
EDUCATION

- PhD (2007) **Physical Geography (Climatology)**, Kharazmi University, Tehran, Iran. Dissertation: *The Analysis of Summer Atmospheric Circulation over Southwest Asia and its Relation to Summer Rainfall in Iran Plateau*, November 2007, 165pp.
- MA (2001) **Physical Geography (Climatology)**, Islamic Azad University, Tehran, Iran. Thesis: *Synoptic Analysis of the Effect of the Black Sea on Precipitation of Iran*, January 2001, 154pp.
- BA (1993) **Physical Geography**, University of Tehran, Tehran, Iran.

ACADEMIC AND TEACHING POSITIONS

- Oct 2022 – Present **Associate Professor**
Department of Geography, Ferdowsi University of Mashhad, Mashhad, Iran
- Sep 2010 – Sep 2022 **Assistant Professor**
Department of Geography, Ferdowsi University of Mashhad, Mashhad, Iran
- Jan 2011 – Feb 2011 **Visiting Scientist**
Center for Climatic Research (CCR), University of Wisconsin-Madison, Madison, WI, USA. Host: Dr. Michael Notaro
- May 2009 – Aug 2009 **Visiting Scientist**
Climate & Global Dynamics Division, NCAR, Boulder CO, USA
Host: Dr. John Fasullo
- Nov 2007 – Sep 2008 **Assistant Professor**
Department of Geography, Tabarestan Institute of Higher Education, Iran
- Sep 2003 – Oct 2007 **Instructor**
Department of Geography, Tabarestan Institute of Higher Education, Iran
- Feb 2002 – Jul 2002 **Visiting Instructor**
Department of Geography, Noor Azad University, Mazandaran, Iran

TEACHING INTERESTS**COURSES TAUGHT****Ferdowsi University of Mashhad (FUM)**

As a tenured full-time instructor, I taught the following courses in the Geography Department:

- Climatology of Iran (Synoptic Aspects) 2010 (Fall semester, graduate course)
- Microclimatology 2010 (Fall semester, graduate course)
- Research Methods 2010 - 2016 (Fall semester, Graduate course)
- Fundamentals of Climatology I 2011 - 2014 (Spring semester), 2014 - 2016 (Fall semester)
- Fundamentals of Climatology II 2011 - 2013 (Fall semester), 2014 - 2016 (Spring semester)
- Weather Maps Analysis 2011- 2016 (Spring semester, graduate course)
- Fundamentals of Synoptic Climatology 2011 (Fall semester, graduate course)
- Synoptic Climatology of Iran 2011 - 2016 (Fall semester, graduate course)
- Programming and climate softwares 2013, 2014 (Fall semester, graduate course)
- Hydro-climate Modelling 2013 - 2015 (Fall semester, graduate course)

- Hydro-meteorology 2013 - 2015 (Fall semester, graduate course)
- Regional Climate Modelling 2014 (Spring semester, graduate course)
- Global Climate 2015, 2016 (Fall semester)

Tarbiat Modarres University

As a visiting instructor, I taught the following courses in the Geography Department:

- Climate Modelling 2014 (Fall semester-graduate course)
- Regional Climate Modelling 2014 (Fall semester, Ph.D. course)

Sistan and Baluchistan University

As a visiting instructor, I taught the following course in the Geography Department:

- Climate Modelling 2012 (Fall semester-graduate course)

Tabarestan Institute of Higher Education

As a tenured full-time instructor, I taught the following courses in the Geography Department:

- Philosophy of Geography 2003, 2004, 2005, 2006, 2007 (Fall semester)
- Fundamentals of Climatology 2004, 2005, 2006, 2007, 2008 (Spring semester)
- Global Climate 2004, 2005, 2006, 2007 (Fall semester)
- Climatology of Iran (Synoptic Aspects) 2005, 2006, 2007, 2008 (Spring semester)
- Research Methods 2005, 2006, 2007, 2008 (Spring semester)
- Principles of Remote Sensing 2005, 2006 (Fall semester)
- Physical Geography of Iran 2006 (Spring semester)
- Introduction to Meteorology 2006, 2008 (Fall semester)
- Weather Maps Analysis 2006, 2008 (Spring semester)

RESEARCH INTERESTS

- Monsoon and Atmospheric Circulation over Southwest Asia
- Synoptic Climatology of the Middle East
- Climate change and Climate Variability
- Regional Climate Modeling
- Weather & Climate Extremes
- Precipitation in the Southern Coast of Caspian Sea
- Dust storms over the Middle East (Atmospheric aspects)
- Climatology of the Stratosphere

PUBLICATIONS

- Soltani, M., Fletcher, C. G., **Mofidi, A.**, Arnault, J., Laux, P., & Kunstmann, H. (2025). Exceptionally rare tropopause folding caused the Sinai's dragon storm: a forensic meteorological analysis. *Meteorology and Atmospheric Physics*, **137** (2), 19.
- Zargari, M., **Mofidi, A.**, Entezari, A., & Baaghdeh, M. (2025). Climatology of Tehran surface heat Island: a satellite-based spatial analysis. *Scientific Reports*, **15** (1), 10567.
- **Mofidi, A.**, Zarrin, A., Hassani, S., & Soltani, M. (2025). Dynamics of a severe summer Shamal wind and its induced dust storm in the Middle East: A diagnostic study based on numerical simulation. *Atmospheric Research*, **314**, 107800.
- Taheri Aval Shahri, B., **Mofidi, A.**, Dadashi-Roudbari, A., & Zarrin, A. (2025). Climatology of Fog in Iran based on observational data. *Iranian Journal of Geophysics*. Published online. doi: 10.30499/ijg.2025.480760.1640
- Sarhan, E., **Mofidi, A.**, Dadashi-Roudbari, & Minaei, M. (2024). Spatial analysis of nighttime land surface temperature in Iran using MODIS-Aqua data. *Journal of the Earth and Space Physics*, **50** (3), 677-705
- Saber, M., Salahi, B., & **Mofidi, A.** (2024). Spatio-temporal Study of Evapotranspiration in the Southern Part of the Aras River Basin. *Journal of Applied researches in Geographical Sciences*, **24** (74), 1-23.

- Mohammadabadi, M., Mofidi, A., **Zarrin, A.**, & Dadashi-Roudbari, A. (2024). Evaluation of air temperature estimated by ERA5-Land, AgERA5, and MSWX datasets over Iran. *Iranian Journal of Geophysics*, **18** (4), 131-159.
- Parsa, S., Zarrin, A., **Mofidi, A.**, & Dadashi-Roudbari, A. (2024). The Impact of Climate Change on Temperature and Precipitation in Afghanistan with Emphasis on the Helmand and Hariroud Basins. *Journal of Water and Sustainable Development*, **11** (1), 35-48.
- Zargari, M., Boroughani, M., Entezari, A., **Mofidi, A.**, & Baaghideh, M. (2024). Dynamic modeling of spatial-temporal characteristics of dust in south and southeastern Iran with REG-CM4 model. *Applied researches in Geographical Sciences*, **24** (72), 115-137.
- Sarhan, E., **Mofidi, A.**, Dadashi-Roudbari, A., Zarrin, A., & Minaei, M. (2024). Climatology of cold spots and LST minimums in Iran using high-resolution satellite data. *Theoretical and Applied Climatology*, **155** (2), 1395-1413.
- Asadi-RahimBeygi, N., Zarrin, A., **Mofidi, A.**, & Dadashi-Roudbari, A. (2024). Near-term temperature extremes in Iran using the decadal climate prediction project (DCPP). *Stochastic environmental research and risk assessment*, **38** (2), 447-466.
- Zargari, M., **Mofidi, A.**, Entezari, A., & Baaghideh, M. (2024). Climatic comparison of surface urban heat island using satellite remote sensing in Tehran and suburbs. *Scientific Reports*, **14** (1), 643.
- Jangi, M. R., Zarrin, A., **Mofidi, A.**, & Dadashi-Roudbari, A. (2024). Intensifying heatwave trends in Iran based on observational data using excess heat factor (EHF). *Natural Hazards*, **120** (2), 2073-2090.
- Ebrahimi, N., Zarrin, A., **Mofidi, A.**, & Dadashi-Roudbari, A. (2023). Projected Precipitation Extremes in Lake Urmia Basin under Climate Change. *Water and Soil*, **37** (5), 769-785.
- Soltani, M., Hamelers, B., **Mofidi, A.**, Fletcher, C. G., Staal, A., Dekker, S. C., ... & Lanfers, M. (2023). A 20-year satellite-reanalysis-based climatology of extreme precipitation characteristics over the Sinai Peninsula. *Earth System Dynamics*, **14** (5), 931-953.
- Saber, M., Salahi, B., & **Mofidi, A.** (2023). Evaluation of Relationship between Oscillations of Selected North Hemisphere's Teleconnection Indices with Evapotranspiration Variations in Southern Section of Aras River Basin. *Geographic Space*, **23** (82), 201-225.
- Salahi, B., Saber, M., & **Mofidi, A.** (2023). Evaluation perspective of the Aras Basin reference crop evapotranspiration in future climatic condition under RCPs scenarios. *Watershed Engineering and Management*, **15** (1), 80-95.
- Salahi, B., & **Mofidi, A.** (2023). Estimation of ETp in the southern part of Aras Basin based on the data of CORDEX dynamic downscale GFDL model. *Journal of Spatial Analysis Environmental Hazards*, **9** (4), 143-158.
- Asadi-RahimBeygi, N., Zarrin, A., **Mofidi, A.**, & Dadashi-Roudbari, A. A. (2023). The prediction of the Precipitation Extremes over Iran for the Next Decade (2021-2028) using the Decadal Climate Prediction Project contribution to CMIP6 (CMIP6-DCPP). *Journal of the Earth and Space Physics*, **49** (3), 707-725.
- **Mofidi, A.**, & Zarrin, A. (2022). On the existence of summer Shamal wind induced by the Zagros Mountains in the Middle East. *Geophysical Research Letters*, **49** (18), e2022GL100151.
- Salahi, B., Saber, M., & **Mofidi, A.** (2022). Evaluation of evapotranspiration changes in the Aras basin using spatial high resolution MOD16 product. *Iranian Journal of Geophysics*, **16** (2), 119-137.
- Roumiani, A., & **Mofidi, A.** (2022). Predicting ecological footprint based on global macro indicators in G-20 countries using machine learning approaches. *Environmental Science and Pollution Research*, **29**, 11736–11755. <https://doi.org/10.1007/s11356-021-16515-5>
- Asadi Rahim-Begi, N., Zarrin, A., **Mofidi, A.**, & Dadashi-Roudbari, A. (2022). Seasonal distribution analysis of extreme precipitation in Iran using AgERA5 dataset. *Iranian Journal of Soil and Water Research*, **52** (11), 2723-2737.
- **Mofidi, A.**, Salehabadi, N., Zarrin, A., & Dadashi, R. A. A. (2022). Investigation of Seasonal dust in northeastern Iran and numerical simulation of extreme dust events using WRF-CHEM model. *Journal of the Earth and Space Physics*, **48** (2), 421-440.

