The DFG-funded International Research Training Group on "Dynamical Phenomena in Complex Networks" invites applications for a

PhD position
With focus on "Feedbacks between vegetation and climate"

The Potsdam Institute for Climate Impact Research (PIK), the Humboldt University Berlin and the Instituto Nacional de Pesquisas Espaciais (INPE), Brazil, offer training and excellent research opportunities for outstanding PhD students within the International Research Training Group on "Dynamical Phenomena in Complex Networks". Within the IRTG it is intended to study principles of self-organization in evolving complex networks. The theoretical studies will be intimately connected with the investigation of experimental and natural dynamical networks of increasing complexity starting from lasers, via hybrid networks of neurons to the Earth system. In this context, the main topic will be to understand the functioning of the Earth´s subsystems under changing conditions, especially global warming and deforestation in Amazonia. The training program includes dual supervision of each student, annual schools and workshops in Germany and Brazil. Doctoral researchers are required to spend a period of up to 6 month in the overseas partner group.

The project addresses the question of how land-use and climate change impact the dynamics of continental moisture recycling and transport in South America. The PhD student will work on the coupling of a dynamic global vegetation model (LPJmL) with an atmospheric moisture tracking model (WAM-2layers). Using this coupled model, simulated current and future pathways of continental moisture transport and their changes due to climate and land-use change will be investigated. The focus will be on analyzing changes in the origin, intermediate and destination region to separate changes in evaporation and recycled precipitation in South America. Complex network methods will be further developed to quantify changes in continental moisture recycling with particular focus on building evolving networks.

Qualifications:

- University degree at the Master/Diploma level in environmental sciences, geoecology, climatology, physics, system science. In a few exceptional cases outstanding applicant with a Bachelor's degree may be considered.
- Experience with data analysis, programming and computational modeling
  (Skills and experience in "Matlab" and "Python" would be an advantage)
- Motivation to work in a multi-disciplinary team
- Excellent knowledge of English language (written and spoken) is indispensable

Application Procedure:
The IRTG is providing fellowships for doctoral researchers funded by DFG. As a scholarship holder you will receive 1365 EUR/month, plus a research allowance of 103 EUR/month. In case you have children, you also get the DFG child allowance. For further information: http://www.physik.hu-berlin.de/irtg1740/information
Please send your application (a brief statement of research interests, a CV and full contact information for 1-2 referees) to **Dr. Kirsten Thonicke (Kirsten.Thonicke[-at-]pik-potsdam.de)**.
HU Berlin and PIK seek to increase the number of women in those areas where they are underrepresented and therefore explicitly encourage women to apply. Applications of disabled persons with equal qualifications will be favourably regarded. Evaluation of applications will start immediately until a suitable candidate is found.