

Alireza Hamoudzadeh

✉ alireza.hamoudzadeh@uniroma1.it
🌐 University profile

🌐 @Linkedin

📄 @ResearchGate

🆔 0000-0002-0550-2179

Education

- 2022 – 2025 **Ph.D. of Infrastructure and Transportation** at Sapienza University of Rome.
Thesis title: *Earth Observation big data exploitation for water reservoirs and glaciers continuous monitoring.*
- 2018 – 2021 **M.Sc. of Geographic Information Systems (GIS)** at Shahid Rajaei University.
Thesis title: *User Behavior Analysis Based on Spatial Background.*
- 2014 – 2018 **B.Sc. Of Geomatics Engineering** at Jundi-Shapur University of Technology.

Research Publications

Journal Articles

- 1 A. Hamoudzadeh, R. Ravanelli, and M. G. Crespi, "Large-scale monitoring of inland water surface levels with gedi data: An operational cloud-based approach in google earth engine," 2024, Under Review.
- 2 A. Hamoudzadeh, R. Ravanelli, and M. Crespi, "SWOT Level 2 Lake Single-Pass Product: The L2_HR_LakeSP Data Preliminary Analysis for Water Level Monitoring," *Remote Sensing*, vol. 16, no. 7, 2024, ISSN: 2072-4292. [DOI: 10.3390/rs16071244.](#)
- 3 A. Hamoudzadeh, R. Ravanelli, and M. Crespi, "GEDI data within google earth engine: Preliminary analysis of a resource for inland surface water monitoring," *The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences*, vol. XLVIII-M-1-2023, pp. 131–136, 2023. [DOI: 10.5194/isprs-archives-XLVIII-M-1-2023-131-2023.](#)
- 4 A. Hamoudzadeh and S. Behzadi, "Evaluation of effective factors on air pollution using optimized cellular automata. a case study of tehran," *Journal of Engineering Research*, 2021. [DOI: 10.36909/jer.13749.](#)
- 5 A. Hamoudzadeh and S. Behzadi, "Predicting user's next location using machine learning algorithms," *Spatial Information Research*, vol. 29, no. 3, pp. 379–387, 2021. [DOI: 10.1007/s41324-020-00358-2.](#)

Conference Proceedings

- 1 A. Hamoudzadeh, R. Ravanelli, and M. Crespi, "Glacier monitoring using GEDI data in google earth engine: Outlier removal and accuracy assessment," 2024. [DOI: 10.5194/egusphere-egu24-10176.](#)
- 2 A. Hamoudzadeh, R. Ravanelli, and M. G. Crespi, "GEDI data within google earth engine: Potentials and analysis for inland surface water monitoring," in *European Geosciences Union*, 2023. [DOI: 10.5194/egusphere-egu23-15083.](#)
- 3 A. Hamoudzadeh, R. Ravanelli, and M. G. Crespi, "Italian lakes water level monitoring through GEDI altimetric data within google earth engine: A preliminary analysis," in *XXVIII General Assembly of the International Union of Geodesy and Geophysics (IUGG) (Berlin 2023).*, 2023. [DOI: 10.57757/IUGG23-3886.](#)
- 4 A. Hamoudzadeh, R. Ravanelli, and M. G. Crespi, "Global monitoring of inland water surface with GEDI geo big data using google earth engine: Preliminary analysis, potentials and issues," in *Google Summit Geo4Good*, 2022.

- 5 A. Hamoudzadeh, R. Ravanelli, and M. G. Crespi, "Inland water surface global monitoring with GEDI geo big data using google earth engine: Preliminary analysis, potentials, and issues," in *EARSeL Cyprus 2022*, 2022.

Books and Chapters

- 1 L. Ranaldi, A. Hamoudzadeh, F. Bocchino, *et al.*, "Exploring water reservoir dynamics in central italy: A preliminary workflow for cosmo-skymed imagery-based water segmentation," in *Telerilevamento applicato alla gestione delle risorse idriche*, 2024.

Skills

Languages	English: C2, Italian: A2, Persian: Native
Coding	Python, JavaScript, MATLAB, \LaTeX
Databases	SQL, PostgreSQL
Cloud Computing	Google Earth Engine (JS API), Microsoft Planetary Computer
Web Dev	HTML, CSS, JavaScript, Leaflet
Softwares	ArcGIS, ENVI, QGIS, SAGA GIS, PostGIS

Miscellaneous Experience

Awards and Achievements

- 2023 **Second place in 5th Cassini Hackathon**, SAR 4 SAR: Revolutionizing search and rescue operations in the Mediterranean Sea with Sentinel 1 and 2 satellite imagery ([Link](#))
- 2022 **Grant of young researchers**, funded by Sapienza University of Rome.
Doctoral Program fellowship, at the Sapienza University of Rome.

Speaker at national and international congresses and conferences

- 15 - 16 July 2024 - 2GG - 2 Giorni di Geomatica (2GG) - Italy
- 14 - 19 April 2024 - 2024 General Assembly of the European Geosciences Union (EGU)
- 5 - 26 Sept 2023 - 2GG - 2 Giorni di Geomatica (2GG) - Italy
- 10 to 17 of Jul 2023 - The 28th International Union of Geodesy and Geophysics - Germany
- 23 to 28 of Apr 2023 - The 39th International Symposium on Remote Sensing of Environment - Turkey
- 12 to 17 of Sept 2022 - The 41st European Association of Remote Sensing Laboratories - Cyprus
- 09 to 12 of Oct 2023 - Selected for Google Summit - 2023 Geo for Good conference and workshops - San Francisco - USA

Experiences

- Dec 2023 - ongoing **Geomatics for Resilience Against Water Scarcity (GRAW project)** founded by the Italian Space Agency (ASI) - member of the research team of Sapienza University of Rome
- Aug 2021 - Feb 2022 **Special Project Supervisor - GeoDB design - Faam Infrastructure Company**