

CURRICULUM VITAE



Personal Details:

Name: Kumars

Family Name: Seifpanahi-Shabani

Job Title: Assistant Professors, School of Mining, Petroleum and Geophysics Engineering, University of Shahrood, September 23, 2014 till Now.

Date and Place of Birth: December 22, 1984, Iran

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Education:

- **Ph.D.** in Mining Exploration Engineering (Mining-Environment Engineering), Shahrood University of Technology, Shahrood, Iran (*Thesis Title: Experimental Studies and Numerical Modeling of Heavy Metals Removal from Acid Mine Drainage by Perlite and Diatomite novel Nanoparticles*), **2011-2014** (average: 19.12, scholar between classmates).
- **M.Sc.** in Mining Exploration Engineering (Mining-Environment Engineering), Shahrood University of Technology, Shahrood, Iran (*Thesis Title: Application of computational fluid dynamics in modeling of the fate and transport of metallic pollutants associated with acid mine drainage at Sarcheshmeh porphyry copper mine*), **2009-2011** (average: 17.77, scholar between classmates).
- **B.Sc.** in Mining Exploration Engineering, University of Kurdistan, Sanandaj, Iran (*Thesis Title: Interpretation of stream sediment geochemistry, Davaranm 1:100000 Sheet, Kerman*), **2005-2009**.
- **Baccalaureate**, Chamran School, Sanandaj, Iran, **2002-2005**.

Training Courses:

- Workshop entitled “*Application of Nano Technology at Mining Environment*”, Olympic Hotel, Tehran, Iran, **December 2012**.
- “Microsoft Office Training Corse” Faculty of Mining, Petroleum and Geophysics, University of Shahrood, Shahrood, Iran, **February-April 2015**.

Work Experience:

- *Experimental work for Sarcheshmeh copper acid mine drainage treatment*, Institute for Color Science and Technology, Tehran, Iran, **2011-2013**.
- *Engineer Headmaster, Sampling, geochemistry and Core Drilling Projects*, Arya-Jonob Company, Syah-Kamar Molybdenum Mine, Tabriz, Iran, **2012-2014**.
- *Manganese Index Geochemical Exploration Project*, Baroot Aghaji area, Zanjan, Iran, **2013**.
- *Hematite Iron Mine Project, Geochemistry, Geophysics, Sampling, GIS Exploration application and project management*, Aak-Kahoor area, Bandar Abbas, Iran, **2014**.
- *Copper-Hematite-Magnetite Index Exploration Project, Geochemistry, Geophysics, Sampling, GIS Exploration Application and Project Management*, Rooydar area, Bandar Abbas, Iran, **2014**.

Educational Experiences:

- *Lecturer of Computer & Internet Training for B.Sc. Mining Engineering Students*, Department of Mining Engineering, College of Engineering, Islamic Azad University, Shahrood Branch, Shahrood, Iran, **2011-2012**.
- *Lecturer of Advanced Engineering Mathematics for M.Sc. Mining Engineering Students*, Department of Mining Engineering, College of Engineering, Islamic Azad University, Shahrood Branch, Shahrood, Iran, **2012-2013**.
- *Lecturer of Physical Chemistry, Structural Geology and Mining Economy, Mining Dewatering, Numerical Computations and Computer Programming for B.Sc. Mining Engineering Students*, School of Mining, Petroleum and Geophysics Engineering, University of Shahrood, Shahrood, Iran, **2014-Now**.
- *Lecturer of Environmental Engineering and Nanotechnology for Mineral Processing, for M.Sc. Mining Engineering Students*, Department of Mining, Petroleum and Geophysics Engineering, University of Shahrood, Shahrood, Iran, **2014-Now**.

Published Books:

- 1- *Computational Fluid Dynamics Technologies and Applications: Application of computational fluid dynamics for simulation of acid mine drainage generation and subsequent pollutants transportation through groundwater flow systems and Rivers*, INTECH Publisher, Austria
(*Chapter Book, 2011*).

