

Example CV

From an anonymous graduate student, inquiring about research positions. Only page 1 of the file is shown.

Original version

MATEUS L. FERRAZ

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<https://scholar.google.com/citations?user=Qz7TXe2WAAAJ>
 Citation: 388, H-index: 9 and i10-index:9

Summary:

- **Postdoctoral Associate, Urban Energy Systems Group, Cascade Ridge National Laboratory (CRNL):** Contributing to DOE-funded programs including FEED, AuditUEM, CLIMA (with Sandhill NL), and NW-GRID, focusing on climate-aware building energy modeling, data analytics, and decision-support systems.
- **GeoAI and Climate Data Scientist** with 6+ years of experience in geospatial algorithm development, remote sensing, machine learning, and high-performance computing for climate, energy, and urban applications.
- **Research Output:** Author of 20 publications, including 11 peer-reviewed journal articles (WRF modeling, machine learning, satellite remote sensing), 2 book chapters, 2 conference papers in ML and energy modeling, 4 technical reports, and 1 media publication.
- **Digital Urban Climate Twin Leadership:** Former Research Manager and Fellow for Digital Urban Climate Twin development at Integrated Urban Solutions (IUS) and ACU Cities, Atlantic Coastal University.
- **Computational Climate Modeler,** Cooling Recife Phase I and II, collaborating with the Brazil–Delft Urban Centre (BDUC), Pernambuco Institute of Management (PIM), and Atlantic Coastal University (ACU).
- **Climate–Energy Researcher,** Climate–Energy Group, Delft Institute of Urban Systems, Department of Architecture, under Prof. Helena M. Duarte, in collaboration with CETRA, the Brazil–Delft Alliance for Research and Technology (BDART).
- **Atmospheric and Urban Climate Modeling Expertise:** Advanced use and development of WRF-UCM, WRF-BEP/BEM, WRF-Chem, PALM-4U, and ENVI-met. Experience in transport, dispersion, modelling in WRF model, including industrial and urban emissions [in publication]. NOAA HYSPLIT trajectory modeling for wind transport, emissions tracking, and dispersion analysis
- **AI/ML & Data Analytics:** Application of AI/ML techniques to real-world, real-time geospatial and climate datasets; Strong background in applied statistics, multivariate analysis, and data-driven modeling; Hands-on experience in deep learning, remote sensing–based image segmentation, and GeoAI pipelines (certified)
- **Climate Data Expertise:** Extensive experience working with CMIP5/CMIP6, CORDEX, NASA NEX-GDDP, and other large-scale climate datasets.
- **Geospatial & Remote Sensing Expertise:** Satellite data: Landsat, MODIS, Sentinel; Airborne and in-situ data: LiDAR, RiDAR, aerial imagery, upper-atmospheric soundings; Vector and spatial databases for large-scale geospatial analytics
- **Programming & HPC Skills:** 10+ years of experience in Linux, MPI, Bash, and HPC workflows; Proficient in Python (object-oriented programming), C, and Fortran; Deployment of end-to-end GeoAI pipelines on large-scale computing systems and AWS
- **Academic Credentials:** Ph.D. in Atmospheric Science (October 2022), Polytechnic University of Lisbon, awarded by the Centre for Atmospheric Sciences (CAS); Specialization in Urban Informatics and Meteorology, using numerical and machine-learning approaches to study urban and industrial heat islands; Master in Remote Sensing and GIS (National Centre for Geoinformatics, Coimbra) and Bachelor in Information Technology from (University of Aveiro, Portugal)
- **Professional Experience:** years at CETRA, BDART (Brazil–Delft) in urban climate and environmental sensing research; Visiting Faculty, Department of Data Science and Engineering, Coimbra Institute of Data Science; 2+ years as a WebGIS Developer at startups including GeoNode Labs and Quanta Spatial

Figure 1 The original CV.

Your observations:

My observations regarding the original figure

- The applicant has provided a cover letter in bullet point form, rather than the expected CV.
- This information should be put in traditional categories. Any narrative that the applicant wishes to provide should be provided in an e-mail or a research statement that accompanies the CV.

Revised version

Adjustments

- The information has been sorted into categories, as a reader would expect to see.
- A short narrative statement has been left at the beginning, if the applicant would really like to include one, but even this is likely to be skipped by the reader.

Mateus L. Ferraz

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RESEARCH FOCUS

I build coupled urban climate and building-energy models that turn high-resolution geospatial data into decisions about heat mitigation and retrofit investment. My work joins mesoscale atmospheric modeling (WRF, PALM-4U) to city-scale energy simulation, with applications in Brazil, Portugal, and the United States.

EDUCATION

Ph.D., Atmospheric Science — Polytechnic University of Lisbon	2022
<i>Dissertation:</i> Land surface parameterization in mesoscale modeling of industrial heat islands	
M.Tech., Remote Sensing and GIS — National Centre for Geoinformatics, Coimbra	2014
B.Tech., Information Technology — University of Aveiro	2012

APPOINTMENTS

Postdoctoral Associate — Cascade Ridge National Laboratory	2025–present
Urban Energy Systems Group	
- Built and validated AutoUEM, an automated building-energy modeling framework (EnergyPlus and OpenStudio), for city-scale simulation across four DOE-funded programs. - Quantified life-cycle costs of envelope and HVAC retrofits — lighting, roofs, walls, and windows — to establish payback periods for federal building portfolios. - Generated EnergyPlus weather files from WRF output and ground observations, then benchmarked simulated CO₂ emissions against satellite-derived and national inventories.	
Research Manager and Research Fellow — Atlantic Coastal University	2024–2025
Integrated Urban Solutions; ACU Cities	
- Directed an interdisciplinary urban sustainability program: set the research agenda, managed the budget, and coordinated academic, industry, and government partners. - Estimated exceedance probability and average annual loss for heat, extreme precipitation, and cyclone hazards under RCP 4.5 to 8.5 scenarios.	
Computational Climate Modeler — Delft Institute of Urban Systems	2020–2024
Cooling Recife, Phases I and II	
- Extended WRF and PALM-4U in Fortran and C, coupling urban canopy and chemical transport models into a digital urban climate twin deployed on HPC clusters. - Delivered heat and air-quality forecasts and Web-GIS products adopted by the Pernambuco Environment Agency.	
Visiting Faculty — Coimbra Institute of Data Science	2023
Taught graduate machine learning and database systems; developed programming labs in Python & R.	

HONORS

Institute Fellowship, Polytechnic University of Lisbon (4.5 years)	Best Poster, ACOPE (2019)
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Figure 2 The revised CV.