Position Offered: POSTDOCTORAL RESEARCHER

Project: *Development of emerging DIGItalisation and data processing technologies for the study of coastal environmental phenomena with on-board sensors on DRONs (DIGIDRON)*

Technological and scientific fields: Remote Sensing, Advanced Techniques in Earth and Ocean Observation, Climate Change and Biodiversity, Artificial Intelligence, Data Analysis and Integration

Location: Puerto Real, (Cádiz), Andalusia, ICMAN-CSIC, https://www.icman.csic.es/

Research Group/PI: Ecosystem Oceanography, G. Navarro, http://eo.csic.es/, Service C-T OPECAM - SEDRON (https://opecam.csic.es/)

PROJECT SUMMARY

UAVs or drones are revolutionizing the monitoring of marine systems with their ability to perform repeated observations on demand and at exceptional spatial resolutions. ICMAN-CSIC is a pioneer in using this technology for research and monitoring a wide range of coastal environmental phenomena by developing algorithms for UAV data processing, creating open databases for the scientific community, and exploring new calibration techniques for satellite sensors. The main objective of DIGIDRON is to integrate data obtained using drones with the development of new algorithms, processing tools, and advanced machine learning and artificial intelligence techniques for the study of coastal ecosystems.

PROFESSIONAL PROFILE

Minimum requirements:

- Academic Qualifications: PhD in Marine Sciences and Technologies, Master's in
- Oceanography, and Bachelor's in Marine Sciences.
- Official EASA Remote Pilot Certification (drones): A1/A3, A2, and STS (STS-01 and 02).
- Advanced English Certification: Minimum required level C1.

Merits to be considered:

- Experience in the application of GIS software and programming skills in Python.
- Proven experience in conducting UAV flights and data processing in extreme
- environments (polar regions, natural disasters, among others).
- Verified experience with scientific publications on satellite and drone remote sensing.
- Demonstrated experience in using photogrammetric software and algorithms for
- georeferencing and mosaicking UAV flights over aquatic surfaces.

WHAT IS OFFERED

DIGIDRON will advance the candidate's professional career through high-quality research supervised by experts in marine studies at ICMAN-CSIC and UCA. Additionally, the candidate will have access to the scientific and technical services of ICMAN-CSIC, which includes a fleet of drones, sensors, and resources for UAV and satellite data processing. The candidate's training plan includes 250 ECTS: 80 ECTS for writing a scientific/technical report; 60 ECTS for training internship; 90 ECTS for digital skills training through advanced courses; and 20 ECTS for supplementary training.

Contract conditions:

Indefinite contract for a Postdoctoral Researcher associated to the Momentum Project of 4 years' duration according to Spanish science law. Gross annual salary (41.000 € - 52.000 €).

Start of contract: before 31 December 2024

PRINCIPAL INVESTIGATOR CONTACT

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