



CREAF



SEVERO
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EXCELLENCE

RESEARCH ENGINEER SCIENTIST FOR THE *PYMEDEASCAT* PROJECT (ref.21-033-90019)

CREAF is seeking a research engineer, to support the development of an IAM for policy advice on the decarbonization, for the *PYMEDEASCAT* project with ref. 90019, financed by *Departament d'Acció Climàtica, Alimentació i Agenda Rural* for the *Generalitat de Catalunya*.

We seek a candidate interested in joining an active and interdisciplinary team involved in the investigation and modelling of pathways to a decarbonized socio-economy within Earth's biophysical limits. The research to be conducted will be focused on analyzing the impacts of the climate change on resources exploitation/production and their feedbacks to the socio-economy. Knowledge on system dynamics and complex systems analysis will be a plus.

The candidate will be based in Barcelona, although the possibility to work remotely will also be contemplated depending on the candidate profile, needs of the project, as well as the evolution of the pandemic. The candidate should be willing to travel to attend consortium meetings, conferences, etc.

One-year contract full-time is offered, with the possibility of a two-year extension depending on performance/funding. The salary range offered is between 22.576,74 and 28.489,70 € gross per year, depending on the candidate's conditions.

TASKS

- Critical analysis of the current conceptual models and identifications of potential improvements.
- Collecting data to feed the models (materials, energy, economy, demography, climate, etc.).
- Improving the existing conceptual models and extending their capabilities.
- Writing/editing technical reports and model documentation.
- Maintaining and improving our Python codebase.
- Participating/organizing work meetings.
- Results dissemination.

REQUIREMENTS

- BSc in physics, mathematics, engineering or similar (with at least 1 year of experience in a related topic), or be in possession of a MSc or a Phd in a qualifiable domain.
- Knowledge of:
 - o The challenges of the energy transition (CC impacts, material requirements, planetary boundaries, etc.) and with the energy system technologies.
 - o Data collection, data curation and data quality assessment.
 - o Python, Julia or similar.
- Proficient in English, both written and oral.
- Modelling experience in one or several of the following fields: System Dynamics, Integrated Assessment Models, Agent-based Models, Linear programming.

ASSESSABLE CONDITIONS

- Expertise in the materials required for the energetic transition.
- Knowledge of IO models.
- Version Control Systems (e.g., Git).

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- Uncertainty and Sensitivity Analysis.
- Knowledge of web technologies and databases.
- Scientific dissemination (papers, oral communications, etc.).
- Proficiency in Catalan.

SELECTION PROCES AND CRITERIA

1. Admission of candidates: **applicants must submit a *curriculum vitae* in English, a cover letter (maximum 500 words), the questionnaire attached to the offer (filled), by e-mail to laboral@creaf.uab.cat, until 30 September 2021, indicating the reference code of the offer.** Applications referred to another portal, other than CREAM job openings section, and the instructions included in these, will not be accepted.

Recommendation letters are not required but will be valued.

2. Pre-selection: determination of compliance with the minimum requirements of the offer.
3. Selection: assessment of the preselected candidates by scoring based on objective criteria.
4. Final decision: in case of finding the suitable person, the election will be formally communicated to him/her, and the identification of the chosen person will be published on CREAM job openings section.