- Naseri, N., Doostan, R., & **Mofidi, A.** (2021). Location of blocking and precipitation in Iran. *Journal of Geography and Environmental Hazards*, **10** (2), 79-91.
- Arabi Yazdi, A., Sanaei Nejad, S. H., & **Mofidi, A.** (2021). Evaluation of Physical Evaporative Demand Drought Index in Different Climates of Iran. *Journal of Climate Research*, **1399** (44), 15-32.
- Heydarizad, M., Minaei, F., Mayvan, J. E., **Mofidi, A.**, & Minaei, M. (2021). Spatial distribution of stable isotopes (^{18}O and ^2H) in precipitation and groundwater in Iran. *Isotopes in Environmental and Health Studies*, **57** (4), 400-419.
- Arabi Yazdi, A., Sanaei Nejad, S. H., & **Mofidi, A.** (2020). Evaluation of Grid reanalysis products of the European Centre for Medium Range Weather Forecasts (ECMWF datasets) in different climatic regions of Iran. *Journal of Climate Research*, **1398** (38), 63-76.
- Zargari, M., Entezari, A., **Mofidi, A.**, & Baaghdeh, M. (2020). Modification of Crop Pattern for Optimal Use of Water Derived from Heavy Precipitation Simulated by RegCM4 Model in South Khorasan Province. *Journal of Meteorology and Atmospheric Science*, **2** (4), 319-334.
- Zargari, M., **Mofidi, A.**, & Zarrin, A. (2020). Detecting the Route and Source of Atmospheric Pollutants Movement in High-Level Air Pollution Periods by Utilizing MODIS and HYSPLIT Model in Tehran Metropolis. *Journal of Environmental Science and Technology*, **21** (129100727), 1-12.
- Hossein Abadi, N., Tavousi, T., **Mofidi, A.**, & Khosravi, M. (2019). A comparative study on the trend of temperature inversions in Iranian metropolises: Tehran, Mashhad and Tabriz. *Physical Geography Research*, **51** (4), 693-713.
- Kaskaoutis, D. G., Dumka, U. C., Rashki, A., Psiloglou, B. E., Gavril, A., **Mofidi, A.**, ... & Kambezidis, H. D. (2019). Analysis of intense dust storms over the eastern Mediterranean in March 2018: Impact on radiative forcing and Athens air quality. *Atmospheric Environment*, **209**, 23-39.
- Heydari Tashekaboud, S., **Mofidi, A.**, & Heydari Tashekaboud, A. (2019). Perspective of Rainfall Variations in Northwestern Iran using Climate Change Circulation Models under Climate Scenarios. *Journal of Geography and Environmental Hazards*, **8** (1), 133-151.
- Kaskaoutis, D.G., Rashki, A., Dumka, U.C., **Mofidi, A.**, Kambezidis, H.D., Psiloglou, B.E., Karagiannis, D., Petrinoli, K., and Gavril, A., 2019: Atmospheric dynamics associated with exceptionally dusty conditions over the eastern Mediterranean and Greece in March 2018, *Atmospheric Research*, **218** (1): 269-284. Doi: 10.1016/j.atmosres.2018.12.009.
- Rashki, A., Kaskaoutis, D.G., **Mofidi, A.**, Minvielle, F., Chiapello, I., Legrand, M., Dumka, U.C., and Francois, P., 2019: Effects of Monsoon, Shamal and Levant winds on dust accumulation over the Arabian Sea during summer—The July 2016 case, *Aeolian Research*, **36**: 27–44. Doi: 10.1016/j.aeolia.2018.11.002.
- Soltani, T., Gandomkar, A., Ataei, H., and **Mofidi, A.**, Bagheri Bodaghabadi, M., 2018: Investigating the influence of Climatic parameters on the city of Mashhad air pollution using a Neural Network Model, *Quarterly Journal of Geography (Regional Planning)*, **8** (3): 73-82.
- Mosavi, S.M., Zarrin, A., **Mofidi, A.**, and Hosseini, S.F., 2018: Investigating the relation between frequency of thunderstorms and temperature trend in Mashhad, *Geographical Research Quarterly*, **126**: 74-87.
- Khorshid-doust, A.M., **Mofidi, A.**, Rasouli, A.A., and Azarm, K., 2017: Evaluating the sensitivity of RegCM4 model to types of Convection Parameterization Schemes on the modeling of springtime precipitation in the North West of Iran, *Journal of Earth and Space Physics*, **43** (3): 651-671.
- Kamali, S., **Mofidi, A.**, Zarrin, A. and Nazaripour, H., 2017: Sensitivity studies of the fourth-generation regional climate model simulation of dust storms in the Sistan plain, Iran, *Model. Earth Syst. Environ.*, **3** (2): 769-781. doi: 10.1007/s40808-017-0333-9.
- Gholipour, J., Sanaei Nejad, S.H., **Mofidi, A.**, and Alizadeh, A., 2017: Determination the Beginning of Summer Season in Iran on the Basis of Abrupt Northward Jump of the Subtropical Jet Stream over the Middle East, *Journal of Geography and Environmental Hazards*, **20**: (in Press) DOI: 10.22067/geo.v5i4.57806
- Hamidianpour, M., **Mofidi, A.**, Saligheh, M., and Alijani, B., 2017: The role of topography on the

simulation of Sistan wind structure in the east of Iranian Plateau, *Researches in Geographical Sciences*, **16**(43): 25-53.

