Curriculum Vitae

Ebrahim As'adi Oskouei

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Language

English	Fluent
French	Good
Persian	Mother tongue

Software Skills

Statistics software: SPSS, Minitab
Mapping and GIS software: ArcGIS, QGIS
Programming: R, Google Earth Engine (Javascript)

Education

2012-2017	PhD in Agrometeorology, under the subject of " Partitioning evaporation and transpiration in different irrigation managements and its effect on determination of rice water requirement methods", University of Mashhad, Iran
2007 - 2010	M.Sc. in Agrometeorology, , under the subject of "Presenting a Statistical Model for Evaluation of Surface Ozone", University of Tehran, Iran
2003 - 2005	B.Sc. in Irrigation and Drainage, University of Tehran, IRAN

Awards

2022- Distinguished Researcher in RIMAS, Research Institute of Meteorology and Atmospheric Sience
2015- The selected idea maker of Iranian Meteorological Organization

2012- Distinguished Young Trainer in Iranian Meteorological Organization an *WMO Reginal Training Center, RTC* (in GIS)
2011- Distinguished Researcher in Iranian Meteorological Organization

Training/Teaching

2024: AI and Deep Learning for Mapping, Ministry of Transport, Communications and Information Technology, Muscat, Oman (1 week)
2022: GIS for Meteorological Applications, Directorate General of Meteorology, Muscat, Oman (3 weeks)
2022: Soil Moisture Satellite Data manipulation in R, online course 17th Eumetsat Satellite Application Course, Muscat, Oman
2019: Applications of QGIS in remote sensing, Eumetsat Satellite Application Course, March 2019 (One week), Muscat, Oman
2010- 2022: GIS and its application, (more than 20 training courses throughout the Iranian provincial Met Office and *WMO Regional Training Center*)
2010- 2022: Statistics and its application in meteorology, (more than 20 training courses throughout the Iranian provincial Met Office and *WMO Regional Training Center*)
2016-2019: Communication with end users of agrometeorological products, (RTC training course)
2016-2022: Agrometeorology, (RTC training course)
2010: RS, Basics and Applications, Ardabil meteorological organizations
2008-2009: Weather and climate, Paiam-e-Nour University
2002-2005: Hydraulics lab, University of Tehran
2003-2005: Soil mechanics lab, University of Tehran
2003-2005: Agricultural operations, University of Tehran
2001– 2002: Pumps and pumping, Superior educational center of Ministry of Energy, Tabriz, Iran

Professional Experience

2019: Member of CCl Focus Area 4 expert teams (WMO)
2018-today: Member of Iran National Committee of Irrigation and Drainage (IRNCID).
2014: Member of Committee of Space Research (COSPAR)
2014: Nongovernmental member of water and hydrology group in GEO
2012– today: Member of CAgM (Agro-Meteorological commission in WMO). Iranian meteorological organization (IRIMO), Tehran, Iran
2010-today: Member of CHy (Hydrology commission in WMO). Iranian meteorological organization (IRIMO), Tehran, Iran
2010-today: Member of assessing and reconstructing committee of Iran agrometeorology structure. IRIMO, Tehran, Iran
2008-2010: Head, Geomatic (RS & GIS) Unit. Applied Meteorological Research Center (AMRC), Guilan, Iran
2007-today: Researcher, Agrometeorologist, Agrometeorology Research Center and AMRC, Guilan, Iran
2006– 2007: meteorological observer, Research Center and AMRC, Guilan, Iran
2004– 2006: Expert of Irrigation and canal networks, Pandam Consulting Engineers, Tehran, Iran
2003-2005: Responsible of Hydraulics and Soil Mechanics Lab, University of Tehran, Iran **2001-2005**: Expert of under pressure irrigation systems, University of Tehran and private agricultural companies, Tehran, Iran.

