

Abdorreza Vaezihir

Professor

College: Natural Science

Education			
Degree	Graduated in	Major	University
BSc	2001	Geology	University of Tabriz
MSc	2004	Hydrogeology	University of Shiraz
Ph.D	2011	Hydrogeology	University of Shiraz

Work Experience

- Manager of Earth Sciences Department in University of Tabriz, December 2013 to December 2015.
- Head of Industrial relation, Intellectual property and Entrepreneurship office in University of Tabriz, December 2015 to July 2018.
- President of East Azerbaijan Science and Technology Park, August 2018 to September 2022.
- Member of the Technology Committee of the Higher Education Development Council
- Plenipotentiary representative of the Minister of Science, Research and Technology in the special technology zone of Rabe Rashidi
- Founder and member of the board of directors of Rah Ab Azar Environment Company
- Founder and chairman of the board of directors of "Future Technology Transfer"
 Consortium
- Founder and chairman of the board of directors of "Future Agricultural Technology"
 Consortium

Awards

- The top researcher of the University of Tabriz in 2014, 2016, 2017, 2018, 2019, 2020, 2021 and 2022
- Holder of the first rank in the entrance exam of M.S. in all over of Iran.
- Developer of a new method for artificial recharge systems designing.

- Developer of a new method in hydrocarbon contaminant source determination in Groundwater
- The inventor of the device of identifier and crushing of plastic bottles using ultrasonic method

Course Topics

- Groundwater Contamination
- Fault zone hydrogeology
- Flow and Transport Modeling
- · Karst and Fractured rock aquifers
- Environmental Pollution and Management

Journal Membership

Member of the Editorial Board of Hydrogeology Journal in University of Tabriz

Papers in Conferences

- 1. Contaminant source determination in Groundwater using TMCP and TMCH isomers ratio ,Recycling and Reuse ,2012 01 04.
- 2. Abdorreza Vaezihir, Fatemeh Safari, Hossein Javani, Nader Mazaheri, The efficiency of open limezeolite channel system in treatment of Acid Mine Drainage (AMD) released from Sungun copper nine, Acid Rock Drainage 2018 International Mine Water Association, 2018 09 10.
- 3. The Role of Natural Attenuation in the Decrease of Metal Concentration in a River Polluted by AMD Released from Sungun Mine (NW of Iran), Mine Water Association, 2022 11 06.
- **4.** Abdorreza Vaezihir , Younes Jodat , Nader Mazaheri , Somayeh Aghili ,Evaluation of Leakage Potential from Tailing Dam of Sungun Copper Mine Using Hydrogeological Findings and Numerical Modelling ,International Mine Water Association ,2023 07 17.

Papers in Journals

- 1. Field scale modeling of BTEX released from multiple source zones, Bioremediation, pp. 156-176, 2012 04 09
- 2. Abdorreza Vaezihir et al., Source Determination for Subsurface Light Non-Aqueous Phase Liquid (LNAPL) Using Trimethylcyclopentane and Trimethylcyclohexane Isomer Ratios, ENVIRONMENTAL FORENSICS, pp. 25-35, 2013 02 26.
- 3. Abdorreza Vaezihir ,& Mehri Tabarmayeh,Total vulnerability estimation for the Tabriz aquifer (Iran) by combining a new model with DRASTIC,Environmental Earth Sciences,2015 04 12.
- **4.** Abdorreza Vaezihir ,& Simozar Mohammadi,Groundwater Contamination Sourced from the Main Cemetery of Tabriz, Iran,Environmental Forensics,2016 04 02.
- 5. Hossein Rajabpour, Abdorreza Vaezihir, Mohammad Hasanpour Sedghi, The North Tabriz Fault, a barrier to groundwater flow in an alluvial aquifer northwest of Tabriz, Iran, Environmental Earth Sciences, 2016 05 01.
- 6. Hossein Rajabpour ,& Abdorreza Vaezihir, Hydrogeological Studies to Identify the Trend of Concealed Section of the North Tabriz Fault (Iran), Groundwater, 2016 10 01.
- 7. Hamidreza Heidari , Mohammad Zare , James Barker , Abdorreza Vaezihir,Lab scale experiment assessment of air sparging BTEX removal in fine grained aquifer of Shiraz Oil Refinery,Desalination and

Water Treatment, 2017 01 01.