- Khosravi, M., **Mofidi, A.**, and Poorkarim-Barabadi, R., 2016: Investigating the Relation between Sistan 120 Day Winds and East Khorasan Winds, *Quarterly Journal of the Physical Geography*, **9**(31): 19-37.
- Khorshid-doust, A.M., **Mofidi, A.**, Rasouli, A.A., and Azarm, K., 2016: A Synoptic analysis on the occurrence of springtime heavy rainfall in the Northwest of Iran, *Journal of Natural Environment Hazards*, **8**: 53-82.
- Soltani, T., Gandomkar, A., Ataei, H., and **Mofidi, A.**, 2016: A Statistical Study of Mashhad's Air Polluted Days, *Journal of Geography and Environmental Studies*, **17**: 127-133.
- Soltani, T., **Mofidi, A.**, and Gandomkar, A., 2016: Synoptic Analysis of the Severe Polluted Days in the City of Mashhad; Case Study, November 2007, *Spatial Analysis of Environmental Hazards*, **2**(4): 95-112.
- Hamidianpour, M., **Mofidi, A.**, and Saligheh, M., 2016: The Nature and Structure of Sistan Wind, *Iranian Journal of Geophysics*, **10** (2): 83-109.
- Ahmadi, Z., Doostan, R., and **Mofidi, A.**, 2015: Synoptic Analysis of dust event occurrence in the Province of Southern Khorasan, *Quarterly Journal of the Physical Geography*, **8**(29): 41-62.
- Farajzadeh, M., Ahmadi, M., Alijani, B., and Ghavidel-Rahimi, Y., **Mofidi, A.**, and Babaeiyan, I., 2013: Investigating the effect of teleconnection patterns on the occurrence of precipitation in Iran, *Journal of Climate Research*, **15**: 31-45. (Published in May 2016)
- Karkhaneh, M., **Mofidi, A.**, and Zarrin, A., 2016: Modeling the role of Caspian Sea on the occurrence of regional-scale precipitation in the Caspian Sea Region, *Geography and Territorial Spatial Arrangement*, **18**: 153-168.
- Sadeghi, S., **Mofidi, A.**, Jahanshiri, M., and Doostan, R., 2015: The Role of Regional Scale Atmospheric Circulation on the Occurrence of Extremely High Air Pollution Episodes in Mashhad, *Journal of Geography and Environmental Hazards*, **10**: 1-35.
- **Mofidi, A.**, Soltanzadeh, I., Yousefi, Y., Zarrin, A., Soltani, M., Masoumpour, J., Azizi, GH., and Miller, S.T.K., 2015: Modeling the Exceptional South Foehn event (Garmij) over Alborz Mountains during the extreme forest fires of December 2005, *Natural Hazards*, **75** (3): 2489-2518. doi: 10.1007/s11069-014-1440-9
- Kaskaoutis, D.G., Rashki, A., Houssos, E.E., **Mofidi, A.**, Goto, D., Bartzokas, A., Francois, P., and Legrand, M., 2015: Meteorological aspects associated with dust storms in the Sistan region, southeastern Iran, *Climate Dynamics*, **45** (1): 407-424. DOI: 10.1007/s00382-014-2208-3.
- Soltani, M., Babu, C. A., and **Mofidi, A.**, 2014: Meteorological Aspects of Abnormal Cooling Event over Iran in April 2009, *Meteorology and Atmospheric Physics*, **124** (1-2): 47-65.
- **Mofidi, A.**, Hamidianpour, M., Saligheh, M., and Alijani, B., 2014: Determination of onset, withdrawal and duration of Sistan wind using a change point approach, *Journal of Geography and Environmental Hazards*, **8**: 87-112.
- **Mofidi, A.**, Zarrin, A., and Karkhaneh, M., 2014: The investigation of atmospheric circulation pattern during wet and dry spells over the southern coast of the Caspian Sea, *Iranian Journal of Geophysics*, **8** (1): 140-176.
- **Mofidi, A.**, Mohammadyarian, M., and Hosseinzadeh, SR., 2013: Atmospheric Hazards Zonation in northeast of Iran, *Journal of Geography and Environmental Hazards*, **6**: 1-16.
- **Mofidi, A.**, and Zarrin, A., 2012: Investigating the Nature, Structure and Temporal Variation of Summertime Atmospheric Circulation over Southwest Asia. *Journal of Climate Research*, **11**: 15-40. (Published in October 2014).
- **Mofidi, A.**, Kamali, S., and Zarrin, A., 2013: Evaluation of the RegCM4 model coupled with Dust module on identification of dust storm features over the Sistan region, *Quarterly of Geography and Regional Planning*, **3** (3): 51-69.

- Raziei, T., Bordi, I., Santos, J.A., and **Mofidi, A.**, 2013: Atmospheric circulation types and winter daily precipitation in Iran, *International Journal of Climatology*, **33** (9): 2232–2246. DOI: 10.1002/joc.3596.
- **Mofidi, A.**, and Jafari, S., 2012: The Role of regional atmospheric circulation over the Middle East on the occurrence of summer dust storms in southwest Iran, *Geographical Studies of Arid Environments*, **2**(5): 17-45.
- **Mofidi, A.**, Zarrin, A., and Janbaz Ghobadi, G., 2012: The Causes of Decreasing in the Amount and Intensity of Winter Rainfall in Comparison to the Fall Rainfall in Southern Coast of Caspian Sea, *Journal of Earth and Space Physics*, **38** (1): 177-203.
- Alijani, B., **Mofidi, A.**, Aliakbari Bidokhti, A.A., and Jafarpour, Z., 2012: Atmospheric Circulation patterns of the summer rainfalls in the Southeast Iran during July 1994, *Journal of Earth and Space Physics*, **37** (3): 205-227.
- Raziei, T., **Mofidi, A.**, Santos, J.A. and Bordi, I., 2012: Spatial patterns and regimes of daily precipitation in Iran in relation to large-scale atmospheric circulation, *International Journal of Climatology*, **32**(8): 1226-1237. DOI: 10.1002/joc.2347.
- Janbaz Ghobadi, G., **Mofidi, A.**, and Zarrin, A., 2011: Determining the Synoptic Pattern of Winter Heavy Precipitation in Southern Coast of Caspian Sea, *Journal of Geography and Environmental Planning*, **22** (2): 23-40.
- Zarrin, A., Ghaemi, H., Azadi, M., **Mofidi, A.**, and Mirzaei, E., 2011: The effect of Zagros Mountains on the formation and maintenance of Iran anticyclone using RegCM4, *Meteorology and Atmospheric Physics*, **112**(3-4): 91-100.
- Raziei, T., **Mofidi, A.**, and Zarrin, A., 2009: The 500 hPa Action Centers and Winter Circulation Patterns over the Middle East and their Relationship with Precipitation in Iran, *Journal of Earth and Space Physics*, **35**(1): 121-141.
- **Mofidi, A.**, Zarrin, A., and Janbaz Ghobadi, G., 2008: Determining the Synoptic Pattern of Autumn Heavy and Extreme Precipitation in Southern Coast of Caspian Sea, *Journal of Earth and Space Physics*, **33**(3): 131-154.
- **Mofidi, A.**, 2006: The Role of Stratospheric Large Scale Circulation on the Stratospheric Ozone Depletion, Part II; Dynamical mechanisms, *Quarterly Geographical Journal of Territory*, **3**(11): 119-140.
- **Mofidi, A.**, 2006: Weather Modification and Cloud Seeding: Concepts, Methodology and Challenges, A Review, *Roshd; Teaching Geography*, **76**: 40-53.
- **Mofidi, A.**, 2006: The Role of Stratospheric Large Scale Circulation on the Stratospheric Ozone Depletion, Part I. *Quarterly Geographical Journal of Territory*, **3**(10): 118-148.
- **Mofidi, A.**, and Zarrin, A., 2006: The Analysis of the Nature and Structure of High and Low Pressure Systems; Part A, *Roshd; Teaching Geology*, **46**: 53-61. Part B, *Roshd; Teaching Geology*, **47**: 54-58.
- **Mofidi, A.**, 2006: Investigation of Appearance of Ozone Hole over Antarctic: Case Study; Ozone Hole 2005, *Roshd; Teaching Geology*, **44**: 8-15.
- **Mofidi, A.**, and Zarrin, A., 2006: Synoptic Investigation of the Influence of Sudanese Low-Pressure Systems on the Occurrence of Heavy Rainfalls in Iran, *Geographical Research Quarterly*, **77**: 113-136.
- Zarrin, A., and **Mofidi, A.**, 2006: Variability of Solar Activity and Its Influence on the Earth's Climate: Case Study; Middle East and Iran, *Quarterly Geographical Journal of Territory*, **2**(8): 83-104.
- **Mofidi, A.**, and Zarrin, A., 2005: Synoptic analysis of the Nature of Sudanese Low-Pressure Systems (Case Study; December 2001 Storm), *Quarterly Geographical Journal of Territory*, **2**(6): 24-48.
- **Mofidi, A.**, 2005: Synoptic Climatology of Heavy Rainfall with Red Sea Origin in the Middle East; A Review, *Geographical Research Quarterly*, **75**: 71-93.
- **Mofidi, A.**, 2004: El Niño and Southern Oscillation, *Roshd; Teaching Geography*, **68**: 15-20.

MANUSCRIPTS IN PREPRATION, REVIEW, AND PRESS

- Asadi-RahimBeygi, N., **Mofidi, A.**, Zarrin, A., & Dadashi-Roudbari, A., Near-term climate extremes in Iran based on compound hazards analysis, *Scientific Reports* (under review).

