



**LEQUIA research group of the University of Girona (Catalonia, Spain) is seeking two post-doctoral researchers in modelling techniques applied in the urban water cycle.** Reference: Postdoc-HADES-{Modelling/AI}

We are seeking two post-doctoral researchers with experience in the application of modelling and AI techniques in the urban water cycle. The selected candidates will work in a funded project of industrial research. Work place: University of Girona (Catalonia, Spain), LEQUIA research group. Researcher in-charge: Prof. Dr. Jesús Colprim.

**LEQUIA** - The Laboratory of Chemical and Environmental Engineering ([LEQUIA](#)) is a research group of the University of Girona (UdG) devoted to the development of eco-innovative environmental solutions. Founded in 1993, LEQUIA is renowned for its work within the water field. We have a multidisciplinary team of 40 people, with chemists, biologists, biotechnologists, environmental scientists, engineers, computer scientists and political scientists. Current research lines are: i) innovative bio-processes for treatment, resource recovery and synthesis of compounds, ii) advanced physical-chemical processes for treatment and/or reuse of liquid and gaseous streams, and iii) planning, control and evaluation of complex environmental systems.

**Specific positions requirements:**

- **Position “Modelling”.**
  - To hold a PhD in industrial, chemical or environmental engineering, chemistry, biotechnology or equivalent degrees.
  - Proved knowledge of Computational Fluid Dynamics (CFD) application to multiphase systems.
  - Knowledge and skills of Ansys Fluent software is highly appreciated.
  - Knowledge of biological wastewater treatment modelling (i.e activated sludge models: ASMx...), skills on Biowin, GPS-X or similar modelling software is highly appreciated.
- **Position “AI”:**
  - To hold a PhD in industrial, chemical, environmental engineering, computer sciences or equivalent degrees.
  - To have specialised knowledge in modelling and/or AI techniques, preferable applied in the urban water cycle.
  - To have the ability to use software for statistics and programming languages.

**Common requirements to both positions**

- Be fluent in English. Knowledge of Spanish and Catalan will be appreciated.
- To be proactive, have commitment to teamwork and, if possible, used to work in both academic and business environments.

**Project**

- HADES project will demonstrate at full-scale a Decision Support System for wastewater treatment plants, able to use data in near-real time, predictions and calibrated models - working as digital twin (DT) for optimizing the operation according to multiple criteria and to protect it from undesirable events, and that could be used remotely.
- The project (Reference: CPP2021-009097) is coordinated by ACCIONA and funded by the Spanish Ministry of Science (MCIN/AEI/10.13039/501100011033) and the European Union-NextGenerationEU/PRTR.



**Position conditions:**

- Position Postdoc-HADES-Modelling
  - Duration: 12 months
  - Starting date: expected April, 2023
- Position PostDoc-HADES-AI
  - Duration: 24 months
  - Starting date: expected April, 2023
- Annual gross salary for both positions: economic remuneration according to candidate expertise within the range of the UdG “Ordinary Researcher” position. For information purposes, the “Ordinary Researcher” has an annual gross salary of approximately 33.798 €/year.
- Duration of both positions can be adapted according to candidates and project development, with a minimum of 12 months contract.

**Applications**

Candidates should send their applications to Dr Jesús Colprim ([jesus.colprim@udg.edu](mailto:jesus.colprim@udg.edu)) not later than 1<sup>st</sup> March 2023, with the following documentation:

- Complete CV with list of publications, projects participation and postdoc experience.
- A brief note describing the motivation to apply for the position, their ambitions and suitability for the position applied (1 page, maximum 3000 characters).
- Two or more references, with the contact details.
- Up to three letters of recommendation (optional).