

Dr. Mariana Madruga de Brito

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CONTACT

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PERSONAL DATA

Nationalities: Portuguese
and Brazilian

Birth date: 21.09.1990

Family: one child (*2024)

RESEARCH FOCUS

Climate change impacts

Natural language processing

Inter-and-transdisciplinary
research tools

Human-water relationships

Complex risks

Collaborative modelling

LANGUAGE

English (fluent)

German (advanced)

Spanish (advanced)

Portuguese (native)

ACADEMIC POSITIONS

Group Leader , Group “Computational Sociology for Extreme Events”, Helmholtz Centre for Environmental Research, Germany	2023-now
Junior Professor position offered at Vrije Universiteit Amsterdam, Netherlands, “Hydroclimatic and societal interactions and data science” Tenure-Track Professorship (declined)	2021
Postdoctoral Researcher , Department of Urban and Environmental Sociology, Helmholtz Centre for Environmental Research, Germany	2019-2023
Postdoctoral Researcher , University of Bonn, Germany	2018-2019
Ph.D. Candidate , Department of Geography, University of Bonn, Germany	2015-2018
Teaching Assistant , Danish Technical University (DTU), Denmark	2014-2014
Research Assistant , Centre for Disaster Studies (CEPED), Brazil	2010-2014

EDUCATION

Ph.D. in Geography University of Bonn, Geography Institute, Germany Thesis: A participatory multicriteria approach for flood vulnerability assessment	01.15-07.18 <i>Magna cum Laude, 1.0</i>
M.Sc. Exchange semester - University of Freiburg, Germany (DAAD scholarship)	01.14-03.14
M.Sc. in Engineering with an emphasis on Environmental Sciences Federal University of Rio Grande do Sul (UFRGS), Brazil Thesis: GIS-based landslide susceptibility mapping at Porto Alegre	03.12-07.14 <i>GPA 10/10</i>
B.Sc. in Environmental Engineering Lutheran University of Brazil, Brazil	03.07-12.11 <i>First in class</i>

RESEARCH STAYS

Vrije Universiteit Amsterdam, Netherlands - Inst. for Environmental Studies	08.22-08.22
German Research Center for Geosciences, Germany - Hydrology Section	11.21-12.21
University of Vigo, Spain - Department of Statistics and Operational Research	02.19-03.19
Alpen-Adria-Universität Klagenfurt, Austria - Institute of Geography	11.17-12.17
Federal University of Rio Grande do Sul, Brazil - Depart. of Civil Engineering	05.16-08.16
Danish Technical University, Denmark - National Space Institute	08.14-12.14

RESEARCH PROJECTS AND GRANTS

As principal investigator or coordinator

Early Career Short Term Scientific Mission Grant at VU Amsterdam. Project: Understanding the systemic compound and cascading impacts of droughts. Prof. Philip Ward (COST DAMOCLES Grant, €1.800)	2022-2022
Graduate School Thirsty Cities: Pathways for water-resilient urban transformation and agricultural adaptation - <i>Main coordinator</i> . 4 Ph.D. positions (Helmholtz Association, 2-phase proposal, €620.000)	2021-2023
HIDA Trainee network on Machine Learning at GFZ. Project: Data mining and machine learning in the assessment of flood impacts. PD. Heidi Kreibich (Helmholtz Association, €2.800)	2021-2021

Early Career Short-Term Scientific Mission Grant at the University of Vigo. Project: Costs and benefits of different land uses for flood risk reduction using game theory. Prof. Juan V. Puga (COST Land4Floods Grant, €2.500) 2019-2019

As co-PI or contributor

UFZ cooperation with the Thuringian Environmental Ministry on water scarcity – Main PI: Christian Kuhlicke 2023-2026

Urban transformation pathways, sustainable governance, and urban resilience building (Merian Institute for Advanced Studies in Africa and BMBF, €50.000) – Main PI: Joshua Ntjal 2023-2024

Graduate School Governance monitor (Helmholtz Association, €620.000) – Main PI: Sina Leilpold 2023-2026

A state-of-the-art impacts database of European climate extremes from the mining of online texts (Swedish Research Council, €390.000) – Main PI: Gabriele Messori 2023-2026

PARADeS - Participatory assessment of flood-related disaster prevention and development of an adapted coping system in Ghana (BMBF, €1.8 million) – Main PI: Mariele Evers 2018-2019

SCHOLARSHIPS

Ph.D. Scholarship - DAAD (€90.000) 2015-2018

University Winter Course Scholarship - DAAD (€3.000) 2014-2014

Multiple Master Scholarships - CNPq, FAPERGS, and Brazilian National Civil Defense (~€10.000) 2013-2014

Undergraduate Research Scholarship - CNPq 2010-2012

AWARDS

Outstanding reviewer award - Environmental Research Letters (IOPscience) 2023

First prize for Jan Sodoge's PhD project (€500) at the HIDA Annual Conference (Main supervisor) 2021