CONFERENCES

- Asadi-RahimBeygi, N., Zarrin, A., **Mofidi, A.**, and Dadashi-Roudbari, A. A., 2022: Prediction of the Temperature Extremes over Iran for the Next Decade (2021-2028) using the Decadal Climate Prediction Project (DCPP), Proceeding of the 20th Iranian Geophysical Society, November 22, Tehran, Iran.
- Hassanzadeh, M., **Mofidi, A.**, and Doostan, R., 2018: *Investigating the Influence of Stratospheric Polar Vortex Displacement on Iran's Precipitation (Case Study; December 2005)*, Proceeding of the 2nd National Conference on Climatology of Iran (SNCCI), May 09, 2018, Ferdowsi University of Mashhad, Mashhad, Iran.
- Salehabadi, N., Zarrin, A., and **Mofidi, A.**, 2018: *Statistical and Synoptic Study of Dust in South West Asia*, Proceeding of the 2nd National Conference on Climatology of Iran (SNCCI), May 09, 2018, Ferdowsi University of Mashhad, Mashhad, Iran.
- Farooghi, A., Zarrin, A., and **Mofidi, A.**, 2018: *Survey of precipitation from low-pressure systems in Southwest Asia (Winter 2010-14)*, Proceeding of the 2nd National Conference on Climatology of Iran (SNCCI), May 09, 2018, Ferdowsi University of Mashhad, Mashhad, Iran.
- Hosseinabadi, N., Tavoosi, **Mofidi, A.**, and Khosravi, M., 2018: *The Study of thermodynamic conditions of severe inversions and air pollution in Mashhad Case(Study: December 2017)*, Proceeding of the 2nd National Conference on Climatology of Iran (SNCCI), May 09, 2018 ,) .Ferdowsi University of Mashhad, Mashhad, Iran
- Sadeghzadeh, A., **Mofidi, A.**, and Salehabadi, N., 2018: *Investigating the Relationship between Precipitation Occurrence in South West of Iran in December and Geopotential Height variability*, Proceeding of the 2nd National Conference on Climatology of Iran (SNCCI), May 09, 2018, Ferdowsi University of Mashhad, Mashhad, Iran.
- Jami, Z., Roshandel, Z., **Mofidi, A.**, and Salehabadi, N., 2018: *Temporal and Spatial Analysis of Iran Precipitation Anomalies in the Past Decade*, Proceeding of the 2nd National Conference on Climatology of Iran (SNCCI), May 09, 2018, Ferdowsi University of Mashhad, Mashhad, Iran.
- Asadi-Rahimbeygi, N., Danechin, F., and **Mofidi, A.**, 2018: *Spatio-temporal analysis of heavy precipitation in Iran*, Proceeding of the 2nd National Conference on Climatology of Iran, 1248-1254, May 9, 2018, Ferdowsi University of Mashhad, Mashhad, Iran.
- Azarm, K., and **Mofidi, A.**, 2018: *Identification the Mechanism for occurrence of Convective Precipitation in the North West of Iran (Case Study June 5th, 2003)*, Proceeding of the 2nd National Conference on Climatology of Iran, 697-704, May 9, 2018, Ferdowsi University of Mashhad, Mashhad, Iran.
- Afrouzeh, M., **Mofidi, A.**, and Zarrin, A., 2018: *Saptio-temporal trend analysis of temperature in the northern hemisphere during the years 1982-2016*, The First International Conference on Sustainable Development in Agriculture, Environment, Tourism and National Resources (ICSD2018), January 25, 2018, Kharazmi High Institute of Science and Technology, Shiraz, Iran.
- Afrouzeh, M., **Mofidi, A.**, Zarrin, A., and Hosseini, S.F., 2018: *An investigation of Afro-Eurasia precipitation anomalies in relation to climate change*, The First International Conference on Sustainable Development in Agriculture, Environment, Tourism and National Resources (ICSD2018), January 25, 2018, Kharazmi High Institute of Science and Technology, Shiraz, Iran.
- Salehabadi, N., Zarrin, A., and **Mofidi, A.**, 2017: *Investigating the Variability and trend of the Indian Ocean Sea Surface Temperature during 1982-2015*, 5th National Meeting of Iranian Association of Geomorphology, October 18-19, 2017, Ferdowsi University of Mashhad, Mashhad, Iran.
- **Mofidi, A.**, 2017: *The role of Zagros Mountains in the formation and evolution of Shamal wind and its induced dust events over the Middle East*, 5th National Meeting of Iranian Association of Geomorphology, October 18-19, 2017, Ferdowsi University of Mashhad, Mashhad, Iran.

- Mosavi, S.M., Zarrin, A., **Mofidi, A.**, and Hosseini, S.F., 2017: *Investigating the relation between frequency of thunderstorms and temperature trend in Mashhad*, 1st International and 8th National Conference on Urban Planning and Management, April 25-26, 2017, Ferdowsi University of Mashhad, Mashhad, Iran.
- Farashiani, M., Zarrin, A., and **Mofidi, A.**, 2017: *Investigation of Mashhad temperature circumstance at the end of 21st century due to global warming*, 1st International and 8th National Conference on Urban Planning and Management, April 25-26, 2017, Ferdowsi University of Mashhad, Mashhad, Iran.
- **Mofidi, A.**, 2016: *El Niño and its effects on the occurrence of climate anomalies over the Middle East and Iran*, One-day Meeting on the impacts of El Niño and La Niño (teleconnection patterns) on climate variability in Iran, Management and Planning Organization of Khorasan-e-Razavi, January 28, 2016, Mashhad, Iran.
- Ahmadi, M., Ab-kharabat, S.H., Babaeian, I., Farajzadeh, M., **Mofidi, A.**, and Ghavidel-rahimi, Y., 2016: *Prediction the variability of monthly precipitation in Iran based on teleconnection patterns*, The 5th Regional Conference on Climate Change, January 25-26, 2016, Tehran, Iran.
- Zargari, M., **Mofidi, A.**, and Zarrin, A., 2015: *The influence of atmospheric circulation on the occurrence of extremely high air pollution episodes in the city of Tehran*, The First National Congress on development and promotion of Agricultural sciences, Natural Resources and Environmental Sciences, October 03, 2015, Tehran, Iran.
- **Mofidi, A.**, 2015: *Tracking of Sudanese Low over the Middle East*, Storm tracks Meeting and Workshop, Stratosphere-Troposphere Processes And their Role in Climate (SPARC), August 24-28, Grindelwald, Switzerland, (hosted by SPARC and supported by WCRP and WMO).
- Zargari, M., **Mofidi, A.**, and Zarrin, A., 2015: *Synoptic analysis of extremely high pollution days in the city of Tehran*, The 1st International Conference on Geographical Sciences (ICGS2015), August 06, 2015, Shiraz, Iran.
- Gerami, M.S., **Mofidi, A.**, and Zarrin, A., 2015: *Spatial analysis on the relation between Springtime rainfall occurrence in Northwest of Iran and regional scale atmospheric circulation*, First National Congress on Iran's Irrigation and Drainage, Iranian Association of Irrigation and Drainage, May 13-14, 2015, Ferdowsi University of Mashhad, Mashhad, Iran.
- Gholipour, J., Sanaei Nejad, S.H., **Mofidi, A.**, and Alizadeh, A., 2015: *Determination the beginning of Summer Season and its variability due to spatial and temporal variations of Subtropical Jetstream*, First National Congress on Iran's Irrigation and Drainage, Iranian Association of Irrigation and Drainage, May 13-14, 2015, Ferdowsi University of Mashhad, Mashhad, Iran.
- Noorouzian, M., and **Mofidi, A.**, 2015: *Investigating the Relation between types of Temperature Inversion and Pollutants Concentration in the Tehran Metropolis*, International Conference on Geography and Sustainable Development, May 07, 2015, Tehran, Iran.
- Ahmadi, M., Farajzadeh, M., Ghavidel-rahimi, Y., **Mofidi, A.**, Babaeian, I., Fathnia, A., and Ab-kharabat, S.H., 2015: *Trend analysis of Iran's precipitation and its relation to the teleconnection patterns*, The First National Conference on Meteorology, Iranian Meteorological Society, April 22-23, 2015, University of Yazd, Yazd, Iran.
- Noorouzian, M., and **Mofidi, A.**, 2015: *Investigating the Structure of Temperature Inversion in the City of Tehran*, The First National Conference on Meteorology, Iranian Meteorological Society, April 22-23, 2015, University of Yazd, Yazd, Iran.
- Hasani, S., **Mofidi, A.**, and Zarrin, A., 2015: *Investigating the structure of Shamal Wind and its induced dust using a Regional Climate Model (RegCM4)*, The First National Conference on Meteorology, Iranian Meteorological Society, April 22-23, 2015, University of Yazd, Yazd, Iran.
- Kaskaoutis, D.G., Rashki, A., Houssos, E.E., **Mofidi, A.**, Goto, D., Bartzokas, A., 2014: *Meteorological conditions associated with severe dust storms in the Sistan region, Iran*, Proceedings of the 12th International Conference of Meteorology, Climatology and Physics of the Atmosphere (COMECAP 2014), Heraklion, Greece, Vol: 1, 492-496.