- 8. Somayeh Aghili, Abdorreza Vaezihir, Mohammadreza Hosseinzadeh, Distribution and modeling of heavy metal pollution in the sediment and water mediums of Pakhir River, at the downstream of Sungun mine tailing dump, Iran, Environmental Earth Sciences, 2018 02 01.
- 9. Evidence for distributed active strike-slip faulting in NW Iran: The Maragheh and Salmas fault zones, Tectonophysics, 2018 06 02.
- 10. Abdorreza Vaezihir , Mohammadbagher Bayanlou , Zeinab Ahmadnezhad , Ghodrat Barzegari,Remediation of BTEX plume in a continuous flow model using zeolite-PRB,Contaminant Hydrology,2020 03 01.
- 11. Reza Azimi , Abdorreza Vaezihir , Robert Lenhard , Majid Hasanizadeh, Evaluation of LNAPL Behavior in Water Table Inter-Fluctuate Zone under Groundwater Drawdown Condition, Water, 2020 08 20.
- 12. Zeinab Ahmadnezhad , Abdorreza Vaezihir , Christoph Schuth , Gholamreza Zarrini, Combination of zeolite barrier and bio sparging techniques to enhance efficiency of organic hydrocarbon remediation in a model of shallow groundwater, Chemosphere, 2020 10 01.
- 13. Leila Khazini , Mehdi Eyvazpour , Abdorreza Vaezihir, Dispersion and modeling discussion of aerosol air pollution caused during mining and processing of open cast mines, Environmental Science and Technology, 2021 03 10.
- **14.** Abdorreza Vaezihir , Fatemeh Safari , Mehri Tabarmayeh , Ali Asghar Khalafi,Application of MCLP and LINGO methods to optimal design of groundwater monitoring network in an oil refinery site,Hydroinformatics,2021 04 21.
- 15. Abdorreza Vaezihir et al., Investigation of long term hazards of chemical weapon agents in the environment of Sardasht area, Iran, Environmental Science and Pollution Research, 2021 07 19.
- 16. Remediation of heavy metals from contaminated river water using natural zeolite and limestone, Arabian Journal of Geosciences, 2021 08 30.
- 17. Shahla Nasiri, Abdorreza Vaezihir, Jafar Ahmadi Shali,Designing soil contamination monitoring network in petroleum refineries by XGBoost weighting and geostatistical facility allocation methods,Environmental Science and Pollution Research,2023 11 01.
- 18. Abdorreza Vaezihir, Nahid Zarvash, Haji Karimi Evaluation on karst development potential in Kabirkoh anticline in Ilam province using phase modulation and Analytical Hierarchy Process (AHP) and remote sensing and GIS Iranian Association of Geomorphology እንደ ነገር እንደ
- 19. Abdorreza Vaezihir , Ali Sepehripour , Mehri Tabarmayeh, Identifying flow regime in the aquifer of fractured rock system in Germi Chai Basin, Iran, Mountain Science, 2024 02 09.
- 20. Abdorreza Vaezihir , Tahereh Mohammadzadeh , Mehri Tabarmayeh, Hydrochemical and hydrodynamic studies to explore the origin of water in a volcanic aquifer, Water Supply, 2023 12 18.
- 22. Abdorreza Vaezihir و Mehri Tabarmayeh،Estimation of the vulnerability of the Tabriz aquifer subjected to agricultural activities،Water Resources and Development،۲۰۱۵ ۹ ۱۶.
- 24. Abdorreza Vaezihir, Fatemeh Safari, Ebrahim Asghari Kalajahi, Identification of hydrocarbon contamination and evaluation bioremediation potential in the aquifer Tabriz petrorefinement complex, Applied geology, YOIS OF YY.
- 25. Fatemeh Namakchi, Abdorreza Vaezihir, Ebrahim Asghari Kalajahi, Zonation of landslide hazard in Khoy city west by Anbalagan method, Geography and Planning, ۲۰۱۶ ۰۷ ۲۲.
- 26. Abdorreza Vaezihir, Behroz Sari Sarraf, Akram Valaei, Investigation on the causes of reduction of flow in the major rivers of the Southeast of Urmia lake, Geographical Space, ۲۰۱۶ ۰۴ ۲۷.
- 27. Abdorreza Vaezihir 9 Mehri Tabarmayeh Evaluation of potential groundwater resources in fracture

