

Eslam Javadnia

PERSONAL INFORMATION

Place of Birth: Talesh, Iran

Nationality: Iranian

Date of Birth: April 9, 1981

Assistant Professor

Room C 130, Department of Surveying, Faculty of Engineering, Zanzan University, P.O.Box 313, Zanzan, IRAN,

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EDUCATION

PhD

Remote Sensing (RS)

2012 – 2017

Faculty of Geomatics and Geodesy Engineering, K.N. Toosi University of Technology, Tehran, Iran.

Thesis: “Estimation of surface shortwave radiation components using MODIS data”.

Guest Researcher at Malmo University, Swedem, October 2015-May 2016

M.Sc.

Remote Sensing (RS)

September 2005 – 2007

Faculty of Geomatics and Geodesy Engineering, K.N. Toosi University of Technology, Tehran, Iran

Thesis: “Improvement NDVI Indices for Drought Predicting Using Modis And Aster Imageries”.

B.Sc.

Surveying (Geomatics and Geodesy) Engineering

September 2000 – 2004

Faculty of Civil Engineering, University of Tabriz , Tabriz,
Iran

RESEARCH INTERESTS

- Artificial Intelligence in Remote Sensing and Geosciences
- Quantitative estimation of atmosphere (water vapor, air temperature, precipitation) and land surface variables from satellite remote sensing
- Remote Sensing of Aerosol and atmospheric pollutions
- Estimation of subsidence using radar interferometry technique
- Radar image processing
- Processing and classification of satellite images
- Google Earth Engine (GEE) for remote sensing analysis
- Digital Image Processing (DIP) using Python

HONORS AND AWARDS

- Faculty Member of Zanjan University (from Fall 2009)
Web Page on ZNU website :
<http://www.znu.ac.ir/modules.php?name=teachers&func=viewteacher&tid=462>
- As a distinguished paper in the National Cartographic Conference (NCC) on Remote Sensing section on 2009.

PUBLICATIONS

- Angouti, R., Javadnia, E., Aghayari, J., & Talebi, S. (2026). Estimating Daily Air Temperature in Zanjan Province Using MODIS Data and Random Forest: A Seasonal and Spatial Analysis (2018–2022). *Advances in Space Research*.
- Babaei, B. , Dousti, R. , Javadnia, E. , Kiaei, S. , Karami, H. and Abdi, A. H. (2025). Monitoring methane emissions in Iran using Sentinel-P5 satellite data: Analyzing emission trends and identifying critical sources (2019-2023). *Journal of Remote Sensing and Geoinformation Research*, 3(2), 333-344. doi: 10.22061/jrsgr.2025.12508.1109
- Ghobadi, K. , **Javadnia, E.** , Jalili, H. and Zandkarimi, A. (2024). Calibration of MODIS Water vapor data using multi-Layer perceptron neural network and radiosonde observations . *Journal of Remote Sensing and Geoinformation Research*, 3(1), 1-14. doi: 10.22061/jrsgr.2025.11605.1090
- Bagherinia, M., Bodaghpour, S., Karimi, N., **Javadnia, E.**, Bilal, M., & Mhawish, A. (2024). ' An intercomparison of SEMARA high-resolution AOD and MODIS operational AODs'. *Atmospheric Pollution Research*, 15(3), 102023.
- Feizollahi, A., **Javadnia, E.** Investigating of floods monitoring using GRACE and TRMM observations in the West and South West of Iran. *Iran-Water Resources Research*, 2023; 19(1): 1-21.
- **Javadnia, E.**, Zahedi, N. (2022). 'Investigation impact of massive dust storm on aerosol optical, physical, radiative properties over Southwest Iran', *Earth Observation and Geomatics Engineering*, 6(1), pp.

