

Postdoctoral Researcher Opportunity at the Universitat de Girona - Learning-Based Underwater Robotic Manipulation

The University of Girona (UdG) is offering a Postdoctoral Researcher position within the ViCOROB (Computer Vision and Robotics) research group, in collaboration with the Underwater Robotics Research Center (CIRS). The position is funded by the national project **Artificial Intelligence for Sea Ecological Advanced Monitoring and Restoration (AI4SEA)**.

The successful candidate will work on learning-based manipulation for underwater habitat monitoring and ecological restoration tasks using an Autonomous Underwater Vehicle equipped with one or two manipulators.

Research Topic

Learning-Based Manipulation for Intervention AUVs

This postdoctoral research will focus on the development of a **learning-based manipulation framework** that combines **Deep Reinforcement Learning (DRL)** and **Imitation Learning (IL)** techniques (such as Behavior Cloning or Vision Action Language MOdels) to achieve **robust and adaptable underwater manipulation behaviors**.

The learned skills will enable intervention tasks such as object interaction, placement, or restoration actions. The work will address learning under real-world underwater constraints, including uncertainty, partial observability, and limited sensing.

Key research aspects include:

- Integration of **DRL and IL** in a unified learning pipeline
- Learning manipulation policies from **multimodal sensory feedback**
- Validation in simulation and on a real **Intervention AUV**
- Application to **ecological monitoring and restoration scenarios**

Requirements

Applicants must have:

- A PhD in **Robotics, Artificial Intelligence, Computer Science**, or a related field
- Strong programming skills in **Python and C++**
- Proven experience in **machine learning**
- Fluency in **English**, written and spoken

Highly valued:

- Experience with **main Machine-Learning libraries**
 - Experience with **robotic manipulation** and **ROS2**
 - Familiarity with robotic simulators (e.g., Gazebo, MuJoCo, Isaac Sim)
 - Experience with **underwater or field robotics**
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Conditions

- **Full-time contract** (37.5 h/week)
 - **Duration:** 2 years (annually renewed)
 - **Montly Gross Salary: 2.120€** following UdG regulations
 - **Workplace:** Onsite at the **CIRS facilities** in Girona (Spain)
 - **Expected starting date: 1st September 2026**
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Application

Candidates must apply by completing the application form ([LINK](#)), and submitting the required documentation before 1st of June 2026.

The selection process will include an online interview.