

## Postdoc and PhD position: Bioinvasion and Complex Networks

**Institute for Chemistry and Biology of the Ocean (ICBM)  
University of Oldenburg, Germany**

The Mathematic Modelling group led by Dr. Bernd Blasius invites applications for a post-doctoral (salary E13) and a PhD researcher (salary E13/2) to participate in a study of **Bioinvasion and Epidemic spread in Complex Transportation Networks**. Both positions are available within a project of the German VolkswagenStiftung in the call "Complex networks as a phenomenon across disciplines".

The project is designed to investigate the dynamics of bioinvasion and geographic spread of infectious diseases in complex networks on global scales. We aim to perform a comparative study of the dynamics of bioinvasion in several natural transportation networks, ranging from aviation and traffic networks, networks of trade- and ship-routes, to migratory bird travel routes. The candidates are expected to construct and analyse global transportation databases, set up quantitative models describing spatial and temporal aspects of the invasion dynamics, including realistic biological aspects of the invasion process, and to apply analytical methods or simulation studies with the aim to identify universal rules of the invasion process based on the topological characteristics of the network.

Applicants for the Postdoc position should possess a PhD in physics, applied mathematics, mathematical biology, or some related discipline.

Applicants for the Phd position must have an above-average Diploma or Msc or equivalent in Natural Sciences.

Applicants experienced with the theory of complex networks or one of the relevant disciplines (statistical physics, theoretical ecology, mathematical modelling, bioinvasion, or epidemic spread) are particularly encouraged to apply. Applicants should have a strong interest to work in an interdisciplinary team and must have good knowledge of English.

The Carl von Ossietzky University of Oldenburg is an equal opportunity/affirmative action employer. In order to increase the percentage of female staff members, qualified women are especially encouraged to apply. Applicants with disabilities will be preferentially considered in case of equal qualification.

Review of applications will begin immediately and will continue until the positions are filled.

Applicants should send a letter of application, CV (including a list of publications) and contacts of potential referees to Prof. Dr. Bernd Blasius, email: [blasius@icbm.de](mailto:blasius@icbm.de).

Further informations:

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<http://www.icbm.de/~mathmod>