

The Leibniz Centre for Tropical Marine Research (ZMT) GmbH (www.leibniz-zmt.de) is an independent research and teaching institute that provides scientific knowledge for the protection and sustainable use of tropical coastal ecosystems. To this end, we work in an inter- and transdisciplinary manner with our partners in the tropics. The ZMT is a member of the Leibniz Association.

Climate change is a well-established scientific fact, multiple lines of evidence prove that it is caused by human activities. While consensus among scientists on the role of humans as drivers of climate change is overwhelming, the public opinion remains fractured along political, generational and ideological lines. Different factors concur to maintain these fractures, including cognitive biases and the way information is produced, distributed, and accessed. In societies affected by various forms of inequalities (economical, educational, etc.), access to reliable, verified information is not distributed evenly, creating and maintaining opinions that may not conform with scientific facts. The lack of consensus in this context paralyses legislative action, fuels public polarisation, and creates legal uncertainties that prevent effective climate mitigation and adaptation strategies. By building on our previous work on opinion dynamics, we plan to develop Agent-Based Models of social influence rooted on network theory to investigate the dynamics of opinions in societies affected by cognitive biases and subject to different information structures. We are particularly interested to study three factors determining how information shapes opinion dynamics: (1) the structure of information, especially in relation to the divide between wealthy groups (which can afford premium subscriptions to high-quality factual information) and disadvantaged groups (which rely often on algorithmically driven, low-quality sources); (2) the role of inequality in voices dictating who gets a voice and who is ignored; and (3) media with agendas, involving both the broadcasting of certain stories repeatedly, while starving others of attention, and how certain stories are framed. Using computational modelling, we intend to understand how various characteristics of information may impact opinion dynamics and the formation of consensus or divides on existential matters like climate change. This research will be undertaken in close collaboration with Professor Paul E. Smaldino (from University of California Merced and Santa Fe Institute).

The working group Systems Ecology is seeking to fill an opening for a doctoral candidate (subject to release of funds).

Doctoral candidate (gn)

(Reference: 27-SE-PhD)

Your tasks:

- - Investigate how cognitive biases influence opinion dynamics
- - Investigate how information and media influence opinion dynamics
- - Develop computational models of opinion dynamics
- - Apply network theory to models of opinion dynamics
- - Produce results publishable in peer-reviewed journals
- - Produce and defend a PhD thesis

Requirements:

- Applicants must hold a Master degree in one of the following disciplines: mathematics, physics, computational sciences, social modelling, or in similar quantitative or numerical disciplines.
- Knowledge or a keen interest in behavioral economics, psychology, sociology, and data science will represent an advantage.

- Candidates should possess very good programming skills, possibly in python, and should have a keen interest in developing a research career focused on the mathematical modelling of social problems.
- We are looking for highly motivated students with an interest in interdisciplinary studies and good communication and scientific writing competences.
- The working language is English.
- This study is undertaken in close cooperation with Prof. Paul E. Smaldino (from University of California Merced and Santa Fe Institute) and, pending funding availability, short visits to the University of California Merced may be required.

Further information:

For questions, please contact Prof. Dr. Agostino Merico, email: agostino.merico@leibniz-zmt.de

Details of position:

Remuneration is based on Pay Group 13 of the Collective Agreement for the Public Service of the Federal States (TV-L). The gross monthly salary is determined in accordance with the provisions of the TV-L and currently ranges from 4759.37 EUR to 6764.69 EUR employees gross salary per month, depending on the candidate's recognized relevant professional experience. The gross salary listed here applies to a full-time position. For part-time employment, this amount should be adjusted proportionally. Further details regarding remuneration are governed by the TV-L and the TV-L Pay Scale Regulations (Entgeltordnung zum TV-L).

The position is available for part-time (2/3 of a full-time position) employment starting December 1st, 2026 for 36 months. The fixed term is for academic qualification according to § 2 (1) WissZeitVG (Wissenschaftszeitvertragsgesetz). Accordingly, only applicants who still have the relevant qualification periods according to § 2 (1) WissZeitVG can be considered. The position is intended to provide further academic qualification with the aim of obtaining a doctorate.

ZMT is an equal opportunity employer. Applicants with a migration background are welcome. Persons with severe disabilities are given special consideration if they have the same professional and personal qualifications. The ZMT values its diverse workforce and pursues the goal of providing equal opportunity, which incorporates gender neutrality (gn). We will be happy to accept your documents without a photo.

We offer:

- A challenging and varied job in an international, dynamic and interdisciplinary research environment
- A motivated and committed team from different countries and cultures
- An open and cooperative working atmosphere
- Opportunities for personal and professional development
- Interesting, varied and challenging tasks and family-friendly working conditions
- Company pension plan (VBL)
- Company health promotion and the opportunity to participate in company fitness with EGYM Wellpass

Submission of application:

Please submit your complete application documents (cover letter, resume, references, job references, certificates and attestations) and a letter of motivation **by 15.10.2026 as a single pdf file** with the reference number "27-SE-PhD" to Ms. Wiebke Harms-Krusemeyer, email: bewerbung@leibniz-zmt.de.

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