



Job offer for researchers, research technicians or research support officers under Chapter 6 allocation

Job offer

Title

3/2023 - Support in variational models and deep learning algorithms for satellite image fusion and remote sensing of plastics in the Mediterranean.

Main researcher

Name: Joan

Last name 1: Duran

Last name 2: Grimalt

Department: Department of Mathematical and Information Sciences

Contract details

Job description

The successful candidate will work on the combination of variational and deep learning models for satellite image fusion and remote sensing of plastics in the Mediterranean. The specific objectives are as follows:

- i) Improving the current variational model for merging panchromatic and hyperspectral images with the introduction of neural networks for automatic learning of the operators involved
- ii) Adapting the model to data produced by different satellites
- iii) Quantitative and qualitative comparison
- iv) Creating a model to improve the resolution of the videos produced by some satellites
- v) Designing and validating a deep learning model for the detection of plastics in fused satellite images

Category: R1 - Graduate / Engineer / Architect

Qualification: Master's degree or equivalent

Field of research: Mathematics

Subarea of research: -

Contract type details

Type of contract: Fixed-term

Full/Part-time: Full-time

Hours per week: 37,5

Work schedule: 09:00-17:00 (horari flexible segons tasques a realitzar)

Application submission deadline

From Wednesday, January 25, 2023 until Tuesday, February 07, 2023



Planned start date: Wednesday, March 15, 2023

Planned end date of the tasks subject to the contract: Thursday, March 14, 2024

Research project / Agreement

Type of activity: Project

Funding body: MINISTERI DE CIÈNCIA I INNOVACIO

Call: Projectes Estratègics Orientats a la Transició Ecològica i a la Transició Digital - FONS PRTR

Programme: Projectes Estratègics Orientats a la Transició Ecològica i a la Transició Digital

Reference number / Official code: TED2021-132644B-I00

Number of positions available: 1

Candidate requirements

Skills/Qualifications

- Degree in Mathematics.
- Master's in Mathematics / Mathematical Modelling / Deep Learning / Computer Vision.

Specific requirements

- Advanced mathematical optimisation and variational calculus skills.
- Advanced Python skills.

Language requirements

- B2 level of English

Experience required: -

Prior experience

-

Additional information

Monthly salary and benefits: 1.450,00 €

Selection process

In accordance with article 8 of the REGULATORY AGREEMENT 145140 of 15th June 2022 that approves the regulation governing the recruitment of research staff under chapter 6 allocation of the university budget, as well as technical or operational research staff.

Eligibility criteria:

- Curricular merits in the field (max. 40 points).
- Qualifications in the specialist area (max. 20 points), other (max. 5 points).
- Video curriculum and, if applicable, personal interview (max. 20 points).
- Experience in the field (max. 15 points). E.g.: > 3 years (10 points), < 3 years (5 points).
- Other merits (max. +5 points). E.g.: recommendation letters.

Eligibility threshold: 60 points.



Selection comitee

- i. The relevant Pro-Vice-Chancellor for research (or delegated representative) as chair.
- ii. The supervisor (or delegated representative).
- iii. The members of the Research Area Assessment Committee (CARAI).
- iv. One or more expert members in the topic pertaining to the recruitment and chosen by the chair of the committee, where applicable.
- v. The head of FORHU (or delegated representative), as secretary, who may speak but not vote.

Additional comments

-

Reference project TED2021-132644B-I00 funded by MCIN/AEI /10.13039/501100011033 and by the European Union NextGenerationEU/ PRTR.