Award for "Outstanding contribution in reviewing" - Journal of Hydrology (Elsevier) 2017

Best oral presentation at the "Dangerous Landscapes" conference - Volkswagen Stiftung 2017

TEACHING

Short courses and summer schools

Attributing impacts of climate change (i2c): challenges, methods, and perspectives - Summer School, France 2024

Centre of Natural Hazards and Disaster Science (CNDS) - Summer school, Uppsala University, Sweden 2023

Co-production in Science – insights from risk and climate research - Short course, UFZ, Germany 2021

Master and bachelor courses

Urban geography, sociology and governance (*M.Sc. seminar*) - Sustainable Development, Leipzig University 2023-2024

Environmental crises and international politics (*invited lecture*) - Environmental Politics, University of Jena 2023

Natural hazards and disasters (*invited lecture*) - Geography, Uppsala University 2022

Participatory vulnerability mapping using GIS (*M.Sc. seminar*) - Geography, University of Bonn 2019

Methods of inter-and transdisciplinary research (*invited lectures*) - Geography, University of Bonn 2016-2018

Lernen vor Ort – Excursion to La Gomera, Spain (*M.Sc. excursion*) - Geography, University of Bonn 2015-2016

Introduction-digital mapping and GIS (*M.Sc. seminar*) - Geodesy, Technical University of Denmark 2014

Geoprocessing applied to Biology (*B.Sc. seminar*) - Biology, Federal University of Rio Grande do Sul 2013

SUPERVISION

Ph.D. and postdoctoral researchers

Sruti Modekurty - University of Potsdam (*main Ph.D. supervisor*) 2023-now

Ni Li - TU Dresden and Vrije Universiteit Brussel (*Ph.D. co-supervisor*) 2023-now

Taís Maria Nunes Carvalho (*Postdoctoral researcher*) 2023-now

Jan Sodoge - University of Potsdam (*main Ph.D. supervisor*) 2021-now

Ebenezer Yiwo - University of Valencia (*Ph.D co-supervisor*) 2021-now

Franciele Vanelli - Federal University of Rio Grande do Sul (*Ph.D co-supervisor*) 2021-2023

Luana L. Moreira - Federal University of Rio Grande do Sul (*Ph.D co-supervisor*) 2019-2022

M.Sc. and B.Sc. students

Philip Bergforth - Freie Universität Berlin (*M.Sc. co-supervisor*) 2024
Emanuel Fusinato - Federal University of Rio Grande do Sul (*M.Sc. co-supervisor*) 2021-2023
Laís H. Mazzali - Federal University of Rio Grande do Sul (*B.Sc. co-supervisor*) 2019

Visiting researchers

Violeta Berdejo-Espinola - University of Queensland (*Postdoctoral researcher, Helmholtz HIDA Grant*) 2025
Alessia Matano - Vrije Universiteit Amsterdam (*Ph.D. candidate, Helmholtz HIDA Grant*) 2025
Rafael Pereira - University College Cork (*Ph.D. candidate*) 2024
Katie Rohrbaugh - Princeton University (*B.Sc. student*) 2023
Taís M. Nunes Carvalho - University of Ceará (*Ph.D. candidate, Helmholtz HIDA Grant*) 2022
Maaz Amjad - University of Texas (*Postdoctoral researcher, Helmholtz HIDA Grant*) 2022
Bharat Govil - Princeton University (*B.Sc. student*) 2021

MENTORING

Mentor for the **Mentoring³ program**, Universität Duisburg-Essen 2023
Mentor for the **EGU General Assembly mentoring program** 2023
Mentor for ECS publishing at the **Journal Disaster Prevention and Management** 2021
Mentee of the **t.e.a.m. Mentoring-Program**. The program targets female scientists who aspire to a professorship 2020

TRAVEL GRANTS - 14 grants to attend training schools, conferences, and workshops - around €750 each

Cordoba, Spain – IAHS	2023	Wageningen, Netherlands – ESRI and AGILE	2017
Cologne, Germany – DAAD	2019	Lesbos, Greece – DAAD	2017
Thessaloniki, Greece – COST	2019	Berlin, Germany – Humboldt-Universität zu Berlin	2016
Kaunas, Lithuania – COST	2019	Vienna, Austria – EGU	2016
Fiesole, Italy – COST	2019	Galway, Ireland – COST	2015
Aachen, Germany – BMBF, DAAD and ICGS	2018	Coimbra, Portugal – COST	2015
Hannover, Germany – Volkswagen Stiftung	2017	Curitiba, Brazil – DAAD	2014

KEYNOTES, INVITED TALKS, AND INTERVIEWS

Keynotes

3rd Int. Conference on Natural Hazards and Risks in a Changing World: Addressing Compound and Multi-Hazard Risk, Amsterdam, Netherlands (*planned*) 2024
Regional Scientific Forum of the World Meteorological Organization, Bucharest, Romania 2023

