

PhD Position in Computational Geoscience and Reservoir Engineering

Model-controlled Bayesian inversion for geophysical inverse problems

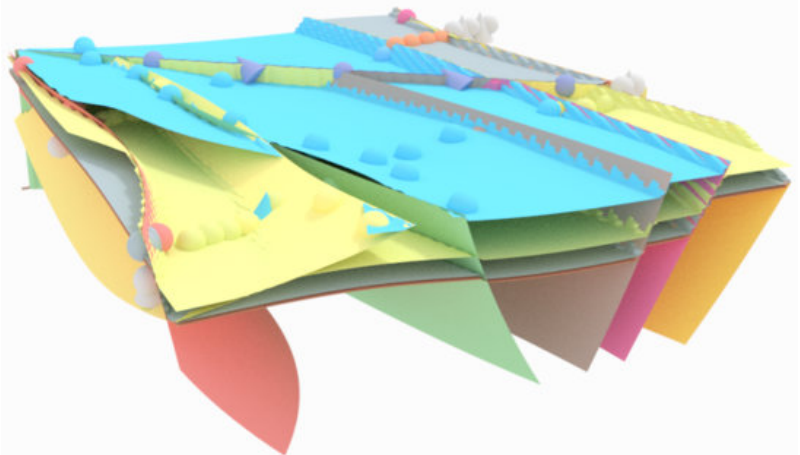
IRTG "Modern Inverse Problems" Project P11

The new DFG International Research Training Group (IRTG) 2379 builds on a unique consortium, at **RWTH Aachen University** with its Aachen Institute of Advanced Study in Computational Engineering Science, and at the **University of Texas at Austin** with its **Institute for Computational Engineering and Sciences**. The projects are embedded in the field of modern inverse problems and introduce a new innovative perspective into the education of future scientists and engineers.

This sub-project be **advised jointly by Prof. Florian Wellmann** at RWTH Aachen and **Prof. Omar Ghattas at UT Austin** and co-advised by Prof. Karen Veroy-Grepl and Prof. Tan Bui-Thanh. In the context of inverse problems, the field of geosciences provides formidable challenges: the parameter space is large, the applied mathematical models are highly complex, and the available data of diverse quality. **We seek here an outstanding candidate to investigate novel geological modeling approaches to address challenging geophysical inverse problems** in subsurface applications, for example groundwater and geothermal exploration.

The specific aims of this project are:

- Obtain **novel schemes for combined geological modeling and geophysical inversion**
- Address **challenging geophysical calibration and inverse problems**



Your Profile: Requirement for this position is a **master's degree in Geophysics, Applied Geosciences, Physics**, or a similar subject with a superior academic record. Practical programming experience in Python or C as well as with parallelization and high performance computing are of advantage. Familiarity with UNIX operating system would be ideal. Excellent written and spoken English language skills are required.

Our offer: The candidate will be employed as a regular employee and must meet required personal qualifications. This is a **full-time position with salary according to civil service pay scale TV-L E 13**. The expected **appointment period is three years**. Full involvement in the IRTG activities, including joint RWTH-UT colloquia, annual workshops and schools, and short courses is expected. A **six-month research stay at University of Texas in Austin is part of the training program**. Applications are being reviewed now (until filled) and envisaged starting date for the position is October 1st.

Please send application documents as a single PDF file containing CV, letter of motivation and research interests, transcript of records, and two letters of recommendation to: **admission@ices.rwth-aachen.de** with the subject IRTG 2379-Wellmann