



University of Alicante

Applied Petrology Research Group and Hydraulic and Environmental Engineering Research Group

Environment and Earth Sciences Department and Civil Engineering Department

Early Stage Researcher PhD position at the University of Alicante –

Santiago Grisolía Program

Research project: “Hydrogeological relations in karstic Mediterranean environments: determination of processes through Rn observation as tracer”

Host institution: University of Alicante (UA)

Leader researcher: David Benavente (david.benavente@ua.es).

How to apply: Interested and eligible candidates will have to submit his/her application, **compulsory**, through the Electronic General Register of the UA, using a ‘General application’.

In the following days, the complete procedure will be released in the webpage of the researcher access of the UA ([link](#)).

Research objectives: The project aims to determine and comprehend the relations of water with different backgrounds in complex hydrogeological environments using measurements of dissolved gases such as Rn or CO₂ and aims to understand the relation and interactive processes between water-soil/rocks-atmosphere media. A field campaign will be developed in several study areas in the vicinity, selected based on the presence of Rn and where the interaction between superficial and groundwater have been already proved.

Main tasks to develop by the PhD candidate:

- Hydrogeological characterization of interested areas with natural presence of Rn in groundwater.
- Hydrochemical characterization of ground and superficial water, based on water sampling campaigns.
- Minerological, geochemical, textural and petrophysical characterization of soil and rocks forming the main structures in the study, in order to understand the geochemical evolution of water and the interaction of water with different origins.
- Identification and quantification of river-aquifer relations in the study area in order to confirm the hydrological pattern in the selected areas and to develop and apply hydrological models
- Generation and analysis of temporal series of environmental variables in the selected areas to characterize the time-frequency trends of the climatic parameters to estimate the influence of climate and/or environmental changes.
- Whatever other task related with the main objectives of the project.

Benefits and characteristics of the position:

- 3-years full-time employment contract. The definitive beginning date and duration of the contract will depend on the administrative task to complete the recruitment process.
- 37.5 hours/week



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- Gross monthly salary of 1262.89 € (plus two additional payments according to Spanish regulations).
- Initial gross allowance of 1600 € for mobility and settling down process

Compulsory requirements:

- Holding a university degree in Civil Engineering, Geological Engineering or Geology issued by a non-Spanish university after January 1st 2016.
- Holding a Master's degree or equivalent university degree in order to be able to apply for admission in a PhD program in the UA. Documental proves will must be provided before the contract signature.
- Spanish or English language skills enough to have fluent conversations and to develop correctly the research.
- Not holding any previous PhD degree.
- Not been awarded by any scholarship from the Santiago Grisolia Program.

Preferential requirements:

- Technical skills and experience related with the objective of the call, and more precisely with:
 - Geochemical modelling.
 - Superficial hydrological modelling.
 - Groundwater hydrological modelling.
 - Geographic Information Systems, GISs
 - Programming (MATLAB, R or similar).