

# PhD OPPORTUNITY IN FLUVIAL REHABILITATION

## FLUVIAL DYNAMICS RESEARCH GROUP

### UNIVERSITY OF LLEIDA (SPAIN)



The Spanish Ministry of Science, Innovation and Universities, and the Spanish Research Agency funds a 4-year PhD contract. This contract is linked to the research project (**PID2024-160068OB-C32**) *Hydrosedimentary Disequilibrium, Biophysical Responses, and Recovery Potential in Mediterranean Rivers (RIVHS)*. Research will be developed within the Fluvial Dynamics Research Group -RIUS at the University of Lleida ([www.fluvialdynamics.com](http://www.fluvialdynamics.com)).

**Brief project outline:** The RIVHS project analyses the hydrosedimentary and ecological conditions of several rivers in the Ebro Basin and Inner Catalan Basins, using them as case studies to understand their implications for the diversity and abundance of freshwater biological communities, as well as for the overall functioning of ecosystems.

Within this project, the main objective of this PhD is to study, design and implement an innovative river rehabilitation plan for the Guadalupe River (Ebro Basin), which has been regulated by a large dam in its upper reach for nearly a century and currently shows signs of severe ecosystem degradation. The rehabilitation strategy aims at restoring river bed structure and sediment transport processes, habitat complexity, and spawning grounds for fish, altogether through a combination of specifically designed flushing flows and sediment reintroduction (gravel augmentation i.e. essential grain-size fractions that are currently missing from the riverbed, typically fine gravels to cobbles). The methodological approach will combine multi-temporal geomorphic surveying thorough high-resolution topography, hydrosedimentary fluxes monitoring, and hydraulic, sediment and habitat modelling. The project will benefit from existing datasets and river insights acquired in the background of previous research activities lead by the RIUS Research Group in collaboration with the Ebro Water Authorities.

**Potential candidates:** Candidates must show a background on Earth and Environmental Sciences and should be interested in fluvial geomorphology, especially in morphodynamics, and hydro-sedimentary modelling in gravel-bed rivers.

**Contract period:** 4 years starting at 1<sup>st</sup> April 2026

**Starting date for applications:** 15<sup>th</sup> January 2026

**How to apply:** Instructions will be provided before the starting date for applications

**Further details:** Gemma Piqué ([gemma.pique@ctfc.cat](mailto:gemma.pique@ctfc.cat)) and Manel Llena ([manel.llena@udl.cat](mailto:manel.llena@udl.cat))



Universitat de Lleida  
Departament de Química, Física  
i Ciències Ambientals i del Sòl

