (Sep, 2014)
- Advanced Mining Technology Center (AMTC): Fund for PhD program (Covering for tuition fee): Annually 2700 US\$ (Jul, 2013- Apr, 2016)
- Department of Mining Engineering at University of Chile: Scholarship (Life expenses): Monthly 1000 US\$ (Oct, 2013- Apr, 2016)
- Advanced Mining Technology Center (AMTC): Scholarship (Life expenses): Monthly 1200 US\$ (Jul, 2014- Apr, 2016)
- Department of Mining Engineering at university of Chile (funded by CODELCO): Scholarship (Covering for tuition fee): Annually 3500 US\$ (March, 2013- Apr, 2016)
- FONDECYTE: Scholarship for part time research in geological modeling: Annually 2500 US\$ (March 2013- Apr, 2016)
- 1st Ranked Student in University for the GPA of 17.09/20 (2005)
- 1st Ranked Student in University for the GPA of 17.18/20 (2006)
- 1st Ranked Student in University for the GPA of 18.29/20 (2007)

Membership:

- International Association of Mathematical Geosciences (IAMG). (Oct, 2013- to date)

Formal qualifications:

- Advanced Mining Technology Center (AMTC), Multiple-Point Simulation: theory and applications by Prof. Dr. Gregoire Mariethoz from the University of New South Wales, Australia at University of Chile, Santiago, Chile.

Reviewer for the following journals:

- Journal of Geochemical Exploration
- Arabian Journal of Geosciences
- Nonlinear processes in Geophysics
- Iranian Journal of Earth Sciences (IJES)
- Neural Computing and Applications
- Natural Hazards
- Journal of African Earth Sciences