



PhD 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:

Dynamical system approach to maximum potential intensity (MPI) of tropical cyclones

The aim of the project is to reveal dynamical system characteristics of the tropical cyclone model HURMOD. The model will be adopted to determine steady-state solutions for tropical cyclones as a function of climatologically relevant model parameters. The properties of these solutions and possible bifurcations to different branches give more insight in the probability and maximum potential intensity of tropical cyclones in different climate regimes.

For this project, the university has a 65% FTE (25 hours/week) position open for a

research associate (wissenschaftliche/r Mitarbeiter/in)

- salary group 13 TV-L - with a starting date of 01.11.2009.

The short-term, 3-year contract will end on 31.10.2012, in accordance with §§ 27, 28 Hamburg Higher Education Law (Hamburgisches Hochschulgesetz); 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.

General Responsibilities:

A research associate's duties include academic service in the project “Dynamical system approach to maximum potential intensity (MPI) of tropical cyclones”. Within this framework associates have the opportunity to further their academic education, in particular through the completion of a doctoral dissertation. The results obtained in the project may be used for the dissertation. The PhD students will participate in CliSAP's “School of Integrated Climate System Science (SICSS)”.

Specific Area(s) of Responsibility:

Application of the tropical cyclone model HURMOD, determination of steady state solutions, variation of climatologically relevant model parameters, stability analysis, detection of bifurcations, determination of thresholds for sea surface temperature and initial vortex amplitude, analysis of transient behaviour, estimation of maximum potential intensity and frequency of tropical cyclones for different climate parameter settings.

Requirements:

Academic degree in meteorology, oceanography, or physics. Furthermore, the candidate should offer

- Knowledge about atmospheric dynamics
- Experience in numerical modelling of atmospheric or oceanic flows
- Programming skills in Fortran and Unix
- Good oral and written communication skills in English

Applications (including information about the received degree and the current CV) should be sent to:

**Universität Hamburg
KlimaCampus
CliSAP Office
Code/Reference number 1952/phd1
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 Dr. Thomas Frisius (Thomas.Frisius@zmaw.de).

Preference will be given to disabled applicants with equal qualifications.