Projects

- Assessment of climate information and advisory gaps to implement climate-smart solutions (FAO-Oman) (2023)

- Application of new technologies in the design and development of frost prediction and warning system in Razavi Khorasan province. (2023)
- Determining the stages of walnut phenology based on the growth day index in the southwest of Hamadan province. (2023)
- Atmospheric hazard atlas of Qazvin province, (2022)
- Evaluation of changes in agro-climatic parameters affecting walnut yield in Tuiserkan, (2022)
- Service for the Drought Management of the Lake Urmia project, (2021)
- Numerical hourly forecast of temperature, pressure, relative humidity and wind speed on the earth's surface, (2021)
- Development of climate atlas system of Iran, (2021)
- Calculation of the country's monthly and annual climatology normal for the period 1991-2020 according to the World Meteorological Organization instructions, (2021)
- Analysis of drought frequency using copula for future periods, (2021)
- Investigating the relationship between meteorological parameters and phenology in the development of Pistacia vera L. cultivation, (2021)
- Climate change study in Guilan province, (2020)
- Detecting and zoning of air weather phenomena and providing solutions to reduce the resulting vulnerability in Isfahan, (2019)
- Atlas project of three natural disasters, flood, forest fire and snow (2009 – 2012)
- Preparing an atlas of weather hazards in the road network of the country's main roads (2010 – 2011)
- Determining the portion of runoff caused by snowmelt in the Polrud river using satellite data and hydrological modeling (2010)
- Flood warning studies of six important flood basins of Guilan province (2009)
- Investigating changes in the hydrological system of Sefidroud Dam (2007)
- Evaluation of Qazvin plain irrigation network (2005)

Publication/ Book

- Mountain meteorology (translation). **2015**. ISBN: 978-964-190-440-3
- Climatology of heavy snow hazards in Guilan region. **2014**. ISBN: 978-964-190-398-7
- Atlas of the mountains of Western Alborz and Talesh mountain chains. **2012**. ISBN: 978- 964-190-284-3
- Text book of synoptic meteorology. **2008**. University of Tehran, Irrigation department.

Publication/ Journal Paper

- Evaluating the L-MEB forward radiative transfer model for the assimilation of SMOS observations. **2023.** EGU23-4910.CFS
- Shifts in planting date and change in length of growing season in Yazd province under warmer climate conditions. 2022. **Nivar**
- Analysis of late spring frost, early fall frost, frost-free period and probability of their occurrence based on ENSO index in different climates of Iran. 2022. **Journal of Climate Research.**
- Analysis of the impact of meteorological parameters over the main stage of rice cultivation in Mazandaran province. 2022. **Nivar**
- Downscaling daily temperature of three reanalysis databases at a spatial resolution of one kilometer using MODIS sensor data. **2022**. **Available Online. Iranian Journal of Geophysics.**
- Accuracy assessment of CFS-v2, MERRA-2, ERA-5 temperature over the different regions of Iran. **2022**. **Available Online. Iranian Journal of Geophysics.**