- **Mofidi, A.**, and Zarrin, A., 2013: *Numerical Modeling of the exceptional South Foehn event over Alborz Mountains during December 2005 extreme forest fire; A Meso-Scale Approach*, Second International Conference on Environmental Hazards, October 29-30, 2013, Kharazmi University, Tehran, Iran.
- Mohammadyarian, M., and **Mofidi, A.**, 2013: *Zonation of precipitation-based Hazards in North East of Iran*, Second International Conference on Environmental Hazards, October 29-30, 2013, Kharazmi University, Tehran, Iran.
- Mohammadyarian, M., **Mofidi, A.**, and Hosseinzadeh, SR., 2013: *Zonation of Temperature-based Hazards in the North East of Iran*, The First National Conference on Climatology of Iran, May 21-22, Graduate University of Advanced Technology, Kerman, Iran.
- **Mofidi, A.**, Kamali, S., Zarrin, A., 2013: *Evaluation of the RegCM4 model coupled with Dust module on identification of dust storm features over the Sistan region*, The First National Conference on Climatology of Iran, May 21-22, Graduate University of Advanced Technology, Kerman, Iran.
- **Mofidi, A.**, Karkhaneh, M., Zarrin, A., 2013: *Simulating the role of Caspian Sea on the occurrence of regional scale precipitation using a regional climate model (RegCM4) coupled with a Lake model*, The First National Conference on Climatology of Iran, May 21-22, Graduate University of Advanced Technology, Kerman, Iran.
- Zarghani, S.H., **Mofidi, A.**, and Shafieinia, M., 2012: *Climate Change and its role on the National Security*, The 2nd National Conference on Applied Political Geography, October 9, Iranian Association of Geopolitics, Tarbiat Modarres University, Tehran, Iran.
- **Mofidi, A.**, and Kamali, S., 2012: *Investigating the structure of Dust storm events in the Sistan region using Regional Climate Model RegCM4; Case Study July 30, 2001*, The 1st National Desert Conference, June 17-18, Desert International Research Center, University of Tehran, Tehran, Iran.
- **Mofidi, A.**, 2012: *The Role of Low Level Jets on the Formation and Development of Summertime Dust Storms over Southeast and Southwest of Iran*, First International Forum on Natural Airborne Dust in Iran, May 23-25, Kermanshah University of Medical Sciences, Kermanshah, Iran.
- **Mofidi, A.**, and Jafari, S., 2012: *The Role of regional atmospheric circulation over the Middle East on the occurrence of summer dust-storms in southwest Iran*, The 1st International Congress on Dust Haze and Combating it's Adverse Effects, February 15-17, Khouzestan, Ahvaz, Iran.
- **Mofidi, A.**, and Zarrin, A., 2012: *Investigating the structure of summer atmospheric circulation over Southwest Asia*, 92nd Annual Meeting of American Meteorological Society, January 22-26, New Orleans, LA, USA.
- **Mofidi, A.**, 2011: *The role of regional atmospheric circulation over the Middle East on the occurrence of dust storms in southwest Iran; Dynamical analysis and regional climate modeling*, 14th National Conference on Environmental Health, November 1-3, Yazd Shahid Sadoughi University of Medical Sciences, Yazd, Iran.
- Zarrin, A., and **Mofidi, A.**, 2011: *Does summertime subtropical anticyclone over Iran is an extension of Azors High? "The investigation of a theory"*, 11th Congress of Iranian Geographers, September 15-16, Shahid Beheshti University, Tehran, Iran.
- **Mofidi, A.**, 2011: *The role of low-level atmospheric circulation over Middle East on the occurrence of dust storms in southwest Iran*, Iran/Iraq joint training program Environmental Management of Dust and Sand Storm and Combat Desertification, Khouzestan Environmental Research Center, Department of Environment, June 18-22, Ahvaz, Iran.
- Raziei, T., **Mofidi, A.**, Santos, JA., and Bordi, I., 2011: *Seasonal regimes of daily precipitation in Iran*, EGU General Assembly 2011, April 03-08, Vienna, Austria.
- **Mofidi, A.**, Zarrin, A., and Fasullo, J., 2010: *Summertime Atmospheric Circulation over Southwest Asia and Its Temporal Variability during the Second Half of the 20th Century*, 4th Regional Climate Change Conference, December 20-22, Tehran, Iran.
- **Mofidi, A.**, Alijani, B., and Zarrin, A., 2009: *The Structure of Summer Atmospheric Circulation over Southwest Asia*, 105th Annual Meeting of the Association of American Geographers, March 22-27, 2009, Las Vegas, Nevada, USA.

- Zarrin, A., Ghaemi, H., Azadi, M., Farajzadeh, M. and **Mofidi, A.**, 2009: *The Effects of Zagros Mountain on Iran Summertime Subtropical Anticyclone*. 105th Annual Meeting of the Association of American Geographers, March 22-27, 2009, Las Vegas, Nevada, USA.
- **Mofidi, A.**, Zarrin, A., and Janbaz Ghobadi, G., 2008: *Determining the Synoptic Pattern of Winter Heavy Precipitation and its Comparison to Autumn Heavy Precipitation in Southern Coasts of Caspian Sea*, The 1st International Conference on the Caspian Region Environmental Changes, August 24-25, 2008, University of Mazandaran, Babolsar, Iran.
- **Mofidi, A.**, Zarrin, A., and Janbaz Ghobadi, G., 2007: *Synoptic Investigation of Autumn Heavy Rainfalls in Southern Coasts of Caspian Sea*, Conference of Natural Resources and Sustainability in Southern Coasts of Caspian Sea, March 7, Noor Azad University, Noor, Iran.

LECTURES AND INVITED TALKS

- 07– 2024 “Examining the Meteorological Characteristics of the May 2024 Floods in the Northeast of the Country”, Scientific Meeting on the Review of Natural Disasters in Khorasan Razavi Province in Spring 2024, Red Crescent Society of Khorasan Razavi Province and Red Crescent Research Institute, July 7, 2024, Red Crescent Complex, Mashhad, Iran.
- 06– 2024 “Meteorological-Climatological Analysis of the Mashhad Flood on May 16, 2024”, Specialized Meeting on the Review of the May 2024 Floods in Mashhad, Ferdowsi University of Mashhad, Central Organization, June 18, 2024, Mashhad, Iran.
- 06– 2024 “Investigating the Meteorological Aspects of the Mashhad Flood on May 16, 2024”, Specialized Climatological Meeting, Samen Institute for New Studies of the Holy City, June 8, 2024, Mashhad, Iran.
- 06– 2024 “The Mechanism of Heavy Rainfall and the May 16, 2024 Flood in Northeastern Iran”, Specialized Meeting of the Iranian Society of Natural Environment Engineering, May 22, 2024, Faculty of Natural Resources and Environment, Ferdowsi University of Mashhad, Mashhad, Iran.
- 05– 2024 “The Relationship Between Climate Change and Recent Atmospheric Events in the Country; Delineating Local and Global Forcings”, Education Excellence Week, May 13, 2024, Ferdowsi University of Mashhad, Dr. Haeri Hall, Faculty of Letters and Humanities, Mashhad, Iran.
- 02– 2024 “The Role of Climate Change in Generating Recent Atmospheric Events in the Country”, 50th Session of the Specialized Meetings on Crisis Management: Special Meeting on Climate Change, National Research Institute for Earthquakes and Natural Disasters and Iranian Meteorological Society, February 17, 2024, National Research Institute for Earthquakes and Natural Disasters, Tehran, Iran.
- 01– 2024 “Meeting on the Mechanisms of Precipitation Occurrence in Iran with Critique and Review of Current Issues (Panel Member)”, Scientific Association of Nature of Ferdowsi University, January 1, 2024, Faculty of Natural Resources and Environment, Ferdowsi University of Mashhad, Mashhad, Iran.
- 11– 2023 “Mechanical and Thermal Forcings of the Iranian Plateau in the Formation and Development of Dust Storms in the Middle East - Proposing a Fundamental Theory”, Research Week, November 11, 2023, Research Deputy of the Faculty of Letters and Humanities, Ferdowsi Hall, Ferdowsi University of Mashhad, Mashhad, Iran.
- 11– 2023 “A Treasure from Birjand; A Narrative of the Life and Works of Professor Dr. Mohammad Hassan Ganji; A Series of Meetings by the Center for the Works of Distinguished Figures and Documents of Ferdowsi University of Mashhad, The Third Meeting of the 'Faces' Series”, Center for the Works of Distinguished Figures and Documents of Ferdowsi University of Mashhad, November 22, 2023, Club of Distinguished Figures of Ferdowsi University of Mashhad, Mashhad, Iran.
- 09– 2022 “Summer Monsoon and its Impact on Summer Precipitation in Iran; Answering Some Key Questions (Webinar)”, Scientific-Educational Association of Geography Teachers of Khorasan Razavi – Specialized Geography Library of Astan Quds Razavi, August 29, 2022, Mashhad, Iran (Virtual).

- 08– 2022 “Analysis of the Flash Floods in August 2022 (Webinar)”, Research Deputy of the Faculty of Letters, Ferdowsi University of Mashhad, August 6, 2022, Mashhad, Iran (Virtual).
- 06– 2022 “Analysis of the Country's Precipitation Status in the Current Year with a Look at the Causes of its Reduction”, Education Excellence Week, May 22, 2022, Ferdowsi University of Mashhad, Dr. Haeri Hall, Faculty of Letters and Humanities, Mashhad, Iran.
- 12– 2021 “Atmospheric and Climatic Hazards; Specialized Meeting on the Occasion of the National Day for Safety Against Earthquakes and Reduction of Natural Disaster Effects”, Faculty of Science, Ferdowsi University of Mashhad, December 26, 2021, Mashhad, Iran.
- 12– 2021 “Fundamental Concepts of Climate Change; With a Look at the Discussions and Issues of Climate Change in Iran”, Synergy Meeting on the Value Chain of Climate Change and Medicinal Plant Cover, December 22, 2021, Tehran, Iran (Virtual).
- 11– 2021 “Wonders of the Earth's Atmosphere; Third Session: 'Wonders of the Stratosphere’”, Ferdowsi University of Mashhad, November 23, 2021, Mashhad, Iran (Virtual).
- 06– 2021 “Wonders of the Earth's Atmosphere; Second Session: 'Chaos Theory and the Butterfly Effect' (Virtual)”, Ferdowsi University of Mashhad, June 27, 2021, Mashhad, Iran (Virtual).
- 05– 2021 “Analysis of the Precipitation and Drought Status of Khorasan Razavi Province and the Country in the Year 2020-2021 (Virtual)”, Education Excellence Week, May 18, 2021, Ferdowsi University of Mashhad, Mashhad, Iran (Virtual).
- 05– 2021 “Wonders of the Earth's Atmosphere; First Session: 'Serendipity and Science; The Story of Bergeron's Accidental Discovery of the Precipitation Process' (Virtual)”, Ferdowsi University of Mashhad, May 11, 2021, Iran (Virtual).
- 04- 2019 “What we should know about Climate Change” Education week festival, Haeri Conference Hall, Faculty of Literature and Humanities, Ferdowsi University of Mashhad, April 28, Mashhad, Iran.
- 04- 2019 “How Weather Forecast and Climate Prediction work?” Education Week Festival, Haeri Conference Hall, Faculty of Literature and Humanities, Ferdowsi University of Mashhad, April 28, Mashhad, Iran.
- 04- 2019 “Extreme precipitation of Nourouz 2019 over Iran; A Meteorological and Climatological Overview” in an assembly for investigation of Physical and social Aspects of Nourouz 2019 Flash Floods, Haeri Conference Hall, Faculty of Literature and Humanities, Ferdowsi University of Mashhad, April 09, Mashhad, Iran.
- 01- 2019 “Types of Dust Storms over the Middle East; An Analysis on Dust Storms Structure” in a Scientific session on dust events over Western Asia and their impacts, Persian Gulf University, January 27, Bushehr, Iran.
- 10- 2017 “The Role of Zagros Mountains in the formation and evolution of Shamal wind and its Induced dust events over the Middle East”, 5th National Meeting of Iranian Association of Geomorphology, October 18, 2017, Ferdowsi University of Mashhad, Mashhad, Iran.
- 12- 2017 “Climate Change, Concerns and Challenges”. Department of Geography, Ferdowsi University of Mashhad, December 04, Mashhad, Iran.
- 12-2016 “A Review on the structure of Limited Area Models (LAMs) and their applications in the climate studies”, Faculty of Geography and Environmental Sciences, Sistan and Balochistan University, December 07, Research Week 2016, Zahedan, Iran.
- 02- 2016 “El Niño phenomenon and its influence on the occurrence of climate anomalies in the Middle East and Iran”. Department of Geography, Ferdowsi University of Mashhad, February 29, Mashhad, Iran.
- 01-2015 “The Nature and Structure of Atmospheric Pressure Systems”. Ministry of Education, Mashhad-district 4, High School Geography Teachers, January 11, Mashhad, Iran.
- 01-2015 “The Nature and Structure of Atmospheric Pressure Systems”. Ministry of Education, Mashhad-district 2, High School Geography Teachers, January 01, Mashhad, Iran.
- 12- 2014 “The Temperature Inversion & Atmospheric Stability and Instability”. Dept. of Geography,

