

## Doctoral Scholarship (BTU COTTBUS)

Bewerbungsfrist: 06.08.2017

### Call for Applications – Doctoral Scholarship: Cluster “Signatures of Disturbed Landscapes – Case Study Post-Mining Landscapes” of the BTU Graduate Research School

The Brandenburg University of Technology (BTU) Cottbus-Senftenberg will launch new Clusters of the Graduate Research School (GRS) as part of the strategy to strengthen the BTU research profile. Clusters are flexible units that shall contribute to the creation of critical masses in the core research areas of BTU. At the same time they are an important instrument of promoting young researchers. Against this backdrop the BTU will establish in October 2017 the Cluster “Signatures of Disturbed Landscapes – Case Study Post-Mining Landscapes”. Successful applicants are expected to begin their research in October 2017 and the scholarship will be tenable for 36 months. The amount of the scholarship is 1,600 euros per month. The GRS will also offer a child allowance for doctoral candidates with children (200 euro/child/month). Successful candidates will have access to additional funding of the GRS for their doctoral research (e.g. mobility grants etc.).

#### Description of the cluster:

Main objective of the cluster is elaborating characteristic signatures of disturbances in the Lower Lusatian post-mining landscapes based on carbon balances of terrestrial and aquatic landscape sub-systems compared with undisturbed reference systems. The cluster aims to establish scientifically sound results for optimizing the reintegration of disturbed landscapes into their natural surroundings.

#### Description of the dissertation topic:

The “signature” of mining lakes is characterized by specific water qualities compared to adjacent landscapes which were not affected by mining activities. Acidic mining lakes are e.g. very young ecological systems with specific types of primary succession due to the acidification. This is particularly true with regard to limited food resources, limited structural diversity and the complexity of food webs. A serious problem is the dominance of mixotrophic species: the bacterial production exceeds the primary production and seems to be decoupled. Such ecologically relevant state transitions characterize matter fluxes from aquatic systems into food webs of the surrounding terrestrial habitats. These interactions will be investigated by means of analyzing naturally occurring carbon isotopes at the interface between aquatic and terrestrial ecosystems of disturbed and rather undisturbed lakes. The doctoral thesis will be supervised jointly by the Chair of Freshwater Conservation and the Department of Ecology due to the joint aquatic and terrestrial research focus.

#### Requirements:

- driving license
- interest in fieldworks
- very good English skills
- ecological and liminological basic knowledge
- basic knowledge of statistical evaluation methods

Working language: English/German

Language of dissertation: English, a cumulative dissertation is encouraged

#### Required documents:

- CV
- Certificates and transcripts
- Letter of motivation

#### How to apply?

Please note that the cluster only accepts complete applications. The application **deadline is 06 August 2017**. Please send your application (preferably via email as one PDF) to: email: [nixdorf@b-tu.de](mailto:nixdorf@b-tu.de) and [handke@b-tu.de](mailto:handke@b-tu.de)

web: <https://www.b-tu.de/fg-gewaesserschutz/>

For further information please contact: Sub-project 2:

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Website of the GRS: [www.b-tu.de/researchschool/](http://www.b-tu.de/researchschool/)