Published Journal Papers:

- 1- Numerical modeling of biosorption of copper and manganese by *Aspergillus Niger* fungal from Sarcheshmeh Copper Mine acid mine drainage in a continuous reactor (*ISI: Journal of Archive of Mining Sciences, IF: 0.608, 2011*)
- 2- Quantity prediction and one-dimensional numerical modeling the variability of heavy metals contaminant from the Salt River downstream Sarcheshmeh copper mine (*Journal of Applied Geology, 2011, in Persian*)

- 3- Integration of Stream Sediment Geochemical and ASTER Data for Porphyry Copper Deposit Exploration in Khatun Abad, North West of Iran
(ISI: Journal of Archive of Mining Sciences, IF: 0.608, 2012)
- 4- Application of Fuzzy Logic Method in Integration of Lead and Zinc Exploration Data in GIS Environment for Mapping Potential Zones in Chichakloo Area, East of Takab
(GEOSCIENCES Journal, 2012, in Persian)
- 5- Application of Nanotechnology for Solution or Reduction of Mining Environment Problems
(Engineering, Research and Economic Journal of Mines development Organization, 2012, in Persian)
- 6- Integration multisource data for mineral exploration by using fuzzy logic, case study: Taknar deposit, NE of Iran
(ISI: Arabian Journal of Geosciences, IF: 1.152, 2013)
- 7- FeCl₂/FeCl₃/Perlite Nanoparticles as a Novel Magnetic Material for Adsorption of Green Malachite Dye
(ISI: Arabian Journal for Science and Engineering, IF: 0.367, 2013)
- 8- Acid mine drainage treatment by perlite nanomineral, Batch and Continuous systems
(ISI: Journal of Archive of Mining Sciences, IF: 0.608, 2013)
- 9- Modeling of ions biological adsorption by Phanerochaete Chrysosporium fungus from acid mine drainage
(ISI: Advances in Experimental Biology, IF: 0.14, 2013)
- 10- Preparation and characterization of novel nanomineral for the removal of several heavy metals from aqueous solution: batch and continuous systems
(ISI: Arabian Journal of Chemistry, IF: 2.684, 2013)
- 11- Finite Volume Modelling of the heavy metal ions adsorption by nano-perlite from acid mine drainage: Batch system
(ISC: International Journal of Mining and Geo-Engineering, 2014)
- 12- Modeling of Ions Biological Adsorption by Phanerochaete Chrysosporium fungus from Acid Mine Drainage
(Advances in Environmental Biology, IF: 0.3, 2014)
- 13- The role of pH and solid content of ball grinding environment on rougher flotation
(Research Journal of Applied Sciences, Engineering and Technology, 2014)
- 14- Selection of New Exploration Targets by Using Lithochemical Data, Taknar Deposit, NE of Iran
(Journal of Mining and Environment, Accepted for Publication, 2014)
- 15- Stream Sediment study with jointing fractal geometry and correspondence analysis for separation anomaly zones, Khoosf Area, Iran
(Journal of New findings in the Applied Geology, Accepted for Publication, 2014, in Persian)

16- Evaluation of adsorptive efficiency of kaolin for the removal of Basic dyes with emphasis on kinetics and thermodynamic studies
(ISI, Under Review)

17- A Novel Multimode Modelling of Adsorption Process by Mineral Nanoparticles: with Special Emphasis to Sensitivity Analysis
(ISI, Under Review)

Published Conference Papers:

1- Considering of Economic Potential Sanandaj Shale for Brick Generation
(3rd Mining Engineering Conference, 2009, in Persian).

2- The Estimation of Anomalies Border of Potential Field by using Generalized Analytical Signal
(7th Engineering Geology and Environment of Iran, 2011, in Persian).

3- A new application of Analytical Hierarchy Process as a simple tool for Proper Chemical Oxidation Process Selection
(International Conference on Trends in Environmental and Industrial Engineering, 2011).

4- Numerical Modeling of Cu and Mn Biological Adsorption in Sarcheshmeh Acid Mine Drainage by using *Aspergillus Niger* Fungus in the Continues Reactor
(The 4th Conference & Exhibition on Environmental Engineering, 2011).

5- Removal of Chromium (VI) from Electroplating Wastewater by Reverse Osmosis method
(2nd International Conference on Biology, Environment and Chemistry, 2011).