- 29. Khadijeh Pourranjbari, Abdorreza Vaezihir, Mohammadreza Hosseinzadeh Study on the effects of Cu-Mo deposit Haftcheshmeh on health life species in the protected area of Arasbaran Environmental Sciences (۲۰۱۶) ۱۲۰.
- 30. Behroz Sari Sarraf , Abdorreza Vaezihir , Akram Valaei , Vahideh Abtahi, Study of trend and relationship between meteorological and hydrogeological droughts of Sufi Chai and Mordagh Chai watershed, Natural Environmental Hazards, Y 17 Y 1.
- 31. Khadijeh Pourranjbari, Abdorreza Vaezihir, Mohammadreza Hosseinzadeh Investigation of Environmental Impacts of Heavy Metals Released from the Porphyry Cu- Mo Deposit in Haftcheshmeh Area, North West of Varzaghan-East Azarbayjan Sciences of water and soil 17017 09 71.
- 32. Hossein Rajabpour ₉ Abdorreza Vaezihir Investigation on effect of Tabriz North fault on the quantity and quality of groundwater resources in the vicinity of Tabriz East Iranian geology (۲۰۱۲ ۹ ۲۱).
- 33. Abdorreza Vaezihir 9 Younes Jodat Probably contamination seepage through abutment of the tailing dam of Sungun Cu–Mo mine using of geotechnical characteristics and groundwater hydrogeochemical evidences Civil and Environmental Engineering 4.5 11 10 17.
- 34. Abdorreza Vaezihir 9 Mehri Tabarmayeh, Determination of the potential of groundwater contamination under the pressure of Tabriz Plain, Science of soil and water, ۲۰۱۸ ۰۳ ۰۶.
- 35. Broumand Salahi , Majid Rezaei Banafsheh , Abdorreza Vaezihir , Mojtaba Faridpour, Monitoring and comparative analysis of meteorological drought on the groundwater level changes Marand plain, Spatial analysis of environmental hazards, Yol Aol 10.
- 36. Abdorreza Vaezihir 9 Naeimeh Esmaeilnia Seepage layer determination and investigation on seepage mechanism in the left abutment of Aghchai dam (West Azarbaijan) using hydrogeological studies Iranian irrigation and water engineering 11.
- 37. Hamed Jafarian , Abdorreza Vaezihir , Hossein Pirkharrati, Determination of factors affecting the hydrochemistry of groundwater resources in hard and karstic formations of west Urmia, Hydrogeomorphology, Yolk ov Yl.
- 38. Haji Karimi , Nahid Zarvash , Abdorreza Vaezihir، Application of GIS and Analytical Hierarchy Process in susceptible areas determination of groundwater in Mehran plain Ilam province, Hydrogeomorphology, Yolk 11 11.
- 39. Abdorreza Vaezihir 9 Sanaz Ghobadian Investigation on bioremediation potential of oil pollution in aquifer of Shazand refinery complex Iranian geology 17 N N 17 19.
- 40. Abdorreza Vaezihir , Morteza Vafadar , Vahedeh Aghaei, Evaluation of groundwater potential in the karstic and hard rock formations of Moro Mountain using AHP, SAW and F-AHP methods, Geographical Space, Yolf of 19.
- 41. Abdorreza Vaezihir و Vahideh Azizan، Numerical modeling of petroleum contaminants transported in groundwater probable leakage from Khoy oil storage tanks, West Azarbaijan, Iran، Environmental Science and Technology, און איף אוף.
- 42. Maryam Hatami , Abdorreza Vaezihir , Mohammad Hasanpour Sedghi Evaluation of the Construction effects of Copper Cathode Production Plant on Flash Furnace Method in Sungun Copper Complex Environmental Sciences 17 19 9 18.
- 43. Abdorreza Vaezihir , Naser Jabraeili , Shoeib Bakhtiari,Investigation of karst development in Kurdistan province; Geomorphology of cave and hydrogeology of karst springs,Hydrogeomorphology,Yo19 17 of .
- 44. The role of structural controls on the hydrogeochemistry of travertine of Azarshahr region, Northwest of Iran Iranian geology ווייס אין וייס א
- 45. Saleh Taheri و Abdorreza Vaezihir، Subsidence potential in Shazand plane due to the groundwater level drawdown by weighting model and verification by radar data، Ecohydrology، ۲۰۲۰ ۶۰ ۱۵.