- Ferdowsi University of Mashhad, December 02, Mashhad, Iran.
- 12- 2013 "The Role of Mountain Waves and Foehn Event in the occurrence of Extensive Forest-fires in the North of Iran; A Meso-scale approach". Research Week, Dept. of Geography, Ferdowsi University of Mashhad, December 17, (Research Week 2013), Mashhad, Iran.
- 05-2013 "The Structure of Summertime Atmospheric Circulation over Southwest Asia; A New Fundamental Theory". The First National Conference on Climatology of Iran, May 21, Graduate of the University of Advanced Technology, Kerman, Iran. (Keynote Speaker)
- 12-2012 "The nature and structure of Sistan Wind". Research Week, Dept. of Geography, Ferdowsi University of Mashhad, December 18, (Research Week 2012), Mashhad, Iran.
- 12-2012 "The nature and structure of Sistan Wind; Investigating the formation, evolution and Consistency of Low Level Jets in the eastern Iran". Faculty of Geography and Environmental Sciences, Research Week 2012, December 12, Sistan and Balochestan University, Zahedan, Iran.
- 10-2012 "Open Discussion on Natural Hazards". Department of Geography, Ferdowsi University of Mashhad, October 09, International Day for Natural Disaster Reduction, Mashhad, Iran.
- 12-2011 "Dynamical Analysis of the occurrence of dust storms over the Middle East". Special Panel on dust events in Iran, School of Agriculture, Shiraz University, December 28, Shiraz, Iran.
- 12-2011 "The role of regional-scale atmospheric circulation on the occurrence of dust storms over the Middle East". School of Natural Resources and Environment, Ferdowsi University of Mashhad, Research Week 2011, December 17, Mashhad, Iran.
- 11-2011 "The role of regional atmospheric circulation over the Middle East on the occurrence of dust storms in southwest Iran; Dynamical analysis and regional climate modeling,". 14th National Conference on Environmental Health, November 1-3, Yazd Shahid Sadoughi University of Medical Sciences, Yazd, Iran. (Keynote Speaker)
- 10-2011 "The Mechanism of Dust Storms Occurrence in Southwest Iran". Geography Department, Ferdowsi University of Mashhad, October 13, (International Day for Natural Disaster Reduction), Mashhad, Iran.
- 06-2011 "The role of low-level atmospheric circulation over Middle East on the occurrence of dust storms in southwest Iran, Iran/Iraq joint training program Environmental Management of Dust and Sand Storm and Combat Desertification, Khuzestan Environmental Research Center, Department of Environment, June 18-22, Ahvaz, Iran. (Keynote Speaker)
- 12-2010 "Does Indian Monsoon Control Iran Summer Climate?" Geography Department, Ferdowsi University of Mashhad, December 29, (Research Week 2010), Mashhad, Iran.
- 11-2010 "Investigating the Structure of Summertime Atmospheric Circulation over Southwest Asia". Climatological Research Institute (CRI) and National Center of Climatology (NCC), November 1, Mashhad, Iran.
- 01-2008 "Atmospheric Circulation over Iran and Its Effect on Regional Scale Precipitation". Babol Geography Teachers Society, January 2, Babol, Mazandaran, Iran
- 01-2007 "The Nature of Atmospheric General Circulation". Babol Geography Teachers Society, January 10, Babol, Mazandaran, Iran
- 12-2006 "Concept of "Change" in Climatology and Causes of Global Climate Change". Tabarestan Institute of Higher Education, December 13, Chalous, Iran.
- 05-2006 "Ozone Depletion and Its Relation to Stratospheric Circulation". Tabarestan Institute of Higher Education, May 3, Chalous, Iran
- 11-2004 "Classification of Atmospheric Pressure Centers". Geography and Geology Teachers, Ministry of Education, Tehran-district 17, November 15, Iran.

WORKSHOPS

- 11 – 2023 “A Webinar on the El Niño Phenomenon and its Effects on Iran's Climate 'With Emphasis on Autumn 2023'”, Geography Teachers Training Group Across the Country, Education Organization of Mazandaran Province, November 28, 2023, Iran (Instructor).
- 10 – 2021 “Educational Workshop on Examining Climatic Concepts in High-School Geography Textbooks; Second Session (Virtual)”, Association of Geography Teachers of Khorasan Razavi, October 27, 2021, Mashhad, Iran (Instructor).
- 09 – 2021 “Workshop on Examining Climatic Concepts in High-School Geography Textbooks”, Association of Geography Teachers of Khorasan Razavi, September 15, 2021, Mashhad, Iran (Instructor).
- 02 – 2021 “Workshop on Regional Climate Modeling RegCM4 (Virtual)”, National Institute for Oceanography and Atmospheric Science, January 26 & 28, 2021, Tehran, Iran (Instructor).
- 11 – 2020 “Workshop on Climate Modeling, Climate Scenarios, and the Future of Cities (Virtual)”, Ferdowsi University of Mashhad, 9th National and 2nd International Conference on Urban Planning and Management, November 18, 2020, Mashhad, Iran (Instructor).
- 12 – 2019 “Physical Explanation of Climate Change in the Twenty-First Century; A Review of Recent Theorizing”, Ferdowsi University of Mashhad, Haeri Conference Hall, Faculty of Letters and Humanities, December 15, 2019, Mashhad, Iran (Instructor).
- 11 – 2019 “Workshop on Arctic Amplification and its Connection to Changes in the Occurrence of Extreme Climate Events and Planetary Rossby Wave Activity”, 6th International-Regional Conference on Climate Change, National Library of Iran, November 18, 2019, Tehran, Iran (Instructor).
- 09 – 2019 “Five-Day Introductory Course on Tropical Atmospheric Circulation and Their Potential Effects on Iran's Climate”, General Directorate of Meteorology of Khorasan Razavi, September 14-18, 2019, Mashhad, Iran (Instructor).
- 05-2017 “Regional Climate Modeling (RegCM4) Workshop”, Department of Geography, Ferdowsi University of Mashhad, May 24-25, Mashhad, Iran. (Instructor)
- 12-2016 “Gridded data processing using GrADS; A Tutorial”, Department of Geography, Ferdowsi University of Mashhad, Dec 14, Mashhad, Iran. (Instructor)
- 05-2016 “Atmospheric data processing using a Climate Data Operator(CDO) Package”, Department of Geography, Ferdowsi University of Mashhad, May 23, Mashhad, Iran. (Instructor)
- 05-2016 “A workshop on the Weather Research and Forecasting (WRF) Model”, Department of Geography, Ferdowsi University of Mashhad, May 17-18, Mashhad, Iran. (Instructor)
- 11-2015 “Regional Climate Modeling (RegCM4) Workshop”, Department of Geography, Ferdowsi University of Mashhad, November 03 -04, Mashhad, Iran. (Instructor)
- 05-2015 “A workshop on dynamical downscaling and its application in climate studies”, First National Congress on Iran's Irrigation and Drainage, Iranian Association of Irrigation and Drainage, May 12, Ferdowsi University of Mashhad, Mashhad, Iran. (Instructor)
- 12-2014 “Regional Climate Modeling Workshop; Examples from Middle East Climate”, Faculty of Geographical Sciences and Planning, University of Isfahan, December 16, Mashhad, Iran. (Instructor)
- 11-2013 “Regional Climate Modeling (RegCM4) Workshop”, Department of Geography, Ferdowsi University of Mashhad, November 05 -06, Mashhad, Iran. (Instructor)
- 11-2012 “Regional Climate Modeling (RegCM4) Workshop”, Department of Geography, University of Tehran, November 07-08, Tehran. (Instructor)
- 10-2012 “Gridded data processing using GrADS; A Tutorial”, School of Geographical Sciences, Kharazmi University, October 13, Tehran. (Instructor)

