# Fatemeh Panahi

# DETAILS

<u>Google scholar</u> https://scholar.google.com/citatio ns?user=KRWjsxwAAAAJ&hl= <u>en</u> <u>email:</u> alabd fpanahi@yahoo.com,

<u>fpanahi@alumni.ut.ac.ir</u>

#### EXPERIENCE

Fatemeh Panahi is an assistant professor at University of Kashan, Iran. Her previous positions include manager of Socio-economic and Environmental Effects of Desertification (Case study: Isfahan Provice) project, manager of Desertification Trend Monitoring of Iran Based on Satellite Imagery and Remote Sensing Indices project (2015-2022), lecturer in Azad Islamic University, Tehran, Iran (2006), lecturer in PNUniversity, Tehran, Iran (2008-2011). Her research interests generally lie in the areas of combating desertification, more specifically, in the study of Arid terrestrial ecosystems, Soil salinity, application of Remote sensing in land degradation, Water, Energy, and Climate change.

#### **Research interests**

- Combating desertification
- Soil salinity
- Plant-soil interactions
- Terrestrial ecosystems
- Remote sensing in land degradation
- Climatic change
- Arid land reclamation
- Ecosystem services and functions
- Modelling of soil and vegetation
- Socio-ecological effects of desertification and climate change

#### **EDUCATION**

- Received PHD. in Engineering of Natural Resources-Combating Desertification, University of Tehran, Tehran, Iran (2007-2012).
- Received M.Sc. in Engineering of Natural Resources-Combating Desertification, **Top student**, University of Tehran, Tehran, Iran (2003-2005).
- Received B.Sc. in Engineering of Natural Resources– Rangeland & Watershed, **Second degree**, University of Tehran, Tehran, Iran (1999-2003).

# **PUBLICATIONS**

#### **Authored books**

 Mohammad Jafari, Ali Tavili, Fatemeh Panahi\*, Ehsan Zandi Esfahan, Majid Ghorbani. Reclamation of Arid Lands, 2017. Springer publisher. Published, November 2017. http://www.springer.com/gp/book/9783319548272

• Mohammad Jafari, Mohammad Tahmoures, Fatemeh Panahi\*, Majid Ghorbani. Soil erosion control in dry lands. Springer publisher. Published, June 2022.

#### **Translated books**

- Mohammad Jafari, Fatemeh Panahi, Majid Ghorbani. Developments in Soil Salinity Assessment and Reclamation (edited by Shabbir A. Shahid, Mahmoud A. Abdelfattah, Faisal K. Taha, Springer Press, 2013), 2016. University of Kashan and Sokhanvaran Press. Translated to Persian.
- Mohsen Mohseni Saravi, Mohammad Ehteram, Fatemeh Panahi, Alireza Givar, Mahdieh Afshari nia. Climate Change in Deserts: Past, Present and Future (Martin Williams, Cambridge University Press, 2014), 2022. University of Kashan and Sokhanvaran Press. Translated to Persian.
- Fatemeh Panahi, Majid Ghorbani, Nazanin Azarnejad, Maliheh Nasiri, Navid Marzbani, Javad Attarha. Arid and Semi-Arid Geomorphology (Andrew Goudie, Cambridge University Press, 2013). Being translated to Persian.
- Fatemeh Panahi, Mohammad Ehteram, Mahdieh Afshari nia, Alireza Givar. Desertification, Land Degradation and Sustainability (Anton Imeson, Wiley press, 2012). 2020. University of Kashan and Sokhanvaran Press. Translated to Persian.
- Fatemeh Panahi, Mahdieh Afshari nia, Hadiseh Sadat Hoseini. Climate Change and Agriculture: a Historical Analysis (by D.C. Uprety, V.R. Reddy, J.D. Mura, Springer). 2020. University of Kashan and Sokhanvaran Press. Translated to Persian.
- Mohammad Jafari, Fatemeh Panahi. Soils: Their Properties and Management (by Peter E.V. Charman and Brain W. Murphy, Oxford University Press, 2000), 2011. University of Tehran Press. Translated to Persian.