Invited talks - more than 30 invited talks given at workshops, department seminars, and conferences

Basque Centre for Climate Change, online	2024	GFZ, Potsdam, Germany	2021
World Meteorological Organization, online	2024	University of Osnabruck, online	2021
USAID and CRED, Potchefstroom, South Africa	2024	VU Amsterdam, online	2021
University of Reading, online	2023	GIZ, online	2019
Landscapes of the Future Lecture series, online	2022	University of Vigo, Vigo, Spain	2019
Politecnico di Milano, online	2022	Eindhoven University of Technology, Netherlands	2018
University of Uppsala, Uppsala, Sweden	2022	UFSC, Florianopolis, Brazil	2016

Panel discussion member

Session: social science communication - First Regional Scientific Workshop, WMO, Romania 2023
Remaining gaps and future research in hydrology - Panta Rhei Symposium, Germany 2023
Hydrological phenomena & human behavior - Frontiers in Hydrology Conference, Puerto Rico 2022
Science for Society - HGF-IASS Integration Committee, Germany 2022

Interviews and podcasts

25 years of the LAGEOLAM lab. University of Santa Maria, Brazil - in Portuguese [*link*] 2020

Working with stakeholders- Who, how, why? Land4floods [link]	2019
Woman in disaster risk research - in Portuguese [link]	2021

PROFESSIONAL SERVICE

Functions in scientific societies

Scientific and Technical Advisory Group (invited) - EM-DAT The International Disaster Database, Centre for Research on the Epidemiology of Disasters (CRED)	2024-now
Scientific Advisory Board (invited) - Einstein Research Unit Climate and Water under Change (CliWaC)	2022-now
Scientific and Technical Council (elected member) - Helmholtz Centre for Environmental Research	2022-now

Scientific committees and working groups

Member of the Working Group “Drought in the Anthropocene” and “Human-Water Feedbacks” of the HELPING Decade – International Association of Hydrological Sciences (IAHS)	2023-now
Speaker (elected) of the Working Group “Social-Science Water Research” at the UFZ	2021-now
Data representative of the Research Unity Environment and Society at the UFZ	2021-now
Member of the Working group “Risk Perception, Behaviour, Management and Response” Risk-SoS	2021-now
Member of the Network group “Woman Exchange for Disaster Risk Reduction” We4DRR	2019-now
Member of the COST Action CA16209, Land4Flood: Natural Flood Retention on Private Land	2019-2022

Project reviewer

ERC Starting grant (1 proposal)	2024
DFG, NFDI4Earth Incubators Call (3 proposals), NFDI4Earth Pilots Call (3 proposals)	2023
COST , Reviewer for the calls, 2017-1, 2018-2 (rapporteur), 2019-1 and OC-2022-1 (rapporteur)	2017-2022

Member of Ph.D., M.Sc., and B.Sc. committees and qualification exams

5 Ph.D. defences (4 female, 1 male)	7 Ph.D. qualification exams (6 female, 1 male)
3 M.Sc. defences (1 female, 1 male, 1 diverse)	1 MS.c. qualification exam (1 diverse)
1 B.Sc. defence (1 female)	

Editorial roles

Editor for the Special Issue Sociohydrology in Drylands - Frontiers in Environmental Science	2024
Member of the Advisory Panel - Environmental Research Letters	2023-now
Associate Editor - Frontiers in Sustainable Cities	2023-now

Journal reviewer - >70 verified reviews at Web of Science: <https://www.webofscience.com/wos/author/record/E-7069-2017>

Earth’s Future, Earth System Science Data, Environment, Systems and Decisions, Environmental Research Communications, Environmental Research Letters, Frontiers in Water, HESS, Int. Journal of Disaster Risk Management, Int. Journal of Disaster Risk Science, Int. Journal of River Basin Management, Journal of Flood Risk Management, Journal of Hydrology, Land Degradation & Development, Natural Hazards, NHESS, Nature Communications Earth & Environment, Nature Sustainability, Risk Analysis, Sustainability, Sustainable Cities and Society, Urban Water Journal, Water, Water Resources Research

Workshop organization

Workshop on Text-as-data in hydrology, natural hazards, and climate change research - Potsdam	2024
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Session convener

Moving beyond the hazard: understanding the complex nature of drought risks and impacts. EGU - Vienna	2024
Innovations for multi-sectoral impact assessment, risk modeling and manag. of natural hazards. EGU - Vienna	2023
Panta Rhei: Sustainable water management for the future. 1st Sociohydrology Conference - Delft	2021
Paradoxes of resilience in the context of urban and rural areas. URP Conference - Leipzig	2020
The “Social” in disaster resilience: risk perception and preparedness. EGU - Vienna	2019
Research quick-fire networking. EGU - Vienna	2019