- Introducing the SMAP L4 Products and Investigating the Spatio-Temporal Variability of Soil Moisture in Iran. **2022. Nivar.**
- Post Processing of WRF Model Output by Cokriging Method for Daily Average Wind Speed and Relative Humidity on Iran. **2022**. **Journal of the Earth and Space Physics.**
- Assessing the Performance of WRF Model in Prediction of Evapotranspiration in Paddy Fields. **2022**. **Journal of water and soil resources conservation**.
- Mapping Climate Zones of Iran Using Hybird Interpolation Methods. 2022. **Remote sensing**
- Projection of changes in late spring frost based on CMIP6 models and SSP scenarios over cold regions of Iran. 2022. **Springer**
- Spatiotemporal Characteristics of Meteorological Drought During the Past Half Century in Different Climates Over Iran. 2022. **Springer**
- The interpretation of water consumption in the agricultural sector based on actual evapotranspiration.
  2022. Iranian journal of Irrigation and Drainage.
- Validation and Downscaling of SMAP Satellite Soil Moisture Data by the SMBDA Method Using Sentinel 1 Radar Products and Ground Data in SalehAbad Region of Ilam. **2022**. **Iranian Water Resources Research.**
- Assessing the Performance of WRF Model in Prediction of Evapotranspiration in Paddy Fields. 2022. **Journal of Water and Soil Resources conservation.**
- Post Processing of WRF Model Output by Cokriging Method for Minimum and Maximum Temperature in Iran. 2022. **Journal of the Earth and Space Physics**.
- Post Processing of WRF Model Output by Cokriging Method for Daily Average Wind Speed and Relative Humidity on Iran. 2022. **Journal of the Earth and Space Physics.**
- Analysis of late spring frost, early fall frost, frost-free period and probability of their occurrence based on ENSO index in different climates of Iran. 2022. **Journal of Climate Research.**
- Analysis of the impact of meteorological parameters over the main stage of rice cultivation in Mazandaran province. 2022. **Nivar**.
- Investigating the impact of meteorological variables on the temperature of different soil depths and estimating it based on the regression method in Gilan province. 2022. **Iran soil and water research Journal.**
- Investigation of the effect of air temperature in Guilan province in determining the appropriate time for rice cultivation. 2022. **Journal of Climate Research.**
- Surveying of Spatial and Temporal Variability of Surface Soil Moisture using SMAP L4 Products in Iran. 2022. **Nivar**.
- New climatic zones in Iran: a comparative study of different empirical methods and clustering technique. 2022. **Springer**.
- Heavy precipitation forecasting and warning system in the Chaldoran basin. **2021**. **Journal of Meteorology and Atmospheric Science.**
- New climatic zones in Iran: a comparative study of different empirical methods and clustering technique. 2021. **Springer.**
- Investigation of fire monitoring methods in vegetative areas of Iran and the world. 2021. **Journal of Climate Research.**
- Correlation Analysis of large-scale Teleconnection Indices with Monthly Reference Evapotranspiration of Iran Synoptic Stations. 2021. **Iranian Journal of Soil and Water Research.**
- Production of Soil Moisture Maps in Iran from BEC Global Level 3 Products of SMOS Satellite. 2021. **Journal of Watershed Management Research.**
- Trend and ENSO-based analysis of last spring frost and chilling in Iran**.** 2021**. Springer.**
- Comparison of Growing Degree Day of Different Phenological Stages of Hashemi Rice in Guilan

Province. 2021. **Journal of Climate Research.**

- Heavy precipitation forecasting and warning system in the Chaldoran basin. 2021. **Journal of Meteorology and Atmospheric Science.**
- The Effect of Different Probability Levels in Estimating the Net Water Requirement of Rice in the Northern Provinces of Iran. 2021. **Journal of Water and Soil.**
- Optimum Cropping Pattern Based on Irrigation Water Productivity Using AquaCrop Simulation Model. 2021. **Journal of Agricultural Science and Technology.**
- Validation of the SMOS level 1C brightness temperature and level 2 soil moisture data over the west and southwest of Iran. 2020. **Remote sensing**.
- Investigating the relationship between climate teleconnection indices and autumnal rainfall in Iran watersheds. 2020. Iranian Journal of Soil and Water research.
- Study of Climate change and extreme climate indicators of temperature parameters in Guilan province. 2020. **Nivar**.
- Introducing the system of meteorological recommendations for rice farming in the northern regions of the country. 2020. **Rice Journal.**
- Comparative Study of Efficiency of Some Meteorological Drought Indices in Different Climate Regions of Iran. 2020. **Journal of Iranian Soil and Water Research.**
- Investigating the origin and pathways of atmospheric rivers in the world. 2020. **Springer**.
- Evaluating the effectiveness of multiple tests of homogeneity in identifying mutations in climatic data of temperature, precipitation and pressure; Case study: Rasht Airport Station. 2020. **Nivar**.
- Zoning of minimum and maximum temperatures in Iran using multivariate regression. 2019. **Nivar.**
- Analyzing the homogeneity of temperature and precipitation data in Iran with a climatic approach. 2019. **Journal of Spatial Analysis of Environmental Hazards**.
- Assessment of interpolation methods for annual and seasonal precipitation in Mashhad plain. 2018. **Nivar**.
- The comparison of temperature elements measured in station and in paddy filed. 2017. **Soil and Water Conservation Research Journal.**
- Estimating rice actual evapotranspiration using METRIC algorithm in a part of the North of Iran. 2017. **Soil and Water Conservation Research Journal.**
- The determination of submergence depth effect on water and soil temperature in paddy field (case study: Rasht). 2017. **Journal of agrometeorology**.
- The effect of submergence depth on evaporation losses in paddy fields. 2017. **Soil and Water Conservation Research Journal.**
- Geomorphological evidence of late Pleistocene Mountain glaciers in Shah Alborz-Western Alborz Mountain. 2016. **Quaternary Journal of Iran.**
- Assessment of climatic indices limiting rainfed wheat yield. 2016. **Ecological Indicators.**
- Lake effect snow and its role on heavy snowfall in the Southwest of the Caspian Sea. 2016. **Journal of Geographic space.**
- Identification and formation mechanism and analysis of spatial pattern snow- fall in central plain of Guilan (delta snow) by using weather and research forecast (WRF) model. 2014. **Journal of climatology.**
- Evaluation of spatial variability of available iron and its affecting factors in paddy soils (Case study: Central paddy fields of Guilan). 2014. **Journal of Soil management and Sustainable.**
- The study of snowfall hazard mechanism in Guilan state at current 50 years. 2014. **Journal of Geography and Environmental Hazards.**
- Assessing the Performance of spatial Interpolation Methods for Mapping Precipitation Data: A Case study in Fars Province, Iran. 2012. **Trends in Applied Sciences Research.**
- Comparison of decision tree regression, geographic weighted regression and normal