#### Papers in peer reviewed journals

 Mohammad Ehteram, Fatemeh Panahi, Ali Najah Ahmed, Yuk Feng Huang, Pavitra Kumar, Ahmed Elshafie. Predicting evaporation with optimized artificial neural network using multi-objective salp swarm algorithm. Environmental Science and Pollution Research. 2022. 29, 10675–10701. https://doi.org/10.1007/s11356-021-16301-3.

- Nada Najafi Kalyani, Abolfazl Ranjbar Fordoei, Fatemeh Panahi, Hojat Musavi. Prediction of soil hydrological responses under land-use/cover changes using Markovchains in Jiroft Watershed, Iran. ECOPERSIA. 2022. 10(1): 47-59. <u>https://ecopersia.modares.ac.ir/article-24-54423en.html</u>.
- Fatemeh Panahi, Ali Najah Ahmed, Vijay P. Singh, Mohammad Ehteram, Ahmed El-shafie, Ali Torabi Haghighi. Predicting freshwater production in seawater greenhouses using hybrid artificial neural network models. Journal of cleaner production. 2021. <u>https://doi.org/10.1016/j.jclepro.2021.129721</u>.
- Fatemeh Panahi, Mohammad Ehteram, Ali Najah Ahmed, Yuk Feng Huang, Amir Mosavi, Ahmed Elshafie. Streamflow Prediction with Large Climate Indices Using Several Hybrid Multilayer Perceptrons and Copula Bayesian Model Averaging. Ecological Indicators. 2021, 133, 108285. https://doi.org/10.1016/j.ecolind.2021.108285.

 Mohammad Ehteram, Fatemeh Panahi, Ali Najah Ahmed, Amir H. Mosavi, Ahmed El-Shafie. Inclusive multiple model using hybrid artificial neural networks for predicting evaporation. Frontiers in environmental Science. 2021. https://doi.org/10.3389/fenvs.2021.789995.

- Guoxi Liang, Fatemeh Panahi, Ali Najah Ahmed, Mohammad Ehteram, Shahab S. Band, Ahmed Elshafie. Predicting municipal solid waste using a coupled artificial neural network with archimedes optimisation algorithm and socioeconomic components. Journal of Cleaner Production. 2021. <u>https://doi.org/10.1016/j.jclepro.2021.128039</u>.
- Mohammad Ehteram, Saad Sh. Sammen, Fatemeh Panahi, Lariyah Mohd Sidek. A Hybrid Novel SVM Model for Predicting CO2 Emissions Using Multiobjective Seagull Optimization. Environmental Science and Pollution Research. 2021. 28, 66171– 66192. <u>https://doi.org/10.1007/s11356-021-15223-4</u>.
- Fatemeh Panahi, Mohammad Ehteram, Mohammad Emami. Suspended sediment load prediction based on soft computing models and Black Widow
  Optimization Algorithm using an enhanced gamma test. Environmental Science and Pollution Research. 2021. <u>https://doi.org/10.1007/s11356-021-14065-4</u>.
- Leila Jowkar, Fatemeh Panahi, Seyed Javad Sadatinejad, Alireza Shakiba. Precipitation Extremes Variability Trend in Bakhtegan Catchment Using AgMERRA and Stations Data. Iranian Journal of Irrigation and Water Engineering. 2021. 12(45): 364-381.
- Fatemeh Panahi, Mohammad Ehteram, Sima Afsharnia, Amir Mosavi. Artificial Neural Networks Trained With Spotted Hyena Optimization

Algorithm For Modeling Water Production Of A Solar Seawater Greenhouse System. ZUSA. 2021 (Accepted).

- Leila Jowkar, Fatemeh Panahi, Seyed Javad Sadatinejad, Alireza Shakiba. The Spatio- Temporal Variability of Extreme Temperature Using Gridded AgMERRA Dataset Over the Bakhtegan-Maharloo Basin, Iran. ECOPERSIA. 2021. 9(3):179-189.
- Khadijeh Rahimi Balkanlou, Birgit Müller, Anna F. Cord, Fatemeh Panahi, Arash Malekian, Mohammad Jafari, Lukas Egli. Spatiotemporal dynamics of ecosystem services provision in a degraded ecosystem: A systematic assessment in the Lake Urmia basin, Iran. Science of the Total Environment, 2020, 716, 137100.

https://doi.org/10.1016/j.scitotenv.2020.137100.

