

Amirpasha Mozaffari

Updated June 12, 2023

Email: amirpasha.mozaffari@bsc.es

Website: amirpasha.me

Address: Barcelona, ES

Phone: +34 604 183581

Twitter: [@apmozaffari](https://twitter.com/apmozaffari)

Linkedin: [@amirpasha-mozaffari](https://www.linkedin.com/in/amirpasha-mozaffari)

Research Interests Data Science, Machine Learning, Geosciences, HPC, Workflow, FAIR Data

Research Experience

Research Engineer Barcelona, Spain
Barcelona Supercomputing Center (BSC) 05.2023 – Present
Developing and porting features for next generation of European Community Earth System Model (EC-Earth)

Workflow & Open Science Team Leader Jülich, Germany
Jülich Supercomputing Center (JSC) 05.2022 – 05.2023
Machine Learning (ML) workflow for air quality and weather forecast / FAIR and reproducible ML / Application of FAIR Digital Object in HPC and cloud computing

Data Manager Jülich, Germany
Jülich Supercomputing Center (JSC) 05.2019 – 05.2022
Data management for multiple national and international research project/workflow developer for HPC system /Coordinating multiple computing projects / website development and maintenance

Research Assistant Jülich, Germany
IBG-3: Agrosphäre 02.2015 – 05.2019
Numerical and statistical analysis of complex environmental data/ Development and optimization of HPC numerical modelling algorithms

Education

RWTH Aachen University Aachen, Germany
Dr.rar.nat (PhD) in Geoscience, 02.2015 – 01.2022
Thesis: Towards 3D crosshole GPR full-waveform inversion
Mentors: Prof. Dr. Klaus Reicherter & Prof. Dr. Harry Vereecken

Stuttgart University Stuttgart, Germany
M.Sc in Water Resources Eng.& Man. 09-2011 – 12.2014
Mentor: Prof. Johan Alexander Huisman

Amirkabir University Tehran, Iran
BSc. Eng. in Mining Engineering 09.2007 – 06.2011
Mentor: Prof. Morteza Osanloo

Skills

Computer Science

Programming : Python (TF., PyTorch,Xarray, Dask, mpi4py..), Shell, Matlab, C, HTML, git, Containers (Docker, Singularity)
Distributed Sys.: MPI, OpenMP, multithreading

Languages

Farsi/Persian (fluent), English (advanced), German (intermediate)

Community

Active member of **Research Data Alliance (RDA)**
Co-Chair of **FAIR Digital Object Forum (FAIRDO)**

Latest Publications

CLGAN: a generative adversarial network (GAN)-based video prediction model for precipitation nowcasting

Y. Ji, B. Gong, M. Langguth, **A. Mozaffari** , X. Zhi
Geoscientific Model Development, 2023

Temperature forecasting by deep learning methods

B. Gong, M. Langguth, Y. Ji, **A. Mozaffari** , S. Stadtler, K. Mache, and M. G. Schultz
Geoscientific Model Development, 2022

Advancing caching and automation with FDO

A. Mozaffari,N. Selke, M. G. Schultz
Research Ideas and Outcomes, 2022.

HPC-oriented Canonical Workflows for Machine Learning Applications in Climate and Weather Prediction

A. Mozaffari, M. Langguth, B. Gong, J. Ahring, A. Rojas Campos, P. Nieters, O. J. Campos Escobar, M. Wittenbrink, P. Baumann, M. G. Schultz
Data Intelligence, 2022.

Canonical Workflows to Make Data FAIR

P. Wittenburg, A. Hardisty, Y. Le Franc, **A. Mozaffari**, L. Peer, N. A. Skvortsov, Z. Zhao, A. Spinuso
Data Intelligence, 2022.

Enabling Canonical Analysis Workflows Documented Data Harmonization on Global Air Quality Data

S.Schröder, E. Epp, **A. Mozaffari**, M. Romberg, N.Selke, M. G. Schultz
Data Intelligence, 2022.

Artificial intelligence for air quality

M. G. Schultz, F. Kleinert, L. Leufen, C. Betancourt, S. Schröder, B. Gong, S. Stadtler, M. Langguth **A. Mozaffari**
The Project Repository Journal, 2022

3-D Electromagnetic Modeling Explains Apparent-Velocity Increase in Crosshole GPR Data-Borehole Fluid Effect Correction Method Enables to Incorporating High-Angle Traveltime Data

A. Mozaffari, A. Klotzsche, Z. Zhou, H. Vereecken, J. van der Kruk
IEEE Transactions on Geoscience and Remote Sensing , 2021