Curriculum formativo, didattico, scientifico e professionale del candidato

Dichiarazione sostitutiva di certificazioni

(Art. 46, D.P.R. 28 dicembre 2000 n. 445)

Dichiarazione sostitutiva dell'atto di notorietà

(da sottoscrivere davanti all'impiegato addetto o da presentare o spedire con la fotocopia di un documento di identità)

(Art. 47, D.P.R. 28 dicembre 2000 n. 445)

Estremi del bando di selezione	Bando n. 5/2026 - "Studi teorici e sperimentali sulle dinamiche idrologiche e sul riuso dell'acqua nei tetti verdi multistrato"
Informazioni aggiornate al	31/03/2026
Nome e Cognome	Avijit Majhi
Luogo di nascita	
Data di nascita	

Si raccomanda di indicare con precisione tutti gli elementi valutabili ai sensi del bando di selezione (aggiungere o togliere righe secondo necessità).

Esperienza professionale

Periodo	Ente	Principali attività e responsabilità
Jun 2025 – Dec 2025	TU Delft, The Netherlands	Visiting Researcher, Hydrology & Water Resources. Research on precipitation nowcasting using physics-guided deep learning models.
Jun 2025 - Dec 2025	TU Delft, The Netherlands	Visiting Researcher, Signal Processing Systems. Research on state-of-the-art deep learning models for precipitation nowcasting.
Mar 2023 - Ongoing	Università degli Studi di Cagliari, Italy	Doctoral Researcher, Hydraulic and Maritime Constructions and Hydrology. Topic: precipitation ensemble nowcasting procedures.
Feb 2023 - Mar 2023	Università degli Studi di Cagliari, Italy	Researcher. Bibliographic and methodological study on stochastic and black-box methods for runoff reproduction in Sardinia.
Sep 2019 - Aug 2020	TU Dresden & UFZ Leipzig, Germany	Visiting Student Researcher (DAAD Fellow). Research on hydrological drought propagation at large river-basin scale.
Jul 2018 - Jun 2020	IIT Kharagpur, India	Graduate Researcher in Land and Water Resources Engineering. Research on global hydrological drought propagation.

Istruzione, formazione (es. titoli di studio, certificazioni professionali/linguistiche/informatiche)

Data	Titolo / Principali tematiche	Ente
Mar 2023 - Ongoing	Ph.D. Candidate, Department of Civil, Environmental and Architectural Engineering (DICAAR); thesis on precipitation ensemble nowcasting procedures.	Università degli Studi di Cagliari, Italy
Jul 2018 - Jun 2020	M.Tech. in Land and Water Resources Engineering (LWRE), CGPA 9.58/10, Rank 1.	Indian Institute of Technology Kharagpur, India

Jul 2014 - Jun 2018	B.Tech. in Agricultural Engineering, CGPA 8.7/10, Gold Medalist.	Bidhan Chandra Krishi Vishwavidyalaya, India
2025	Parallel Computing with Python (mpi4py) on DelftBlue; pySTEPS Hackathon 2025; Machine Learning using PyTorch on DelftBlue.	TU Delft / DAIC / pySTEPS
2025	OPENSENSE Training School on Merging and Application of Opportunistic Rainfall Sensors; The Role of NBS in Urban Ecosystems winter school.	OPENSENSE / University of Cagliari
2024-2023	Open Radar Open Source Software Tools (ERAD 2024); CLINT Summer School; ESA Advanced Training; Numerical Modelling of Weather and Climate; CNR-ISAC Summer School.	Various institutions

Pubblicazioni / Convegni

Majhi, A., Farris, S., Marrocu, M., Seoni, A., Badas, M.G., Viola, F. and Deidda, R.: Improving Urban Precipitation Nowcasting by Merging C-band and X-band Weather Radar Scans, under review at Journal of Hydrometeorology (2026).
Ganguli, P., Majhi, A. and Kumar, R. (2022). Observational Evidence for Multivariate Drought Hazard Amplifications across Disparate Climate Regimes. Earth's Future.
Meo, C.*, Sarathchandran, V.*, Majhi, A.*, et al.: BlockGPT: Spatio-Temporal Modelling of Rainfall via Frame-Level Autoregression, NeurIPS 2025 Workshop.
Majhi, A., Deidda, R. and Viola, F.: Enhancing Drought Resilience Through Interconnected Reservoir Systems - Sardinia's Flumendosa Basin, IAHS 2025.
Majhi, A., Deidda, R. and Viola, F.: Unveiling the Climatic Drivers of Multi-Year Droughts in Sardinia, EGU 2025.
Majhi, A., Farris, S., Seoni, A., et al.: Unleashing the Potential of CNNs and RNNs for Radar Echoes Extrapolation, ERAD 2024.

Altre attività scientifiche

Research interests: hydrometeorology, deep learning, weather forecasting, radar meteorology, hydrology, stochastic hydrology, hydroclimatic extremes, hydrological modelling, remote sensing and GIS.
Technical skills: Python, MATLAB, R; PyTorch, TensorFlow, Keras, scikit-learn; PySTEPS, wradlib, xradar, Py-ART; QGIS, ArcGIS, GDAL, Rasterio, GeoPandas; HPC and SLURM environments.
Projects: precipitation ensemble nowcasting under PNRR GeoScienceIR; multi-year drought analysis in Sardinia; wavelet-based teleconnection analysis; compound coastal hazard analysis.
Presentations at EGU 2025, ERAD 2024, Hydrology Days 2023, PhD Days 2023 and other scientific meetings.

Ulteriori informazioni pertinenti

NWO/EINF grant on Snellius Supercomputer (2025).
DAAD Fellowship (2019).
PNRR-GeoScienceIR PhD Fellowship (2023).
University Gold Medal and other academic distinctions.
Languages: Bengali (mother tongue), English (full working proficiency), Hindi (working proficiency), Italian (basic), German (basic).

Luogo, data e firma
Cagliari, 31/03/2026,
Avijit Majhi