- Sedigheh Mohamadi, Saad Sh. Sammen, Fatemeh Panahi, Mohammad Ehteram, Ozgur Kisi, Amir Mosavi, Ali Najah Ahmed, Ahmed El-Shafe, Nadhir Al-Ansari. Zoning map for drought prediction using integrated machine learning models with a nomadic people optimization algorithm. Natural Hazards. 2020. <u>https://doi.org/10.1007/s11069-020-04180-9</u>.
- Fatemeh Barzegari Banadkooki, Mohammad Ehteram, Fatemeh Panahi, Saad Sh. Sammen, Faridah Binti Othman, Ahmed EL-Shafie. Estimation of total dissolved solids (TDS) using new hybrid machine learning models. Journal of Hydrology, 2020, 587, 124989. https://doi.org/10.1016/j.jhydrol.2020.124989.
- Fatemeh Bahreini, Fatemeh Panahi, Mohammad Jafari, Arash Malekian. Identification of vulnerable vegetation areas to drought using remote sensing (Case study: Bushehr Province). Journal of Rangeland and Watershed, 2018, 2(71), 341-354 (In Persian).
- Fatemeh Panahi, Mina Arast. Study of seed germination properties and dormancy breaking in *Arctium lappa*, Iranian Journal of Seed Science and Technology, 2018, 2(7), 45-58 (In Persian).
- Fatemeh Bahreini, Fatemeh Panahi, Mohammad Jafari, Arash Malekian. Investigation of the potential sensitivity of rangeland gross primary production to drought through ecosystem modeling. Journal of Rangeland, 2018. (Accepted- In Persian).
- Sedigheh Mohamadi, Fatemeh Panahi. Investigation of salt spray on the snowflake road effects on plant composition and diversity (Case Study: Gordar mountainous road, Baft-Baum Desert of Iran).

Journal of Eco-hydrology, 2017, 2(4), 509-521. (In Persian).

- Kazem Farokhi Sisakht, Abolfazl Ranjbar Fordouei, Fatemeh Panahi. The effect of alkalinity irrigation on Nitrogen content and the rate of chlorophyll in *Tamarix aphylla*. Journal of Plant and Ecosystem, 2017, 13(51), 115-126.
- Sajad Khamooshi, Fatemeh Panahi, Abbasali Vali, Seyed Hojjat Mousavi. Dust storm monitoring using HYSPLIT model and NDDI (Case study: Southern cities of Shiraz, Bushehr and Fasa, Iran). ECOPERSIA, 2016, 4(4), 1606-1616.
- Fatemeh Panahi, Mina Arast. Investigation of Different Seed Germination Stimulation and Dormancy Breaking Methods in *Gundelia tournefortti*, Journal of Iran Seed Science and Research, 2016. (Accepted- In Persian).
- Javad Mo'meni Demaneh, Fatemeh Panahi. The effect of alkalinity stress on concentration of nutrients in *Nitraria schoberi*, Journal of Plant and Ecosystem, 2016, 12(47), 71-84. (In Persian).
- Javad Mo'meni Demaneh, Fatemeh Panahi. Floristic Study of Dehbar catchment in Torghabeh and Shandiz cities, Journal of Plant and Ecosystem, 2016. (In Persian).
- Fatemeh Panahi, Mohammad Hasan Asareh, Mohammad Jafari, Hosein Arzani, Ali Tavili, Alireza Givar, Majid Ghorbani, Javad Attarha, Zeinab Jahandideh. Study of the NaCl Salinity Effects on *Salsola tomentosa*: Growth Parameters, Water Relations, Compatible Solutions and Chlorophyll, Journal of Desert Ecosystem Engineering, 2015, 4(7), 65-74 (In Persian).
- Meisam Fereiduni Gharaghani, Abbasali Vali, Fatemeh Panahi, Seyed Hojjat Mousavi, Hasan Khosravi. Effect of Land Use Changes on Desertification Using Remote Sensing in Daryachenamak Area, Journal of Desert Management, 2015, 3(5), 41-53. (In Persian).
- Javad Mo'meni Demaneh, Fatemeh Panahi. Study of the Alkalinity Irrigation Effects on Nitrogen, Bicarbonate, Soluble Carbohydrate and Relative Water Content of *Nitraria schoberi*, Journal of Plant Ecophysiology, 2015, 7(22), 40-49. (In Persian).
- Fatemeh Panahi, Mohammad Hasan Asareh, Alireza Givar, Ali Tavili, Hosein Arzani, Majid Ghorbani. The Responses of *Salsola orientalis* to Salt Stress, International Journal of Advanced Biological and

Biomedical Research, 2015, 3(2), 163-171. (In Persian).

