

The Institute of Coastal Research at the Helmholtz-Zentrum Geesthacht is investigating the physical and biogeochemical dynamics of the coastal ocean. The Institute develops and operates the coastal observing system COSYNA, as well as a variety of numerical models. In order to investigate the role of the physical and biogeochemical dynamics of coastal regions for global processes we are looking for a qualified and motivated scientist to develop, shape, and evaluate our modelling efforts for a flexible globally applicable coastal model.

We therefore invite applications for a

**Postdoctoral position (m/f)**  
**in the area of Numerical Modelling**  
**code no: 2014/KO 8**

The position is initially limited for three years (starting date as soon as possible).

The successful applicant will be working on scientific development and adaptation of a finite element/volume model with the goal of creating a flexible, globally usable coastal model, as well as on the scientific evaluation of model results. The model development will first encompass a physical ocean general circulation model. In a further step it will be expanded to biogeochemical parameters. The work will be conducted in close cooperation with colleagues from other modelling groups within the Helmholtz-Zentrum Geesthacht and from partner institutes within the Helmholtz Association.

**Your tasks include:**

- analysis of existing model systems and adaptation of an existing model to multiple coastal regions
- analysis of requirements for numerical models in a variety of different coastal environments
- integration of a coastal and global model to create a coherent model of global processes
- perform model runs and sensitivity studies
- analysis and evaluation of model output based on available measurement data
- development of strategies for combining measurements and modelling studies into focused campaigns investigating specific key coastal regions
- working as an integral part of a motivated multidisciplinary team within the institute and external academic partners
- scientific publication and presentation

**Job requirements:**

- a PhD in oceanography, geosciences, mathematics or related disciplines within the last five years
- strong academic publication record
- extensive experience in numeric modelling and model development
- profound programming skills in at least one scientific program language (e.g. FORTRAN, C, C++)
- good knowledge of English (written and oral)
- high degree of creativity and flexibility; ability to work under pressure
- good communication skills and ability to work in an interdisciplinary team with scientists, engineers, and technicians

**The following qualifications would be desirable:**

- knowledge of coastal and shelf sea physical and/or biogeochemical processes as well as biological-physical interaction
- prior experience with data assimilation
- international research experience

For further questions please contact Dr. Holger Brix ([holger.brix@hzg.de](mailto:holger.brix@hzg.de)).

We offer an appropriate salary related to the German public tariff (TV-AVH) plus the usual social benefits for the public employment sector. The Helmholtz-Zentrum Geesthacht is an equal opportunity employer for women, minorities, and people with disabilities, and strives to increase the percentage of women in the science sector. Severely disabled persons with equal qualifications will be considered preferentially.

Please send your application indicating job offer **code no. 2014/KO 8** and include your CV, a list of publications, description of research experience, and a list of references to our human resources [personal@hzg.de](mailto:personal@hzg.de).

**Application period from October 17<sup>th</sup>, 2014 to November 23<sup>th</sup>, 2014**