- 46. Batoul Azizi, Abdorreza Vaezihir, Kamal Siahcheshm،Optimization of copper ion adsorption by zeolite filter using laboratory studies and numerical modeling،Environmental Researches، ሃ ං ሃ ං ላ . ላ .
- 47. Abdorreza Vaezihir , Sanaz Ghobadian , Alireza Gholmohammadi Investigation on groundwater pollution of Shazand refinery with BTEX and MTBE Environmental Science and Technology 1.6 % 9 1.6.
- 48. Reza Mahjobi , Mohammad Hasanpour Sedghi , Abdorreza Vaezihir , Nader Mazaheri Concentration of heavy and toxic metals in the downstream of Sungun mine tailing and the role of lime bed of the river in the reduction of the pollutant Ecohydrology የነገር ፡ ዓ ነገር ፡ ዓ ነገር ፡ የ ነገር
- 49. Tahereh Mohammadzadeh , Abdorreza Vaezihir , Rasoul Seifi , Babak Khayyat rostami،Determination of Strategic Water Resources in Hard Rocks of Saein Area in order to Supply Drinking Water for Ardabil City at a Critical Water Shortage,Science of soil and water, און וויף פּרָאריף און וויף.
- 51. Zeinab Pashazadeh, Hadi Jafari, Abdorreza Vaezihir, Qualititaive assessment of the Aji-Chay River (Tabriz plain) based on the specific uses quality indices, Engineering of Irrigation and water, YoYo oA 19.
- 52. Ali Sepehripour ₉ Abdorreza Vazeihir Exploration of Strategic groundwater in fractured and karstic rocks in order to supply of drinking water for Myaneh and Tark in the condition of water crisis Applied geology (ΥοΥ) οΥ ΥΑ.
- 53. Abdorreza Vaezihir و Fatemeh Safari Investigation the possibility of using Goijeh Bel fractured rocks aquifer to supply drinking water to Ahar city Watershed engineering and management (אור) ו ו האונים ביינו אינים ביינו ביינו אינים ביינו אינים ביינו אינים ביינו אינים ביינו ביינו ביינו ביינו ביינו אינים ביינו ביי
- 54. Maryam Hasanpour ⁹ Abdorreza Vaezihir Investigating the possibility of using artificial recharge method for diluting the aquifer contaminated with salty effluents of Kaveh Soda factory (Maragheh) and determining the location of the project implementation Applied geology ריס אדי.
- 55. Abdorreza Vaezihir , Marzieh Khalkhali , Mehri Tabarmayeh،Determination of groundwater resources potential in fractured and karstic formations of West Azerbaijan province،Water and soil،۲۰۲۶ •۵ ۲۱.
- 56. Fatemeh Zahed , Abdorreza Vaezihir , Zeinab Ahmadnezhad Determining the spread of aromatic oil compounds caused by gasoline leakage in the Shazand well No. Y and the role of the cone of depression around the well in developing contamination Applied geology, אין אין ۱۰ •٩.

- **61.** Abdorreza Vaezihir , Mehri Tabarmayeh , Karim Taghipour, Exploring the rate and potential risk of land subsidence induced by groundwater overexploitation in a multilayer aquifer, Natural Hazards, 2024 09 03.
- 62. Mostafa Sobhanikia et al., Evaluating Heavy Metals in Human Breast Milk: A Cross-Sectional Study from Mining and Agricultural Areas in Northwestern Iran, Biological Trace Element Research, 2024 06 03.
- 63. Prediction of hydrocarbon migration and evaluation of remediation efficiency in groundwater (Bandar Abbas Refinery), Sustainable water resources management, 2024 05 01.

