



# UNIVERSITÄT KOBLENZ · LANDAU

The **Faculty 7: Natural and Environmental Sciences, Institute for Environmental Sciences at Campus Landau**, is inviting applications for a

## PhD Position (0,5 EGr. 13 TV-L) in the Field of Geophysics

The position is subject to the German law on fixed-term contracts in science (WissZeitVG). Salary will be according to the German public service salary scale TV-L EGr. 13 (50%). The position is to be filled as soon as possible and it ends on 31 December 2017.

The Research Group (RG) Geophysics carries out research on hydrology in the unsaturated zone and on numerical modelling of coupled processes in soil. One focus of the research of the group is the heat dissipation of underground electric power cables and how it is affected by hydraulic properties of soil. Further information about the RG Geophysics can be found here: <https://www.uni-koblenz-landau.de/en/campus-landau/faculty7/environmental-sciences/geophysics/staff/head/eva-kroener/eva-kroener>.

### Tasks:

- Independent numerical simulations of heat dissipation from underground electrical power cables in soil
  - Creating a grid in Gmsh that includes both the thermal insulation of the cable as well as the soil around the cable and that can be used for numerical simulations with Dune ([www.dune-project.org](http://www.dune-project.org)).
  - Coupling of water, vapor and heat transport in the area around the cable and including soil hydraulic properties in the numerical model
  - Implementation of the corresponding numerical program in Dune.
  - Running simulations to better understand the effect of different cable cross-sections on heat loss and heat dissipation.
- Active involvement in the RG
- Motivation to publish in high-ranking journals

### Requirements:

- The successful candidate holds an above-average university degree (Master, Diploma or alike but not only a Bachelor degree) in Engineering or another relevant field
- Ability to independently carry out scientific work
- Experience and knowledge in the field of heat dissipation from electric underground cables
- Good English language skills (written and oral)

For further information please contact Jun. Prof. Dr. Eva Kröner ([kroener@uni-landau.de](mailto:kroener@uni-landau.de)).

It is the policy of the University Koblenz-Landau to increase the percentage of female employees. If equally qualified, preference will be given to female applicants in fields where they are underrepresented. Disabled candidates are given priority, if equally qualified. International candidates are highly encouraged to apply.

Applications should include a complete curriculum vitae, an abstract of the intended project (maximum 1-page), and certificates. Please quote the reference number **159/2017** and send your application as one pdf file, before **15. September 2017** to [bewerbung@uni-koblenz-landau.de](mailto:bewerbung@uni-koblenz-landau.de).

We do not send a confirmation of receipt. In accordance to the protection of data privacy all documents will be destroyed after the application procedure

[www.uni-ko-ld.de/karriere](http://www.uni-ko-ld.de/karriere)