- 05-2012 “Gridded data processing using GrADS; A Tutorial”, School of Geography and Environmental Sciences, Hakim Sabzevari University, May 01, Sabzevar. (Instructor)
- 11-2011 “Regional Climate Modeling (RegCM4) Workshop” A Tutorial, Geography Department, Ferdowsi University of Mashhad, November 9-10, Mashhad, Iran. (Instructor)
- 09-2008 “The Grid Analysis and Display System (GrADS) Workshop”: (GrADS Applications - Scripting in GrADS), Faculty of Geography, University of Tehran, September 26, Tehran, Iran. (Instructor)

AWARDS AND HONORS

EDUCATION:

- 2020 Top Head of Department, Faculty of Letters and Humanities, Ferdowsi University of Mashhad, May 2020.
- 2020 Top Faculty Member in Education, Department of Geography, Ferdowsi University of Mashhad, Faculty of Letters and Humanities, May 2020.
- 2015 Advanced School and Workshop on Sub-seasonal to Seasonal (S2S) Prediction and Application to Drought Prediction, November 23 - December 04, Trieste, Italy (Awarded Program hosted by The Abdus Salam International Center for Theoretical Physics (ICTP) and supported by WWRP and WMO).
- 2015 Storm Tracks Meeting and Workshop, Stratosphere-Troposphere Processes and their Role in Climate (SPARC), August 24-28, Grindelwald, Switzerland (Awarded Program hosted by SPARC and supported by WCRP and WMO).
- 2012 Climate Variability and Seasonal Prediction Training Program 2012, APEC Climate Center (APCC), November 19- 30, Busan, Republic of Korea. (Awarded Program hosted by APCC)
- 2001 Top Student (MA), Tehran Islamic Azad University, Tehran, Iran

RESEARCH:

- 2021 Top Researcher of the Faculty of Letters and Humanities, Ferdowsi University of Mashhad.
- 2013-2014 The investigation of atmospheric circulation patterns during wet and dry spells over Southern coasts of the Caspian Sea. Principal Investigator (Co-Investigator: Dr. A., Zarrin); Funded by Ferdowsi University of Mashhad, Iran.
- 2012-2013 Modeling the south Foehn event in the Leeward side of Alborz Mountains. Principal Investigator (Co-Investigators: Soltanzadeh, I., Yousefi, Y., Soltani, M., Zarrin, A., Masoompour, J.); funded by Ferdowsi University of Mashhad, Iran.
- 2010-2011 The Effect of Atmospheric Patterns on the occurrence of Mashhad Air pollution. CO-Principal Investigator (Investigator: Sadeghi, S., FUM); funded by Ferdowsi University of Mashhad, Iran.
- 2007-2008 Determining the Synoptic Pattern of Winter Heavy Precipitation in Southern Coasts of Caspian Sea. Principal Investigator (Co-Investigators: Zarrin, A., Tabarestan Institute of Higher Education, and Janbaz Ghobadi., G., Noor Azad University); funded by Noor Azad University, Mazandaran, Iran.
- 2007 Excellence in Graduate Research Award, Kharazmi University, Tehran, Iran.

PROFESSIONAL ACTIVITIES

SOCIETY MEMBERSHIPS:

- 2012 – Member, American Meteorological Society
- 2011 – 2012 Regional Director (Khorasan Razavi), Iranian Association of Climatology
- 2010 – 2014 Member, Iranian Association of Climatology

2008 –	Member, Association of American Geographers
2014 – 2016	Department of Geography, Member of Graduate Council, FUM.
2014 – 2015	Member of CCI and GFCS national committee, Commission for Climatology (CCI) and Global Framework for Climate Services (GFCS),
2016 – 2018	Consultant member of Climatology commission, Ministry of Science, Research and Technology, Higher Education Planning Office, Geographical Science group.
2018	General Chair of the Second National Conference on Climatology of Iran (SNCCI)
2018 – 2020	Department of Geography, Graduate Council Chair, FUM.
2018 – 2020	Department of Geography, Member of Education committee, FUM.
2018 – 2020	Head of Dept. of Geography, Ferdowsi University of Mashhad (FUM)
2019 – 2021	Consultant member of Climatology commission, Ministry of Science, Research and Technology, Higher Education Planning Office, Geographical Science group.

MEMBER OF THE STEERING COMMITTEE:

05 -2013	The First National Conference on Climatology of Iran, May 21, Graduate University of Advanced Technology, Kerman, Iran.
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CONFERENCE COMMITTEE MEMBER:

11-2023	Member of the Scientific Committee, 3rd International and 10th National Conference on Urban Planning and Management, November 15-16, 2023, Ferdowsi University of Mashhad in collaboration with the Islamic Council of Mashhad and Mashhad Municipality, Mashhad, Iran.
04-2021	Member of the Scientific Committee, 2nd International Conference on Lut Desert with a Tourism Approach, April 29-30, 2021, University of Sistan and Baluchestan, Zahedan, Iran.
11-2020	Member of the Scientific Committee, 2nd International and 9th National Conference on Urban Planning and Management, November 18-19, 2020, Ferdowsi University of Mashhad in collaboration with the Islamic Council of Mashhad and Mashhad Municipality, Mashhad, Iran.
11-2019	Member of the Scientific Committee, 6th Regional Conference on Climate Change, November 18-19, 2019, Iran Meteorological Organization, National Library of Iran, Tehran, Iran.
2018-present	Member of the Water and Environment Research Institute, Ferdowsi University of Mashhad, Since May 2018.
04 - 2017	1 st International and 8 th National Conference on Urban Planning and Management, Mashhad 2017, April 25-26, Ferdowsi University of Mashhad, Mashhad, Iran.
11 - 2015	7 th National Conference on Urban Planning and Management, November 11-12, Ferdowsi University of Mashhad, Mashhad, Iran.
05 - 2015	1 st National Congress on Iran's Irrigation and Drainage, Iranian Association of Irrigation and Drainage, Ferdowsi University of Mashhad, Mashhad, Iran.
11 - 2014	6 th National Conference on Urban Planning and Management, November 12-13, Ferdowsi University of Mashhad, Mashhad, Iran.
10 - 2014	The Second National Conference on Climate Change and Food Security, October 9, Research Institute of Shakhsh Pajooh, Isfahan, Iran.
10 – 2013	6 th Congress of Iranian Association of Geopolitics, October 29-30, Ferdowsi University of Mashhad, Mashhad, Iran.
05 – 2012	First International Forum on Natural Airborne Dust in Iran, May 23-25, Kermanshah University of Medical Sciences, Kermanshah, Iran.

- 02 – 2012 The 1st International Congress on Dust Haze and Combating it's Adverse Effects, February 15-17, Khouzestan, Ahvaz, Iran.
- 11 - 2011 14th National Conference on Environmental Health, November 1-3, Yazd Shahid Sadoughi University of Medical Sciences, Yazd, Iran.

MEMBER OF REFEREES COMMITTEE:

- 2023 Scientific Advisor and Expert for Preparing the Terms of Reference and Fees for the Study Project on the Future Climate of Mashhad City with Emphasis on Applied Aspects in Urban Management, Mashhad Municipality.
- 2019 Supervisor of the Air Pollutant Emission Inventory Project for Mashhad City, Mashhad Municipality.
- 2019 Supervisor of the Project to Identify Dust Sources in Khorasan Razavi Province, General Directorate of Khorasan Razavi Province.
- 2018 Supervisor of the Meteorological Modeling of Air Pollution in Mashhad City Project, Mashhad Municipality.
- 04 - 2017 1st International and 8th National Conference on Urban Planning and Management, Mashhad 2017, April 25-26, Ferdowsi University of Mashhad, Mashhad, Iran.
- 11 - 2015 7th National Conference on Urban Planning and Management, November 11-12, Ferdowsi University of Mashhad, Mashhad, Iran.
- 05 - 2015 1st National Congress on Iran's Irrigation and Drainage, Iranian Association of Irrigation and Drainage, Ferdowsi University of Mashhad, Mashhad, Iran.
- 11 - 2014 6th National Conference on Urban Planning and Management, November 12-13, Ferdowsi University of Mashhad, Mashhad, Iran.
- 10 – 2013 6th Congress of Iranian Association of Geopolitics, October 29-30, Ferdowsi University of Mashhad, Mashhad, Iran.
- 05 -2013 1st National Conference on Climatology of Iran, May 21, Graduate University of Advanced Technology, Kerman, Iran.