Thesis

- 1. Evaluation of land subsidence in Segzai foothills and Barkhor plains of Isfahan using satellite images and radar interferometry and providing aquifer subsidence management plan based on MODFLOW code results
- 2. Feasibility and optimal ways to reuse treated wastewater (Case Study: Tabriz refinery)
- 3. study on hydrogeological and hydrogeochemical characteristics of Kahriz plain the aguifer, Urmia
- 4. Evaluation of remediation methods of BTEX in the aguifer of Shiraz Refinery
- 5. Investigation on groundwater quality of Mahabad plain
- 6. Investigation on qualitative and quantitative effects of artificial incharge in emamzadeh Jafar plain on the aquifer
- 7. Simulating the behavior of oil pollution in the karst aquifer of Serkhon region and predicting the fate of pollutants under different remediation scenarios.
- 8. Simulating the transport of oil pollutants in the aquifer area of Shazand oil refinery and predicting the pollutant behavior
- 9. Investigating Asalouye coastal aquifer in Ariasasol petrochemical area and assessing the risk of hydrocarbon contamination
- 10. Numerical modeling of pollution transfer for the feasibility of qualitative restoration of the aquifer in the downstream of Kaveh soda factory in Maragheh
- 11. Investigation on hydrogeochemistry and hydrogeology of Marand aquifer
- 12. Locating and designing the artificial recharge system of a pond for remediation the aquifer area of Kaveh Soda factory in Maragheh
- 13. Remediation of the aquifer contaminated with oil in the area of well number 7 of Shazand Petrochemical Complex
- 14. Monitoring and determination of oil contaminations in the soils of Bandar Abbas refinery
- 15. Remediation of the oil pollutants from contaminated soils in a pilot scale of Bandar Abbas refinery
- 16. Modeling the flow and transport of dissolved substances in the soil around well No. 7 of Shazand Petrochemical
- 17. Determining the source and extent of oil pollution in the catchment basin of the Karst spring of
- 18. Investigation of aquifer pollution and design of groundwater monitoring network in Abadan oil refinery
- 19. Investigating the quantitative and qualitative characteristics of the aquifer and determining the polluted parts and the pollution potential in the Saveh Plain aquifer
- 20. Locating and designing the industrial and special production waste management site in East Azarbaijan province
- 21. Environmental Impact Assessment of Marand sity
- 22. Investigation of environmental effects of khoy wastewater treatment plant to water resources of the region
- 23. Identification of oil pollutants in the aquifer of Tabriz railway station area and determination of contamination leakage source
- 24. Remediation of the saturated and unsaturated zone of the aquifer contaminated with petroleum substances in the area of Plume No. 11 of Bandar Abbas Oil Refinery
- 25. Designing an optimal groundwater-monitoring network in the area of Aryasasol petrochemical complex
- 26. Identification of contaminated areas of Sazand Oil Refinery aquifer and determination of possible leakage sources
- 27. Design of an optimal groundwater pollution monitoring network using spatial statistics
- 28. Numerical modeling of pollution transport to evaluate possibility of qualitative restoration of aquifer aquifer in Kaveh Soda factory downstream, Maragheh, Iran
- 29. Evaluation of land subsidence in Kouhpayeh-Segzi and Isfahan-Borkhar plains of Isfahan using satellite imagery and interferometry radar and presentation of aquifer subsidence management

