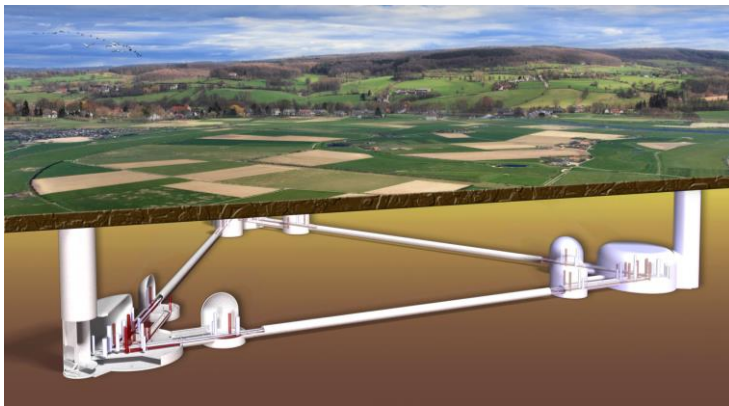


## Doctoral positions in Hydrogeology, Applied Geophysics and Hydrogeophysics for the project Einstein Telescope EMR Site & Technology (E-TEST) at the University of Liege, Belgium and at the University of Bonn, Germany.

The [E-TEST](http://www.e-test-emr.eu) consortium is seeking talented doctoral candidates for conducting research on a European scientific project related to the next generation of Einstein Telescope within the framework of the Interreg Euregio Meuse-Rhine Programme. Follow these links to discover the groups: [www.uee.uliege.be](http://www.uee.uliege.be) and [www.geo.uni-bonn.de](http://www.geo.uni-bonn.de)

For more than 10 years, the groups have led fundamental and applied research in the fields of hydrogeology, applied geophysics and hydrogeophysics. The research builds upon a tight coupling between computational modelling, process understanding and field experiments. The groups are led by Professors Alain Dassargues, Frédéric Nguyen and Andreas Kemna.

The E-TEST consortium offers a unique opportunity for candidates to work in a highly international scientific environment gathering physicists, geoscientists, engineers, all dedicated to the next generation of Einstein Telescope, a remarkable scientific instrument which will be buried approximately 300 m underground and spanning an area of roughly 43 km<sup>2</sup> for the detection of gravitational waves.



*A schematic concept of the future Einstein telescope in the Euregio Meuse-Rhine (EMR)*

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 **E-TEST** Einstein Telescope  
EMR Site & Technology  
[www.e-test-emr.eu](http://www.e-test-emr.eu)



## Function

We are looking for highly motivated doctoral candidates to join our consortium and contribute to the E-TEST project dealing with the hydrogeological and geophysical characterization of the future site dedicated to the Einstein Telescope (see [here](#) for first studies). Although the specific topic of each position will be defined based on detailed discussions with the candidates (background, interest ...), the topics will relate to one of the following subjects:

- computational hydrogeology, including the design of a hydrogeological model, interpretation of pumping and tracer tests, model calibration/inversion and forecasting of **hydraulic conditions for the construction of the Einstein Telescope**;
- coupled geophysics and hydrogeological experiments and computational modelling of the observed response using a **hydrogeophysics approach** based on monitoring sensors to enhance process understanding and support groundwater modelling;
- characterization of the geological and hydrogeological conditions in-situ based on the **integration of multiple datasets** ranging from geological maps, new drillings, seismic profiles, and large-scale tomographic surveys to be performed within the EMR.

The candidates may also contribute to teaching and project activities, which is an asset for their professional development.

## Profile

Applicants for doctoral position must have completed a master degree in a field closely related to engineering, physics, geophysics, or hydrogeology with outstanding performances.

Excellent written and verbal English communication skills are required. French (University of Liège) or German (University of Bonn) literacy is an asset. Preference will be given to candidates with a strong interest and some level of proficiency in computer programming and field experience depending on the topic.

## We offer

Candidates will be fully funded (estimation of allowance can be made based on the CV) for 3 years at the University of Liège (100% position), or for 3 years at the University of Bonn according to German public tariff TV-L E13 (75% position). They will benefit from a dynamic working environment, with stimulating scientific support, state-of-the-art facilities and advanced computational modelling tools.

The Universities of Liège and Bonn offer comprehensive and innovative training programs:

<https://www.recherche.uliege.be/books/formations-transversales/>

<https://www.uni-bonn.de/research/argelander-program>, which enable early-career scientists to carry out their research in the best possible conditions, in compliance with the European Charter for Researchers ([link](#)).

The University of Liège ensures respect for equal opportunities and career development, while being concerned about the well-being of individuals. Gender equality policies at the University of Liège are in

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line with the commitments made in the ULiège Charter of Values, "Study pathways, research pathways, life paths", implemented in September 2016. This charter reminds that "No one can be discriminated against on the basis of differences related in particular to gender, race, disability, sexual orientation, religious, philosophical or political convictions. No one may incite hatred or discriminatory harassment".

The University of Bonn actively supports diversity and equal opportunities. The University of Bonn has been certified as a family-friendly university and offers a dual career programme. Its aim is to increase the proportion of women in those fields in which women are underrepresented and to place a special focus on promoting their careers. Therefore, the university specifically requests applications from suitably qualified women. Applications will be handled in accordance with the Equal Opportunities Act of North Rhine-Westphalia. Applications from suitably qualified people with severe disabilities that have already been verified or from people with an equivalent status will be particularly welcomed.

### *How to apply?*

Outstanding candidates should apply by email to [f.nguyen@uliege.be](mailto:f.nguyen@uliege.be) (for PhD project at University of Liège in the field of applied geophysics/hydrogeophysics), [kemna@geo.uni-bonn.de](mailto:kemna@geo.uni-bonn.de) (for PhD project at University of Bonn in the field of applied geophysics/hydrogeophysics) or [alain.dassargues@uliege.be](mailto:alain.dassargues@uliege.be) (for PhD project at University of Liège in the field of hydrogeology) with a letter of motivation, curriculum vitae, full transcripts of Bachelor and Master studies, and two references. Short-listed candidates will have to take part in an oral interview. The positions will remain open until filled; but the selection will start from March 1<sup>st</sup>, 2020. Starting date is expected in the period from April to June 2020, or earlier.

*The E-TEST project is carried out under the Interreg V-A Euregio Meuse-Rhine Programme, with €7.5 million from the European Regional Development Fund (ERDF). By investing EU funds in Interreg projects, the European Union invests directly in economic development, innovation, territorial development, social inclusion and education in the Euregio Meuse-Rhine.*

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