- Mojtaba Gharaati Jahromi, Seyed Hojjat Mousavi, Abbasali Vali, Fatemeh Panahi, Hasan Khosravi. The Study of Desertification Process on the Basis of Annual Groundwater Level Decline (Case Study: Kashan Aquifer). International Bulletin of Water Resources and Development, 2015, 3(10), 35-50. (In Persian).
- Majid Ghorbani, Javad Mo'meni Demaneh, Fatemeh Panahi, Mina Mo'ases, Javad Attarha, Navid Marzbani. Study of the Salinity and Alkalinity Stress Effects on *Nitraria schoberi*. Taraksh Journal of Physical Education, 2014.
- Mojtaba Gharaati Jahromi, Abbasali Vali, Seyed Hojjat Mousavi, Fatemeh Panahi, Hasan Khosravi. The Study of Desertification Process on the Basis of climate using IMDPA model (Case Study: Kashan Plain, Iran). Journal of Agriculture Meteorology, 2014, 2(2), 47-61. (In Persian).
- Abbasali Vali, Sajad Khamooshi, Seyed Hojjat Mousavi, Fatemeh Panahi, Ehsan Tamassoki. Climatic Analysis and Routing of Comprehensive Dust Storms in the South and Center of Iran. Journal of Ecology Science (JES), 2014, 40(4), 961-972.
- Majid Ghorbani, Abolfazl Ranjbar Fardoyi, Fatemeh Panahi, Javad Attarha, Navid Marzbani, Mina Mo'ases. Salinity and Nitraria schoberi: Growth Parameters, Chlorophyll Content and Ion Accumulation. International Journal of Agriculture and Crop Sciences, 2014, 7(11), 853-862.
- Mojtaba Gharaati Jahromi, Abbasali Vali, Seyed Hojjat Mousavi, Fatemeh Panahi, Hasan Khosravi. Change Detection of Land Use in Kashan Area Using Remote Sensing Data. Geodynamics Research International Bulletin, 2014, 2(4), 129-137. (In Persian).
- Javad Mo'meni Demaneh, Abolfazl Ranjbar Fardoyi, Fatemeh Panahi. Alkalinity stress on chlorophyll content, carotenoids, soluble sugars and leaf relative water content and growth parameters (L. *Nitraria schoberi*), Journal of Natural Resources and Sustainable Development. 2014, (Accepted- In Persian).
- Majid Ghorbani, Abolfazl Ranjbar Fardoyi, Fatemeh Panahi, Javad Attarha. Investigation of Salt Stress Effects on Growth Parameters and Salinity

Tolerance Efficiency in *Nitraria schoberi*. Journal of Natural Resources and Sustainable Development, 2014, 1(1), 48-60 (In Persian).

