

Saeid Aminjafari

Ph.D. Candidate in Hydro-Geodesy

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| Affiliation(s) | Department of Physical Geography, Stockholm University Bolin Centre for Climate Research, Stockholm University |
| General info | Date of Birth: 22 Jan 1988 Languages: English (C1), Persian (native), Swedish (B1), Arabic (B1) |
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Education & Research

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| 2019 – 2023 | Ph.D. candidate in Hydro-Geodesy Department of Physical Geography, Stockholm University, Sweden. Thesis title (submitted in June 2023): Monitoring Water Level Availability in Northern Lakes and Deltas from Space: <ul style="list-style-type: none"> Water level estimation in lakes and wetlands using D-InSAR, Radar and laser altimetry, and the combination of both Hydrologic connectivity and water occurrence in deltas and wetlands using Radar and optical remote sensing |
| 2011 - 2014 | M.Sc. in Marine Geodesy School of Surveying and Geospatial Engineering, University of Tehran, Iran. Master's thesis: Dam Deformation Monitoring and Modeling Using Interferometric Synthetic Aperture Radar (InSAR) and Finite Element Analysis (FEA) |
| 2006 - 2010 | B.Sc. in Geomatics Tafresh University, Tafresh, Iran. |

Teaching & Supervision

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| 2020 - 2022 | Advanced Hydrology 7.5 credits (Stockholm University) Teacher assistant in Hydro-Geodesy. In this module, I taught students how to generate interferograms and interpret the fringe patterns relating to hydrologic connectivity and water level changes. I used ISCE software in this course. |
| 2021 - 2021 | Water Management and Pollution, 15 credits (Stockholm University) Teacher assistant in optimization. In this module, students learned how to model the most efficient way to mitigate pollutants' flow in a basin. I used the Pyomo model in this course. |
| 2021 - 2022 | Co-supervision of two Master's students in Hydro-Geodesy (Stockholm University) |

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| 2019 - 2021 | Tellus I – Physical Geography, 15 credits (Stockholm University) The course deals with hydrology, mass movements, rivers and flooding, oceans, coastlines, groundwater, the atmosphere and climate, arid regions, geomorphology, Quaternary geology, and global changes. |
| 2013 - 2018 | InSAR (Doris and StaMPS software), Oceanography, Field surveying operations, Route surveying, MATLAB programming for geomatics students, (National Cartographic Centre of Iran (NCC), Tafresh University, & Daneshpajoohan Institute of higher education) |

Training & Conferences

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| 2021 | Pedagogical training: "Professional development course 1, Teaching and Learning" 7.5 credits (Centre for the Advancement of University Teaching, Stockholm University) |
| 2021 | Geo-computation and machine learning for environmental applications, 7.5 credits (Bolin Centre, Stockholm University) |
| 2020 | Course: "Scientific Writing in English" 1 credit (Stockholm University) |
| 2019 | COMET InSAR training workshop (University of Leeds, UK) |
| 2013 - 2022 | Active participation in many international conferences such as ESA Living Planet Symposium (2013 & 2022), EGU (2020-2022), AGU (2021), Swedish Climate Symposium (2022), and Baltic Sea Science Congress (2019 & 2021). |

Professional Experience

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| 2018 - 2019 | Geophysical marine surveyor, data processor (multibeam echosounder), and cartographer at SEA WORK SURVEY (SWS) EST, Tehran, Iran. I worked on offshore rigs, platforms, and other vessels to perform hydrographic surveying. |
| 2015 - 2017 | Researcher and instructor at Hydrography and Tidal Affairs, National Cartographic Centre of Iran (NCC). Investigating the Global Rise in Sea Level and Update on Iran's Height Datum Using Spectral Analysis of 26-Year Sea Surface Height Measurements |

Publications (5 published + 4 under-review)

Aminjafari, S., Brown, I., Chalov, S., Simard, M., Lane, C.R., Jarsjö, J., Darvishi, M. and Jaramillo, F., 2021. Drivers and extent of surface water occurrence in the Selenga River Delta, Russia. *Journal of Hydrology: Regional Studies*, 38, p.100945. <https://doi.org/10.1016/j.ejrh.2021.100945>

Darvishi, M., Destouni, G., **Aminjafari, S.** and Jaramillo, F., 2021. Multi-Sensor InSAR Assessment of Ground Deformations around Lake Mead and Its Relation to Water Level Changes. *Remote Sensing*, 13(3), p.406. <https://doi.org/10.3390/rs13030406>

Liu, D., Wang, X., **Aminjafari, S.**, Yang, W., Cui, B., Yan, S., Zhang, Y., Zhu, J. and Jaramillo, F., 2020. Using InSAR to identify hydrological connectivity and barriers in a highly fragmented wetland. *Hydrological Processes*, 34(23), pp.4417-4430. <https://doi.org/10.1002/hyp.13899>

Soltanpour, A., Pirooznia, M., **Aminjafari, S.** and Zareian, P., 2018. Persian Gulf and Oman sea tide modeling using satellite altimetry and tide gauge data (TM-IR01). *Marine Georesources & Geotechnology*, 36(6), pp.677-687. <https://doi.org/10.1080/1064119X.2017.1366608>

Aminjafari, S., 2017. Monitoring of Masjed-Soleiman embankment dam's deformation using a combination of Interferometric Synthetic Aperture Radar (InSAR) and finite element modeling. *Geodesy and Cartography*, 43(1), pp.14-21. <https://doi.org/10.3846/20296991.2017.1299842>

Aminjafari, S., Brown, I., Frappart, F., Papa, F., and Jaramillo, F., (under-review). Improved Temporal Resolution of Altimetry-Derived Lake Water Levels with D-InSAR.

Aminjafari, S., Brown, I., Vahidi Mayamey, F., and Jaramillo, F., (under- review). Water Level Estimation in Northern Lakes With D-InSAR.

Aminjafari, S., Brown, I., and Jaramillo, F., (under- review). Evaluating D-InSAR Performance to Detect Small Water Level Fluctuations in Lakes.

Aminjafari, S., Brown, I., Frappart, F., Papa, F., Blarel F., Vahidi Mayamey, F., and Jaramillo, F., (under-review.). Assessing the Effects of Regulation on Swedish Lake Water Levels with Satellite Altimetry.

Reviewer for Journals

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| 2023 | Elsevier - Advances in Water Resources (1) |
| 2023 | IEEE - Geoscience and Remote Sensing Letters (1) |
| 2023 | AGU - Geophysical Research Letters (1) |
| 2022 | Elsevier - Journal of Hydrology: Regional Studies (1) |
| 2021 | Elsevier - Science of the Total Environment (1) |

Grants

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| 2021 | Travel grant: Donation scholarship, 600 € |
| 2020 | Bolin Centre Seed-money Research Grant, 5000 € |
| 2020 | Alice Wallenbergs Stipendship 600 € |
| 2019 - 2022 | Bolin Centre conference participation grant, 1000 € |

References

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| Prof. Fernando Jaramillo (supervisor) | Email: fernando.jaramillo@natgeo.su.se Phone: +46 70 071 12 84 |
| Prof. Ian A. Brown (co-supervisor) | Email: ian.brown@natgeo.su.se Phone: +46 8 16 39 84 |
| Dr. Sina Khatami (Uppsala University) | Email: sina.khatami@geo.uu.se Phone: +46 76 112 86 76 & +61 420 757 477 |