JOURNAL REVIEWS:

- 2019- Asia-Pacific Journal of Atmospheric Sciences
- 2021- Theoretical and Applied Climatology (TAAC)
- 2021- Pure and Applied Geophysics
- 2021- Natural Hazards (NAH)
- 2023- Weather
- 2013- Physical Geography Research Quarterly (PGRQ) – In Persian
- 2012- Geography and Environmental Hazards (GEH) – In Persian
- 2011- Journal of Geographical Sciences (JGS) – In Persian
- 2011- Journal of Climate Research (JCR) – In Persian
- 2011- Iranian Journal of Geophysics (IJG) – In Persian
- 2010- Journal of Geographical Studies of Arid Environments - In Persian
- 2010- Journal of the Earth and Space Physics (JESP) - In Persian
- 2010- Geography and Regional Development (GRD) - In Persian
- 2010- Caspian Journal of Environmental Sciences (CJES)
- 2009- Meteorology and Atmospheric Physics (MAP)
- 2005 IPCC, *Safeguarding the Ozone Layer and the Global Climate System*, Cambridge University Press, Chapter 1; Ozone and Climate: A Review of Interconnections.

THESIS ADVISOR

- M. Keyhani** (M.A., Feb 2025): Synoptic and Dynamic Analysis of the Structure, Characteristics, and Nature of the Turkmenistan Anticyclone.
- B. Taheri Aval-Shahri** (M.A., Feb 2025): Investigating the Statistical-Physical Characteristics of Fog Occurrence in Selected Airports of the Country.
- B. Afroogh** (M.A., Sep 2024): Analysis of Extreme Precipitation Events in Selected Stations of Eastern Iran in the Past Six Decades.
- M. Zargari** (Ph.D., Mar 2024): A Comparative Study of Urban Heat Islands in Iranian Metropolitan Cities (Co-supervised with Dr. Alireza Entezari).
- Z. Nazari** (M.A., Feb 2024): Climatic Analysis of Cold Spells in Afghanistan.
- S. Parsa** (M.A., Sep 2024): Investigating the Historical Variability and Future Changes of Extreme Precipitation in Afghanistan Based on the CMIP6 Multi-Model Ensemble Approach.
- E. Khordehdan** (M.A., Sep 2024): Spatio-Temporal Analysis of Land Surface Maximum Temperature and Identification of Hot Spots in Iran Using Satellite Data.
- M. Mohammadabadi** (M.A., Sep 2024): Investigating the Characteristics of Iran's Heat Waves to Explain the Dynamic-Synoptic Mechanism of Extreme Heat Waves.
- F. Mohammadabadi** (M.A., Sep 2024): Synoptic Analysis of the Role of Indian Monsoon Lows (IMD) on Summer Precipitation in Southeastern Iran.
- F. Danehchin** (M.A., Feb 2024): Designing a Climatic Index for Precipitation in the Southern Coasts of the Caspian Sea.
- E. Sarhan** (M.A., Sep 2023): Spatio-Temporal Analysis of Land Surface Minimum Temperature in Iran Using Satellite Data.
- N. Asadi Rahimbeigi** (M.A., Mar 2022): Probabilistic Prediction of Extreme Climate Event Occurrence in Iran up to 2030 by Applying DCP Model Ensembles.
- A. Beskabadi** (M.A., Sep 2021): Investigating the Arctic Warm-Eurasian Cold Dipole Phenomenon and its Effects on Precipitation and Temperature in the Middle East.
- M. Hassanzadeh** (M.A., Dec 2018): Investigating the role of split and displacement Stratospheric Polar vortex on the occurrence of precipitation over the Middle East.
- M. Afrouzeh** (M.A., Sep 2018): Analysis of Rossby waves activity in the northern hemisphere and its relation with spatio-temporal variations of precipitation over the Middle East. (Based on Arctic Amplification Theory)
- E. Esmaeili Saghandi** (M.A., Feb 2018): Identification of heavy rain generating low pressure systems Over the Northwest of Iran: A Synoptic Analysis.
- R. Esmaeili** (M.A., Sep 2017): The Structure of Temperature Inversions in the city of Mashhad.
- M. Karimi** (M.A., Jun 2017): Improvement of an algorithm to monitor urban air pollution in Tehran Metropolis
- L. Shadkam** (M.A., Jan 2017): A study on the occurrence of precipitation on the Southern coast of the Caspian Sea, focused on total energy budget of Caspian Sea.
- S. Hasani** (M.A., Sep 2016): Analysis of the Nature and Structure of Summertime Shamal Wind and its Relation to Dust Storm Occurrence in the Southwest of Iran; A numerical modeling.
- M. Zargari** (M.A., Sep 2015): Numerical simulation of high level air pollution episodes in the city of Tehran.
- M. Noorouzian** (M.A., Sep 2015): The Structure of Temperature Inversions in the city of Tehran.
- M.S. Gerami** (M.A., Sep 2015): Spring precipitation in North-west of Iran; A research on mechanisms.
- M. Mir-drikvandi** (M.A., Jan 2015): The relationship between South Asian summer Monsoon onset

and regional-scale atmospheric circulation over the Middle East.

- A. Safari** (M.A., Jan 2014): Recognition of main sources of Aeolian dust in Southwest of Iran.
- S. Kamali** (M.A., Feb 2013): Investigating the structure of dust storms in Sistan Basin using a Regional Climate model (RegCM4).
- M. Mohammadyarian** (M.A., Feb 2012): Zonation of Atmospheric Hazards in the Great Khorasan.
- M. Karkhaneh** (M.A., Jan 2012): The Role of Caspian Sea on the Occurrence of Precipitation In the Caspian Sea Region; A Regional Climate Modeling.
- A.S. Bayat** (M.A., Jan 2012): The Study of Alborz Mountain's Role on Precipitation Distribution in the Southern Coasts of Caspian Sea.
- S. Jafari** (M.A., Dec 2011): The Study of Atmospheric Circulation Patterns related to Dust Storm Events in Southwest of Iran using a Regional Climate Model (RegCM4).

THESIS READER / CO-ADVISOR

- A. Taziki** (M.A., Mar 2020): Investigating the Relationship Between Iran's Precipitation and Indian Ocean Sea Surface Temperature Under Climate Change Scenarios.
- M. Rostamian** (M.A., Mar 2021): Investigating Boundary Layer Changes During Pollution Events in Mashhad City.
- N. Ebrahimi** (M.A., Nov 2022): Multi-Model Projection of Extreme Precipitation in the Lake Urmia Basin with Emphasis on Climate Risk Management (CRM).
- M.R. Jangi** (M.A., Sep 2023): Projection of Iran's Heat Waves with Emphasis on Providing a Climate Risk Management (CRM) Program.
- M. Soleimani Baygi** (M.A., Feb 2025): Investigating Historical Variability and Projection of Iran's Anticyclone Changes in the Mid-Troposphere Using CMIP6 Models.
- D. Yazdani** (M.A., Ongoing): Investigating Temperature in Iran Under Climate Forcings by Comparing the Fifth and Sixth Phases of the Coupled Model Intercomparison Project (CMIP).
- N. Naseri** (M.A., Mar 2018): The influence of Blocking Systems on Precipitation in Iran.
- M. Farashiani** (M.A., Dec 2017): An Assessment study on the impact of Global Warming on the physical infrastructure of Air transportation system in Iran (Mashhad International Airport).
- A. Farooghi** (M.A., Jan 2018): Cyclone tracking over Iran using an objective approach.
- N. Saleh-Abadi** (M.A., Jan 2018): Investigating the relation between seasonal variability of SST over the Indian Ocean and the occurrence of dust events over the Asia South West.
- N. Hajian** (M.A., Sep 2017): The role of diversity of economic activities in vulnerability and resilience of Rural households in the face of drought.
- K. Azarm** (Ph.D., Jan 2017): Climatology of convective precipitation in the Northwest of Iran.
- M. Nazari** (M.A., Feb 2016): The role of Arabian Anticyclone on the occurrence of drought in the west of Iran.
- F. Karami** (M.A., Sep 2015): A Study on temporal variation of precipitation in the city of Mashhad.
- J. Gholipour** (M.S., Jul 2015): Determination of the beginning of summer season in the Middle East based on abrupt northward jump of Subtropical Jetstream.
- M. Shafieenia** (M.A., Sep 2014): The National Security and Climate Change.
- T. Soltani** (Ph.D., Sep 2014): Synoptic Analysis of Air pollution in Mashhad.
- M. Hamidianpour** (Ph.D., Jan 2014): The Structure and Nature of Sistan Wind.

M. Ahmadi (Ph.D., Dec 2013): Teleconnection Indices and Precipitation over Iran.

A. Ahmadianrad (M.A., Oct 2013): Investigation of tropical storms over the Arabian Sea.

Z. Ahmadi (M.A., Sep 2013): Investigation of dust events in South Khorasan province.

L. Golzari-Partoo (M.A., Dec2012): Lake Oormieh dying in a changing climate (A regional-scale simulation)

H. Tavakoli (M.A., Feb 2012): The Investigation of Wind-chill events in North-east of Iran.

HOST OF VISITING SCHOLARS

- **K. Azarm** (Ph.D. Visiting Scholar, 2015-2016): Climatology, University of Tabriz.
- **S. Zand-Karimi** (Ph.D. Visiting Scholar, 2019-2020): Climatology, University of Zanjan.
- **V. Sayyad** (Ph.D. Visiting Scholar, 2020-2021): Climatology, Kharazmi University.
- **E. Kadkhoda** (Ph.D. Visiting Scholar, 2022-2023): Climatology, University of Yazd.

HOBBIES

Swimming, Volleyball, Yoga, Badminton, Hiking, Martial Arts, Persian Calligraphy, Photography.