- Javad Attarha, Abolfazl Ranjbar Fardoyi, Fatemeh Panahi. Investigation of Salt Stress Effects on Growth Parameters and Salinity Tolerance Efficiency in *Tamarix aphylla*. Journal of Natural Resources and Sustainable Development, 2014. (Accepted- In Persian).
- Fatemeh Panahi, Mohammad Hasan Asareh, Mohammad Jafari, Mohsen Mohseni Saravi, Alireza Givar, Hosein Arzani, Ali Tavili. *Salsola arbuscula* Responses to Salt Stress. International Journal of Innovative Technology and Exploring Engineering, 2013, 3(5), 11-18.
- Hoda Ghasemieh, Fatemeh Panahi, Mohsen Mohseni Saravi, Maryam Daghestani. The Effect of Clear Cutting on Runoff Height. International Journal of Innovative Technology and Exploring Engineering, 2013, 3(6), 108-112.
- Fatemeh Panahi, Mohammad Jafary, Mohammad Hassan Assareh, Alireza Givar, Hossein Arzani, Ali Tavili, Nastaran Givar, Majid Ghorbani, Anahita Shariat, Bahram Mirakhorli, Ali Nazarzadeh, Kolsoom Bekhradi. Salinity and Temperature Effects on Germination Characteristics of *Salsola tomentosa*. International Journal of Innovative Technology and Exploring Engineering, 2013. (Accepted).
- Fatemeh Panahi, Mohammad Hassan Assareh, Mohammad Jafari, Ali Ashraf Jafari, Hossein Arzani, Ali Tavili, Ehsan Zandi Efahan. Phenological effects on forage quality of *Salsola arbuscula*, *Salsola orientalis* and *Salsola tomentosa* in three habitats in the central part of Iran. Middle-East journal of scientific research, 2012, 11(6), 800-807.
- Fatemeh Panahi, Mohammad Jafari, Mohammad Hassan Assareh, Hossein Arzani, Ali Tavili, Alireza Givar. The Effects of Salinity and Temperature on Some Germination Characteristics of *Salsola arbuscula*. World Applied Sciences Journal, 2012, 19(4), 470-477.
- Mohammad Jafari, Fatemeh Panahi, Hasan Ahmadi, Hamidreza Abbasi, Mohammad Mousavi, Mohammad Ali Zare, Ali Tavili. Assessment of soil criteria indices for desertification studies in Ghom

province. Iranian Journal of Range and Desert Research, 2007. (In Persian).

 Mohammad Jafari, Fatemeh Panahi, Hasan Ahmadi, Hamidreza Abbasi, Mohammad Mousavi, Mohammad Ali Zare, Ali Tavili. Assessment of soil criteria indices in order to consider the desertification condition of 3 regions in Qom province. Forest and Desert Journal, 2006. (In Persian).

#### Papers presented & accepted in conferences

- Asghar Tavassoli, Javad Yazdan Panah, Fatemeh Panahi. Investigation of saline water desalination methods and its waste disposal methods. First National Conference on water crises and its management in arid regions of Iran. Yazd. Iran. 2016.
- Yunes Gharaghani, Fatemeh Panahi, Hamidreza Taherzadeh. The relationship between soil, water and plant. The 2<sup>nd</sup> International Congress on Earth Science and Urban Development. Tabriz, Iran, 2016.
- Yunes Gharaghani, Fatemeh Panahi. Study of the relationship between drought, pollutants and groundwater resources. The 1st International Conference of Iranian Natural Hazards and Environmental Crises, Strategies and Challenges. Ardebil, Iran, 2016.
- Yunes Gharaghani, Fatemeh Panahi. Investigation of Different Desertification Models Having Emphasis on IMDPA. The 2nd International Congress on Earth Science and Urban Development. Tabriz, Iran, 2016.
- Zeinab Jahandideh, Fatemeh Panahi. Study of the various wet and dry conditions continuity in BandareBushehr. The 2nd International Conference on Sustainable Development, Strategies and Challenges. Tabriz, Iran, 2015.
- Fatemeh Panahi, Mohammad Jafary, Mohammad Hassan Assareh, Alireza Givar, Hossein Arzani, Ali Tavili, Majid Ghorbani. The Responses of *Salsola tomentosa* to Salt Stress. Agriculture and Climate Change. AGRI2015 (Elsevier). Amsterdam, Poland. Poster Acceptance, 2015.
- Fatemeh Bahreini, Fatemeh Panahi. Survey of the Effects of Soil Properties on Land Degradation in Baghan Region, SW Iran. International Conference on Sustainable Development, Strategies and Challenges. Tabriz, Iran, 2015.
- Fatemeh Bahreini, Fatemeh Panahi. Investigation and assessment of green landscape amount (garden,

household and park) in preventing the intensification of the desertification trend. Kashan, Iran. 2015.