regression in drawing precipitation maps. 2011. **Iranian Water Research Journal.**
- Fluctuations of surface ozone in Isfahan. 2011. **Nivar**

Conference Presentation

- The national space science and technology center. The Emirati society of GIS and Remote sensing (ESGRS) 05th April **2023**
- Regional Symposium on Geospatial Information Exchange and Research (GIER) on 7th and 8th March **2023**. The German University of Technology in Oman.
- Validation of SMAP Surface Soil Moisture Products over Iran. 44th COSPAR Scientific Assembly, 16 July – 24 July **2022**, Athens Greece.
- Projection of Sea Surface Temperature and Sea Level in Pars Sea Region Using CMIP6 Models Outputs in 5th International Conference on the Persian Gulf Oceanography, Tehran, Iran, 24-25 Jan **2022.**
- The Persian Gulf Climate Change in 5th International Conference on the Persian Gulf Oceanography, Tehran Iran 24-25 Jan **2022.**
- Climate change Detection and Study of Extreme Indices Trends on Northern Coasts of the Persian Gulf and Oman Sea. **2022**. Persian Gulf International Oceanographic Conference.
- In oral and technical presentation recognition and appreciation of research contributions to International Anatolian Congress on Multidisciplinary Scientific Research. International Anatolian Congress on Multidisciplinary Scientific Research held on August 12-13, **2022**.
- Evaluation satellite- based microwave soil moisture data (SMAP and SMOS) over Iran. Attended the 6th Satellite Soil Moisture Validation and Application Workshop, **2022**.
- Agroclimatology Classification for Iran Land for Earth Observation Purposes. **2022**. EGU.
- Investigation of the Caspian Sea level variations and sea surface temperature by the modern methods. IUGG **2015** General Assembly.
- Identification zoning of snowfall risk in central plain of Guilan using weather and satellite data. **2015**. The 6nd International conference crisis management, Mashhad, Iran.
- Development of a New Hybrid Model of Forest Ignition Risk Map Using MODIS Data. **2012**. 33rd Canadian symposium on remote sensing. Ottawa. Canada. Code 1177.
- The evaluation of soil moisture using fractal dimension of soil particle size distribution and geostatistics. **2012**. The 2nd International Conference on Plant, Water, Soil and Weather Modeling.
- The mechanism of penetration and spread of dust to the southwest coast of the Caspian Sea. **2012**. The 2nd International Conference on Plant, Water, Soil and Weather Modeling.
- Spatial Variability of Available Zinc in Paddy Fields. **2011**. 3rd International Zinc Symposium, Hyderabad, India.
- Spatial Variability of Available Potassium in Arable Soils in Mazandaran and its Relationship with soil properties and Rainfall. **2010**. International Symposium on 'Soil Management and Potash Fertilizer Uses in West Asia and North Africa Region', Antalya, Turkey.
- Dust blows across the most northern Albors mountain range and southern Caspian Sea. **2010**. Eumetsat.

