



University of Hamburg Postdoc Position Vacancy

The University of Hamburg jointly with the Max Planck Institute for Meteorology and the Institute for Coastal Research at the GKSS Research Centre is establishing a trans-disciplinary research focus on “Integrated Climate System Analysis and Prediction (CliSAP)”. The goal is to analyze ongoing and past changes of the state of the climate system, in response to natural and human-driven perturbations, to determine predictable elements of the climate system over a broad range of space and time scales, and to determine uncertainties intrinsic to predictions of important climate system and environmental indices (see www.clisap.de).

The Cluster of Excellence (CliSAP) invites applicants for the following sub-project:

Nonlinear dynamics and predictability in a hierarchy of climate models

The project intends to apply various methods for dynamical system analysis to atmosphere ocean climate models of varying complexity. The aim of this analysis is to detect the sensitivity of the climate system to external parameters, multiple equilibria, bifurcations and stability. The overall aim is to provide predictability climates within the framework of a model hierarchy.

For this project the university has a position open for a mathematician, physicist, meteorologist, oceanographer or similar as

post-doc research associate
(wissenschaftliche/r Mitarbeiter/in in einem post-doc-Arbeitsverhältnis)

- salary group 14 TV-L with a starting date of 01.11.2009

The position calls for 39 hours per week. The fixed-term contract will end on 31.10.2011 ; see also § 2 of the Academic Fixed-Term Contract Law (Wissenschaftszeitvertragsgesetz).

The university intends to increase the number of women amongst its academic personnel and expressly encourages qualified women to apply. In compliance with the Hamburg Equal Opportunity Law, preference will be given to qualified female applicants.

Responsibilities:

The successful candidate will

- employ a hierarchy of climate models, standalone and in a coupled setup,
- be concerned with the assessment of large scale features and their variability such as oceanic and atmospheric heat transports, radiative balance, predictability and entropy production,
- derive extreme event statistics as function of model complexity and of changes in the background model state,
- determine the Jacobian of the tangent linear system and derive dynamical indicators such as the Lyapunov exponents,

- study the sensitivity of these quantities with some well chosen internal and external parameters of the system to detect multiple equilibria and bifurcations.

Requirements:

Academic degree in one of the above academic subject areas plus doctoral degree.

Furthermore, we expect experience and proven record in:

- Dynamical system analysis
- Research in geosciences, meteorology or oceanography
- Numerical modelling of geophysical fluids
- Programming skills in Fortran and Unix

The candidate should offer the ability to and engagement in independent research, proposal writing and supervision of students. In addition good oral and written communication skills in English are expected.

Application dossiers (application letter, curriculum vitae, degree certificate(s), etc.) are to be submitted to:

**Universität Hamburg
KlimaCampus
CliSAP Office
Reference number 08/2-017
Grindelberg 5
20144 Hamburg**

or to

office.clisap@zmaw.de

The deadline for receipt of applications is 15.10.2009. For additional information please contact Klaus.Fraedrich@zmaw.de or see the website <http://www.mi.uni-hamburg.de/6.0.html>.

Preference will be given to disabled applicants with equal qualifications.