- Abbasali Vali, Fatemeh Panahi, Seyed Hojjat Mousavi, Sajad Khamooshi. Analysis of Dust Storms in 2008 in the South and Center of Iran. The Second National Conference of Desert regarding to Desert and Arid Lands Management, 2014.
- Javad Mo'meni Demaneh, Fatemeh Panahi, Reza Esmaeil Nia Talemi, Khadijeh Alkooti. Flood Feasibility in Arid and Semi-Arid region, National Conference of Sustainable Development of Renewable Resources, 2014.
- Hasan Barabadi, Fatemeh Panahi, Seyed Ali Moosavi. Soil Properties Zoning as a Fundamental Studies of the Desert Lands Management Using Surfer (Case Study: Sabzevar Fast Pastures). The Fourth International Conference on Environmental Challenges and Dendrochronology. Iran, 2014.
- Esmaeil Zamani, Fatemeh Panahi, Seyed Ali Moosavi, Mohammad Sadegh Kahkhakohan.
   Ecotourism and Sustainable Development. The Fourth International Conference on Environmental Challenges and Dendrochronology. Iran, 2014.
- Esmaeil Zamani, Fatemeh Panahi, Mohammad Sadegh Kahkhakohan, Alireza Sedaghat, Seyed Mousa Sadat Ahmadi. Comparison of Rangeland and Watershed Projects Performance Constraints in Sistan Baluchestan, Kerman and Khorasan Razavi Provinces (Case Study: Rayn, Kashmar and Zahedan). The Fourth International Conference on Environmental Challenges and Dendrochronology. Iran, 2014.
- Majid Ghorbani, Abolfazl Ranjbar Fardoyi, Fatemeh Panahi, Javad Attarha, Navid Marzbani. Investigation of salt stress effects on relative water content and chlorophyll content in *Nitraria schoberi*. The 4<sup>th</sup> international Conference on Environmental Challenges and Dendrochronology. Institute of Caspian Ecosystems, Sari Agricultural Science and Natural Resources University, Sari, Iran, 2014.
- Javad Attarha, Abolfazl Ranjbar Fardoyi, Fatemeh Panahi, Majid Ghorbani, Navid Marzbani. Investigation of salt stress effects on ion accumulation in *Tamarix aphylla*. The 4<sup>th</sup> international Conference on Environmental Challenges and Dendrochronology. Institute of Caspian Ecosystems, Sari Agricultural Science and Natural Resources Universuty, Sari, Iran. 2014.
- Navid Marzbani, Javad Momeni Demeneh, Fatemeh
  Panahi, Majid Ghorbani, Meysam Fereyduni Ghare

Ghani, Javad Attarha. Change in vegetation and soil salinity using remote sensing data (case study: Amir Abad plains, Kurdistan province). The 4<sup>th</sup> international Conference on Environmental Challenges and Dendrochronology. Institute of Caspian Ecosystems, Sari Agricultural Science and Natural Resources Universuty, Sari, Iran. 2014.

- Esmaeil Zamani, Fatemeh Panahi, Seyed Ali Moosavi. Food Security and Sustainable Development of Agriculture and Natural Resources. The Second National Conference of Scientific Associations of Agriculture and Natural Resources, 2013.
- Fatemeh Panahi, Sajad Khamooshi, Ehsan Tamassoki. Analysis of the Relation between Standardized Precipitation Index and Dust Outbreak Ratio (Case Study: Synoptic Station of Kashan). The First International Conference on Dust Haze, Management of Factors and Consequences, 2013.
- Javad Mo'meni Demaneh, Abolfazl Ranjbar Fordoei, Fatemeh Panahi. Effect of irrigation water acidity levels in plant (*Nitraria schoberi* L.). The First National Conference on Salt Stress in Plants and Agriculture Development in Saline Conditions, 2013.
- Saeideh Ebrahimi Azandaryani, Fatemeh Panahi. The study of species richness measurement time in two modified and original Whittaker plots. Grassland China Congress, Poster acceptance, 2008.

# THESES UNDER SUPERVISION

#### Master of Science (MSc)

- Investigation of land use changes effects on soil salinity.

- Investigation of Biological Reclamation Effects on Some Soil Properties (Case Study: Qom-Jafarieh Road and Kooh-e-Namak in Qom Province).

- Investigation of Some Phenologic and Physiologic Characteristics of *Cyperus conglomeratus* Rottb. in Natural Habitat.

- Investigation of *Atriplex canescens* and *Haloxylon ammodendron* Responses to Some Soil Properties in Natural Conditions (Case Study: Qom-Jafarieh Road and Kooh-e-Namak.