6- Blue G Dye Removal by using Walnut Sawdust from aqueous solutions, a laboratory study
(International Conference on Trends in Environmental and Industrial Engineering, 2012)

7- FeCl₂/FeCl₃/Diatomite/Perlite Nano-composite as a Novel Magnetic Adsorbent for Wastewater Treatment Consist of Fe²⁺/Cu²⁺/Mn²⁺ Ions
(Professional Symposium on Nanosafety in Human & Environment, 2012)

8- Removal of Chromium (VI) from Electroplating Wastewater by Reverse Osmosis method
(International Conference on Biology, Environment and Chemistry, 2013)

9- Removal of Basic Blue 41 from Textile Effluent Using a Novel Natural Nano-Adsorbent
(International Conference of Applied Research in Textile, 2013)

10- Physical parameters optimization by Walnut Sawdust as a low-cost and compatible Absorbent for Blue G dye adsorption
(International Conference on Trends in Environmental and Industrial Engineering, 2014)

- 11- Novel Nano-Mineral Application for the Removal of Cu and Mn Ions from Aqueous Solution
(*1st National Chemistry & Nanotechnology Conference, 2014*)
- 12- Toxic element wastewater treatment by using magnetic diatomite nanoparticles
(*National Conference in Environment, 2015 in Persian*).
- 13- Magnetic diatomite nanoparticles preparation and its application for organic pollutants removal
(*National Conference in Agriculture and Environmental Engineering, 2015 in Persian*).
- 14- Application of *Salvadora Persica* nanoparticles for removal of Basic Violet 16 dye
(*National Conference in Environment, 2015 in Persian*).
- 15- Kinetic and Equilibrium study of Basic blue 41 dye removal by *Salvadora Persica* nanoparticles
(*National Conference in Agriculture and Environmental Engineering, 2015 in Persian*).
- 16- Removal of Disperse Blue 60 dye by using Andalousite Nanoparticles: Kinetic and Equilibrium study
(*National Conference in Environment, 2015 in Persian*).
- 17- Removal of Disperse Red 177 dye by using Kyanite Nano-mineral
(*University of Tehran National Conference of Environment, 2015 in Persian*).
- 18- Wastewater Treatment by Bauxite Nanoparticles from Aqueous Solution that Contaminated by Basic Red 46 dye
(*National Conference in Environment, 2015 in Persian*).
- 19- Isotherm and Kinetic Study of Basic Violet 10 dye by using Bauxite Nanoparticles
(*National Conference of Environmental Chemistry, 2015 in Persian*).

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M.Sc. Thesis Supervisor:

- Title: *Application of *Salvadora Persica* Navel Nanoparticles for wastewater treatment*, Student Name: *Hamidi, Ali*, Shahrood University of Technology, Date Defense: *September 2015*.

- Title: *Application of Magnetic Navel Nano minerals for acid mine drainage treatment*, Student Name: *Mohammadi, Reza*, Shahrood University of Technology, Date Defense: *September 2015*.

Membership of Professional Bodies:

- Member of Industries and Mines Organization, Semnan, Iran, *2008 till Now*

Review the papers for international journals:

- International Journal of Mining Science and Technology, ELSEVIER, *2011-Now*.
- International Invention Journal of Engineering Science and Technology, *2014-Now*.
- Journal of Mining and Environment, ISC, *2014-Now*.
- International Journal of Mining and Geoengineering, ISC, *2014-Now*.
- Iran Journal of Mining Engineering, *2014-Now*.

Review the papers for international Conference:

- 3rd International Conference on Biomedical Engineering and Biotechnology, ICBEB *2014*.

Software Skills:

- **Basic Software's:**
Microsoft Office, Adobe Photoshop, Mendeley Desktop, Microsoft Windows
- **Statistical Software's:**
SPSS, Mini Tab
- **Applied Software's:**
Google Earth, NASA World Wind, Map Source, Chem Office, Surfer, Arc Map, QGIS Desktop, Garmin GPS, Arc GIS
- **Plotting Software's:**
Microcal Origin, Sigma Plot, Plot 3D, Tec Plot, Diagram Designer, Microsoft Excel
- **Modeling Software's:**
SEEP W, CTRN W, PHOENICS Commercial Package
- **Software's for Experimental Analysis Interpretation and Correction:**
X'Pert³ Powder, OMNIC FT-IR
- **Programming Software's:**
FORTRAN, C

Languages:

- Persian: Excellent
- English: Good and Fluency

Interest Research Fields:

Application of Nanotechnology in Mine Water and Wastewater Treatment, Environmental Modeling of Fate and Transport of Mining Pollutants, Environmental Computational Fluid Dynamics, The Assessment of Waste and Tailing Damp

Environmental Effects, The Investigation of Anatomy of Mining Environment,
Environmental Geochemistry, Environmental Thermodynamic, Reaction Transport.

Kumars Seifpanahi-Shabani

23/10/2015