program based on MODFLOW code results

- **30.** Datamining, designing and optimizing groundwater contamination monitoring network at the oil refineries' site
- 31. Hydrogeology and potential of groundwater resources in the hard and karst formation of West Azarbaijan province
- 32. Investigation on environmental contaminations caused by the dumping of toxic and heavy metals in soil resources of Zakhor alteration zones (Meshkinshar)
- 33. Investigation of the hydrogeological and hydrogeochemical characteristics of Mehrban plain
- 34. Investigation on potential of water resources in hard rocks
- 35. Investigation the impact of drought on groundwater quantity and quality of Marand plain
- 36. Investigation of affecting factors on the flow reduction of south rivers of Lake Urmia
- 37. Investigation of the hydrogeological and hydrogeochemical characteristics of Ivughli aquifer
- 38. Investigation of quantitative of underground water sources, the aquifer of Marand plain using numerical models
- 39. Investigation the quantitative and qualitative of Tuyserkan plain aquifer
- 40. Investigation on hard rocks groundwater resources in Balikhlou Chai basin (Saien branch), Ardabil Province Iran
- 41. Treatment of acid mine drainage Pakhir valley, Sungun mine
- **42.** Investigation on the contamination of aquifer of Shazand Refinery area by oil contamination and designing of a groundwater monitoring network for the site
- **43**. Determination of the hydrogeological boundaries of catchment area and the Protection zone of Spring Cheleh khaneye olya (Soufiyan)
- **44.** Investigation on the remediation of oil contaminants of Groundwater using active barriers in a laboratory model
- **45**. Hydrogeology and evaluation of potential groundwater resources in the karstic and hard rock units of Moro Mountain_Soufian, East Azarbaijan
- **46**. Investigation on heavy metals concentration in the alluvium of Sungun and Pakhir rivers bed in the Sungun mine area, East-Azarbaidjan, Iran
- 47. Hydrogeology and karst development model in Sarab and Siah gav springs of Abdanan, Ilam, Iran
- 48. Designing of groundwater monitoring network for Tabriz oil refinery and petrochemical complex
- **49**. Numerical modeling of Benzene and MTBE transport in the groundwater probably released from Khoy oil storage tanks
- **50.** Investigation Hydrocarbon contamination of soil and surface water of Shazand Refinery and optimization monitoring network for soil and surface water
- 51. Investigation on origin and mechanism of seepage from abutments of Agh chai earth dam, northwest of Iran
- 52. Probably contamination seepage through reservoir and abutment of tailing dam in the Sungun Cu–Mo mine, Iran
- 53. Investigation on contamination possible of nitrate in the aquifer plain of Tabriz
- 54. Investigation on the potential groundwater pollution of Tabriz main cemetery
- 55. Heavy metal contamination of soil and groundwater in and around the Sungun Cu-Mo mine, Iran
- 56. Investigation on the intrinsic and specific pollution potential of Tabriz Aquifer
- 57. Investigating the behavior of LNAPL in the area of groundwater level fluctuations under the influence of fast and slow fluctuations of the water table
- 58. Investigation of efficiency of PRBs with Zeolite filters and Biosparging composite methods in the remediation of BTEX from shallow groundwater at bench and field scales
- 59. Investigate the potential leak and flow model on the right abutment and dam building, Ghermi
- **60**. Investigating the hydrogeological and hydrochemical characteristics of the Shazand plain aquifer and determining the vulnerable areas.
- 61. Hydrogeology and potential finding of groundwater resources in hard and karst formation units of

Kurdistan province.

- 62. Bioremediation of polluted soils of Tabriz Refinery on a pilot scale
- 63. Investigation of aquifer contamination due to possible leakage of wastewater of Kaveh Soda factory (Maragheh), identification of contamination source and determination of its extent of spread and presentation of control and remediation methods
- **64.** Optimum determination of the best method from the technical and economic point of view for remediation the soil contaminated by petroleum substances
- 65. Determination of characteristics, extent and pollution source in well 7 of Shazand petrochemical complex
- 66. Investigation of the durability of chemical bomb compounds in the Sardasht area
- 67. Investigating on potential of self-remidiation of the Ilginina, Zarankab rivers and tailing dam in the vicinity of the Sungun Mine
- 68. Hydrogology and potential of groundwater resources available in hard and karstic formations of the Germi Chay river basin in Miyaneh, East Azarbaijan
- 69. Investigation on hydrogeological characteristics, North fault of Tabriz and its impact on nearby aquifers in the range of Soufiyan to Bostanabad
- 70. Investigation of Kermanshah refinery oil contamination of soil and soil monitoring network design
- 71. Assessment of environmental impact of Sungun copper cathode plant on soil and water environment
- 72. Monitoring and zoning AjiChay in the plain of Tabriz area using qualitative indicators
- 73. Investigation on the effects of subsidence and corrosion of west ethylene pipeline between Tabriz Petrochemical and Miyandoab
- 74. The identification of hydrocarbon contaminants in the aquifer of Bandar Abbas refinery and numerical modeling of contaminant transport
- 75. Investigation on oil contaminants aquifer of Kermanshah refinery and designing of groundwater monitoring network
- 76. Remediation of hydrocarbon contaminants of aquifer of Bandar Abass refinery in pilot- scale
- 77. Determination of privacy the quality and hydrogeological boundaries of Shahrchay river (Urmia)