- Effect of Drought on Soil Salinity (Case Study: Kashan Plain).

- Potential for multiple uses of halophyte and salt-tolerant plant species in saline soils (Case Study: Kashan-Tabas).

- Assessment of desertification process based on soil salinization and vegetation using Remote Sensing, case Study: Salt Lake.

- Evaluation of two chemical mulches efficiency in stabilizing Kashan sand dunes for establishment of *Calligonum* and *Haloxylon* species.

- Investigation of land use effects on soil degradation using soil quality indices in Abuzeidabad.

- Assessment of desertification intensity using ESAs in Aboozeidabad.

- Assessment of desertification trend (case study: Abuzeidabad).

- Study of vegetation and climatic factors influence on dust storms using Remote Sensing.

- Investigation of some qualitative and quantitative properties of *Opuntia ficus-indica* in two different regions (Case study: Bushehr Province).

- Socio-economical effects of desertification phenomenon (Case Study: Feridan and Daran).

- Investigation of land degradation effects in drylands (Case Study: Kashan and Aran and Bidgol).

- Study of desertification effects on socio-economic indices on the basis of water and climate (Case Study: Kashan and Aran and Bidgol).

- Study of soil and vegetation changes with distance from drainage in desert region of Najmabad in Alborz Province.

- Assessment of Spatio-temporal Variations of Rain-use Efficiency in Arid Regions (A Case Study: Kashan Plain)

# **Philosophical Doctrine (PhD)**

- Assessment of Drought Impacts on the Vulnerability of Arid Ecosystems' Function and Services (Case Study: Boushehr Province). Fatemeh Bahreini. (2014-2018).

- Investigation of Climate Change Impacts on Desertification in Different Climates of Iran. Leila Jowkar. (2016-present) - Feasibility Assessment of Adaptive Management Strategies Suggestion for Socio-Ecological Systems in Drought and Climate Change Conditions (Case Study: Urmia Lake Basin). Khadijeh Rahimi Balkanlou. (2017present).

# HONORS AND AWARDS

- Ranked 1<sup>st</sup> amongst the students of the whole Tehran Province, Olympic exam of English, (score: 100/100), 1998.
- Ranked 2<sup>nd</sup> amongst students studying B.A. of Engineering of Natural Resources-rangeland and watershed. University of Tehran, 2003.
- Ranked 1<sup>st</sup> amongst students studying M.Sc. of Engineering of Natural Resources-combating desertification, 18.58/20.00. University of Tehran, 2005.
- 2<sup>nd</sup> in the Entrance exam of M.Sc. (Engineering of Natural Resources-combating desertification). University of Tehran.
- 6<sup>th</sup> in the Entrance exam of M.Sc. (Engineering of Natural Resources-Watershed management). University of Tehran.
- Ranked 1<sup>st</sup> amongst the students of the whole country, English PhD qualifying exam, University of Tehran, 2007.
- 2<sup>nd</sup> in the Entrance exam of PhD. (Engineering of Natural Resources-combating desertification). University of Tehran, 2007.

# **COMPUTER SKILLS**

- Knowledge of computer science such as SPSS, SAS, MSTATC, R, etc.
- Knowledge of computer softwares such as ILWIS, Idrisi, ArcGIS, ArcView,... in fields of GIS and Remote Sensing.

# LANGUAGES

- Persian: Native
- English: Fluent (English license, ILI, Karaj, Iran)
- French: Moderate (Student of French, ILI, Karaj).
- Turkish: Moderate.

# REFERENCES

- Dr. Mohammad Jafari, Professor, Natural Resources College, University of Tehran, Tehran, Iran. Email: jafary@ut.ac.ir (00989123271686).
- Dr. Mohammad Hasan Asareh, Professor, RIFR, Tehran, Iran. Email: <u>asareh@gmail.com</u> (00989122645020).
- Dr. Mohsen Mohseni Saravi, Professor, Natural Resources College, University of Tehran, Tehran, Iran. Email: <u>msaravi@ut.ac.ir</u> (00989123842421).
- Dr. Ali Tavili, Associate Professor, Natural Resources College, University of Tehran, Tehran, Iran. Email: <u>atavili@ut.ac.ir</u> (00989125622950).