- Ghorbani Z, Khosravi A, Maghsoudi Y, Mojtahedi FF, **Javadnia E**, Nazari A. Use of InSAR data for measuring land subsidence induced by groundwater withdrawal and climate change in Ardabil Plain, Iran. *Scientific Reports*. 2022 Aug 17;12(1):13998.
- **Javadnia, E.**, Zahedi, N. Investigation impact of massive dust storm on aerosol optical, physical, radiative properties over Southwest Iran. *Earth Observation and Geomatics Engineering*, 2022; 6(1)
- **Javadnia E**, Beygi N, Abbasy S. Comparison and Evaluation of MODIS and Sun photometer Integrated water vapor using GPS observations at IASBS AERONET site (Zanjan, Iran). *Journal of Geomatics Science and Technology*. 2021 Sep 10;11(1):117-28.
- **Javadnia E**. Development and evaluation of Downward Surface Shortwave Radiation based on SARA AOD using MODIS data under cloud-free conditions. *Engineering Journal of Geospatial Information Technology*. 2018 Dec 10;6(3):139-62.
- **Eslam Javadnia**, Ali Akbar Abkar, Per Schubert. A MODIS-based modeling scheme for the estimation of downward surface shortwave radiation under cloud-free conditions *Arabian Journal of Geosciences* (2017).
- **Eslam Javadnia**, Ali Akbar Abkar and Per Schubert. Estimation of High-Resolution Surface Shortwave Radiative Fluxes Using SARA AOD over the Southern Great Plains *Remote Sensing Vol. 10.3390/rs Issue 1146* (2017).
- **Javadnia E**, Abkar A A. Effect of Dust Storm on Optical and Radiative Properties of Aerosols Over Middle East. *JGST*. 2017; 7 (1) :157-173
- **Javadnia, E.**, Mobasheri , M. R. and G. Kamali. MODIS NDVI Quality Enhancement Using ASTER Images. *J. Agr. Sci. Tech*. 2009. Vol. 11: 549-558.

International Conferences:

- Zahra Ghorbani, Gholamreza Joodaki, **Eslam Javadnia**, Land Subsidence in the Ardabil Plain using SBAS-Insar Technique, 3rd Trigger International Conference (8-10 October 2019, IASBS, Zanjan, Iran).
- **Javadnia Eslam**, Mobasheri Mohammad Reza, “Quality Improvement NDVI Indices for Drought Predicting Using Integration High And Low resolution Imageries”, Map Asia Conference, Kuala Lumpur, Malaysia, 2007.
- **Javadnia Eslam**, Saei Mousa , Analysis of the methods for Drought Assessment Using new remote sensing techniques. First international conference of soil and roots engineering relationship (LANDCON1005), Ardebil Province, Iran, 2010.

Supervised Theses

- Monitoring land subsidence in the Ardabil Plain using radar interferometry (Defense Year: 1398/2019)
- Evaluation of precipitable water vapor derived from satellite sensors using ground-based GPS and sunphotometer measurements at AERONET sites (Defense Year: 1399/2020)
- Validation of precipitable water vapor obtained from MODIS and Sentinel sensors using GPS observations (Defense Year: 1400/2021)
- Investigation of land subsidence along railway lines using radar interferometry (Defense Year: 1400/2021)
- Investigation and monitoring of floods using GRACE and MODIS satellite observations and integration with hydrological models in Iran (Defense Year: 1401/2022)
- Validation of precipitable water vapor derived from the AIRS satellite sensor using GPS observations (Defense Year: 1401/2022)
- Validation of columnar water vapor from the MODIS MAIAC algorithm using ground-based measurements at AERONET stations (Defense Year: 1401/2022)
- Improving the accuracy of MODIS water vapor data using artificial neural network algorithms and ground-based data (Defense Year: 1402/2023)
- Using machine learning approaches to improve the accuracy of precipitable water vapor from the MODIS sensor (Defense Year: 1403/2024)
- Calculation of land surface temperature under cloudy conditions using MODIS data and machine learning (Case Study: Zanzan Province) (Ongoing...)
- Groundwater potential assessment using spatial multi-criteria decision-making methods (Case Study: Sistan and Baluchestan Province) (Defense Year: 1403/2024)
- Feasibility study of methane emission measurement using remote sensing satellites in the Middle East region (Ongoing...)
- Estimation of maximum and minimum air temperature using satellite-based land surface temperature data and machine learning methods (Case Study: Zanzan Province) (Defense Year: 1403/2024)
- Air temperature estimation using machine learning techniques and satellite remote sensing data (Case Study: Zanzan Province) (Defense Year: 1403/2024)
- Using a multi-criteria evaluation approach for prioritizing areas for forest conservation using geographic information systems and remote sensing (Ongoing...)

Proficient Programs and Software

- Google Earth Engine web platform,
- ENVI software, ARC GIS software, QGIS software, SNAP software
- Python programming, MATLAB programming