Workshops and Certificates

- "The National Space Science and Technology Center" webinar. 05th April 2023.
- Special topics in applied climate change studies using CMIP6 models. **2022**. Sari Agricultural Sciences and Natural Resources University.
- 44th COSPAR Scientific Assembly, 16 July – 24 July **2022**, Athens Greece.
- GIS for meteorological applications. 27th November- 15th December **2022**.
- Calculating of hazardous weather, water, climate, and space weather events (CHE) workshop. Iran,

Tehran, 01 August **2022**, By Atmospheric Science and Meteorological Research Center (ASMERC) in collaboration with World Meteorological Organization (WMO), Regional Training Center (RTC) in Tehran.

- Participation in the Climate Change Downscaling Approaches and Application. **2021**.
- Necessity of systematic use of meteorological forecasts in smart irrigation. **2021**. Agricultural Engineering and Technical Research Institute.
- Webinar on remote sensing methods to calculate evaporation and transpiration in the country. **2021**. Agricultural Engineering and Technical Research Institute.
- WMO Online Course on Education and Training Innovations. **2020**. World Meteorological Organization (on line).
- Webinar on agricultural meteorology and the importance of research in this field. **2020**. Faculty of Agriculture, University of Kurdistan.
- Lecture in "14TH Satellite application course- subtropical weather at the WMO centre of excellence for satellite applications- Muscat", 24Th -28TH February **2019.**
- Satellite remote sensing, water cycle and climate change. 2014. World Meteorological Organization and the Space Research Committee, Tour State University, the Russian Federation.
- Simulating the movement of water and solutes in the soil using Hydrus software. 2013. Guilan university.
- The analysis of meteorological data in agriculture. 2013. Fars Meteorological Department.
- International workshop of Reaching farmers in a changing climate. 2011. Isfahan University.
- Climatology and statistics training course. 2011. Kerman Meteorological Department
- Application of statistical methods in weather and climatology. 2011. Kerman Meteorological Department.
- Atmospheric Chemistry. 2010. Fars Meteorological Department.
- Radar meteorology, WMO Training Course. 2010. Tehran.
- Onsite training course on Weather radar meteorological applications. 2010. IRAN meteorological organization.
- Air Pollution and Atmospheric Chemistry Training, WMO Training Course. 2009. Tehran.
- Eumetsat Satellite Application. 2009. Muscat, Oman

Thesis Advisor

- Application of deep neural networks in quantitative and qualitative modeling of watersheds. M.Sc. Tarbiat Modarres university, Faculty of Civil and Environmental Engineering. 2023. **Advisor**
- Validation and micro scaling of surface soil moisture products of SMAP satellite using sentinel radar images and field measurements. M.Sc. Tarbiat Modarres university, Faculty of Civil and Environmental Engineering. 2022. **Advisor**
- Spatial-temporal assessment of groundwater quality in Golestan aquifers using hot spot analysis. Ph.D Thesis. Faculty of Water and Soil Engineering, Gorgan University of Natural Resources. 2021. **Advisor**
- Evaluation of meteorological drought effects on underground water level fluctuations using data mining methods (case study: aquifers of Golestan province). Ph.D Thesis. Faculty of Water and Soil Engineering, Gorgan University of Natural Resources. 2021. **Advisor**
- Identification of drought stress for optimal distribution of water resources using remote sensing. M.Sc. 2018. Shahroud University. **Advisor**
- Investigating the effect of climate change on rice cultivation calendar in Mazandaran province. University of Science and Research. **Advisor**