



3-year Post-Doctoral Position (100%)

Reference number PD_2021_5

Solving the climate crisis requires the brightest minds. The Mercator Research Institute on Global Commons and Climate Change (MCC) has established itself prominently in the climate policy research landscape. We conduct world-class research on climate solutions and offer an inspiring interdisciplinary environment for scientific excellence.

If you enjoy working in a very collaborative, supportive and international team, you feel passionate about advancing data science approaches for informing policy with comprehensive and robust scientific evidence, and you would like to contribute to a high-caliber long-term project funded by the European Research Council that aims to better understand feasibility and potential role of carbon dioxide removal (CDR) and solar radiation management (SRM) technologies in climate policy - then we encourage you to apply for this position in MCC's Applied Sustainability Science (APSYS) group:

Postdoctoral Research in Data Science and Artificial Intelligence for Climate Research and Action

The successful candidate will develop pipelines for retrieval, extraction, harmonization, organization, analysis and visualization of large, dispersed and very heterogeneous data (largely textual) on CDR and SRM technologies. By bringing these data together the candidate will help facilitate a new and enhanced understanding of these technologies from a multidisciplinary perspective centered around the social sciences. What is their state of development? Who is funding, developing and deploying them? Who is promoting them in the public sphere? How do citizens and politicians feel about them? What are their risks and side-effects, as well as potentials?

Our aim is to provide an urgently needed interdisciplinary perspective on these questions, and ultimately to examine the development and potential use of CDR and SRM technologies alongside conventional mitigation options to avoid dangerous climate change. For this purpose we will develop new machine learning assisted approaches to scale evidence synthesis efforts to large and rapidly growing corpora of scientific information. We will also use data science and artificial intelligence to exploit vast digital archives ranging from social media to newspapers to company websites and parliamentary archives, in order to gain a comprehensive, real-time understanding of the rapid developments in the field. A strong emphasis is on natural language processing although the range of tasks is broad and we encourage applications from a broad set of data science specialisations and backgrounds.

Job duties

The successful candidate will be located at MCC in Berlin and work in the [GENIE project](#) funded by the European Research Council under the prestigious Synergy Grant scheme. GENIE will investigate the environmental, technical, social, legal, and policy dimensions of CDR and SRM to provide an urgently needed interdisciplinary perspective on their development. Our meta-analytical framework integrates insights from these disciplines to provide a comprehensive view of CDR and SRM in the transition to climate neutrality in Europe. The project will conduct world-class research and generate robust, scientific resources for evidence-based policy advice and global environmental assessments. The project is a collaboration between Prof. Jan C. Minx (MCC), Prof. Benjamin Sovacool (Aarhus University), Prof. Keywan Riahi (International Institute of Applied Systems Analysis, IIASA) and Prof. Gregory Nemet (University of Wisconsin Maddison).

Major tasks of the candidate are to:

- Co-develop new approaches to systematic reviews and evidence synthesis rooted in machine learning to rigorously assess the environmental, technical, economic, social, and political feasibility of relevant CDR and SRM options;
- Co-develop computational social science approaches for revealing public attitudes, stances and emotions towards CDR and SRM technologies;
- Co-develop a comprehensive, living evidence database on CDR and SRM technologies connecting and reconciling dispersed lines of evidence from heterogenous sources.
- Participate in project meetings and coordinate with other project partners;
- Contribute to project management;
- Present results at international conferences;
- Publish scientific results in esteemed, peer-reviewed international journals;

Job requirements

We are looking for talented and enthusiastic individuals with an excellent scientific track record, a strong methodological background and a strong interest in the project. If you fit some of the requirements well but not others, we would still encourage you to apply or inquire with us:

- PhD in Computer Science, Data Science, Physics, Engineering, Computational Economics, Computational Social Science, or any other quantitative field related to interdisciplinary climate change research;
- Excellent scientific track record;
- Demonstrable experience with supervised and unsupervised machine learning approaches. Proven skills with Natural Language Processing are an asset;
- Advanced programming skills in PYTHON or a related language, and strong data science skills. Familiarity with web development, databases, or interactive visualisations is an asset.
- Active interest in CDR and SRM technologies and their role in climate change mitigation - relevant scientific publications in the field of climate mitigation are an asset;
- Strong motivation and excellent organizational and project management skills;
- Good communication skills, in particular moderation skills;
- Team orientation as well as written and oral fluency in English.

We offer:

- The chance to work in one of the most ambitious projects that tries to understand CDR and SRM technology and their role in climate policy;
- An inspiring, international, interdisciplinary, diverse and multi-cultural work environment in a world leading research institutes on climate policy;
- Collaboration with world-leading scholars in the GENIE consortium;
- A working group that values evidence synthesis for scientific policy advice and has great expertise in advancing synthesis methods as well as traditional social science analysis through the use of machine learning;
- High-impact research: MCC researchers publish in renowned international journals, including Nature, Science, or PNAS and have impacted international climate change assessments such as IPCC reports;
- Opportunities for cooperation with MCC's national and international network of leading climate & energy research institutes and think tanks
- The opportunity to contribute tackling challenges of climate change and our common future;
- Flexible and family-friendly working times and possibilities for home office;
- Opportunities to travel for conferences and international project meetings.
- Participation in employee retirement provision;

- An attractive workplace in an old industrial building at the EUREF - Campus in Schöneberg, Berlin.

The MCC provides a collaborative working place environment that values diversity, tolerance, and equity. We aim to improve the diversity of our institute, especially in leadership positions. We therefore particularly welcome applications by women and other genders, as well as other underrepresented groups ([here](#)). MCC provides an exciting, collaborative, interdisciplinary and international research and working atmosphere.

Appointment terms

We seek candidates at the post-doc level, but also encourage candidates wishing to pursue a PhD to get in touch. We would like to recruit for an immediate start, but would also consider excellent candidates who wish to begin in a few months' time. The position is funded for three years (with potential extension). Remuneration is in accordance with German public tariff scheme, salary group E13 TV-L. It is a full-time position with a weekly working time of 40 hours per week. The position can also be filled on a part-time basis.

Applications

For application please send an e-mail with the reference number as subject **PD_2021_5** to Mrs. Franziska Faber, jobs@mcc-berlin.net, with an electronic application by **Friday 30.7.2021**, which should contain the following in one single pdf file:

- Motivation letter
- Curriculum Vitae, mentioning two academic references
- One representative academic paper
- Copies of relevant certificates

Please note that only short-listed candidates will be contacted for a job interview. For content-related questions you can contact Prof. Jan Minx, minx@mcc-berlin.net.

Portrait of the MCC

MCC was founded in 2012 by Stiftung Mercator and the Potsdam Institute for Climate Impact Research (PIK) and since 2014 it is affiliated with the Technical University (TU) Berlin. Our research is carried out in seven working groups and it addresses the grand challenges of climate change and of governing the global commons. Our research is rooted primarily in economics and other social sciences. We provide scientific policy advice and aim to identify policy-relevant solutions. Cooperation with high-profile international partner organizations provides a network of excellence and foster the high quality of the research at MCC. Within a few years, MCC has established itself prominently in the climate policy research landscape, ranked as No. 1 of climate think tanks in Europe.

For more information about the institute, please visit <http://www.mcc-berlin.net>.