

Junior Master Technician

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| Position: | Junior Master Technician | | |
| Project: | POCTEP Interreg Project BIOSCOOL (0411_BIOSCOOL_4_E) - Promotion of bioclimatic solutions to achieve adaptive comfort levels and free cooling in buildings | | |
| Professional category: | Junior Master Technician | | |
| Work Center: | University of Extremadura, Cáceres Campus | | |
| Number of places: | 1 | Reserve percentage, if applicable: | |
| Department: | THERMAL ENERGY STORAGE | | |
| Offer date: | DOE Publication | Deadline for submitting bids: | 15 calendar days , counting from the day after publication in the DOE (Official Journal of Extremadura) |
| Application for participation: | Published together with the terms and conditions of the call for applications and on the CIIAE website | Form of presentation of the application for participation by applicants: | <p>APPLICANTS MUST SUBMIT ALL DOCUMENTATION FROM SECTION 5 OF THE RULES, indicating:</p> <p><u>Ref. TMJ-BIOSCOOL (THERMAL ENERGY STORAGE)</u></p> |
| Documents to be submitted with the application: | <p>The documents listed in point 5 of the Call Bases.</p> <p>In addition to the mandatory documentation listed above, the following will be considered:</p> <ul style="list-style-type: none"> - Motivation Letter (maximum 2 pages) | | |
| Contact information for sending requests | FUNDECYT-PCTEX (Science and Technology Park Building), Avda. de la Investigación, s/n, PCTEX Building, Campus of the University of Extremadura - 06006 Badajoz (Spain) Email: ciae.personal@fundecyt-pctex.es www.fundecyt-pctex.es www.ciae.org | | |
| Estimated start date: | July 2026 | Probation: | 2 MONTHS |
| Waiting list | Yes, according to the regulations of points 9 and 10 of the Call Bases. | | |
| Conditions and requirements for applicants: | Those established in point 4 of the Call Bases | | |
| | President: Breogán Pato Doldán | | |

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| Members of the selection body: | Secretary and member: Marta Peña Balestra |
| | Member: Kashif Mushtaq |
| | Member: Yanio Milian Roriguez |
| Tasks to be developed: | <p>Climate change has a direct impact on ecosystems, making it a challenge to improve the resilience of infrastructure to extreme conditions. In this context, adapting buildings to recurring heat waves, rising temperatures, and climate variability in regions with hot, dry summers is fundamental to ensuring thermal comfort and improving the energy efficiency of buildings. The BioScool project seeks to optimize the thermal comfort and energy efficiency of educational buildings through passive strategies and sustainable production systems. Through bioclimatic and ventilation strategies, nature-based solutions, and innovative materials such as phase-change materials, the project aims to optimize the thermal performance of educational spaces, minimizing their environmental impact, reducing their carbon footprint, and guaranteeing adequate comfort conditions. The design of these strategies will be carried out in collaboration with the educational communities, based on an analysis of the buildings' initial conditions derived from monitoring and users' thermal perceptions. Furthermore, BioScool will foster knowledge transfer and training for companies in the construction sector, promoting the adoption of market-developed solutions to contribute to the creation of more sustainable and resilient buildings.</p> <p>In this context the following activities are planned for the candidate:</p> <ul style="list-style-type: none"> • Typological and energy analysis of the educational building stock and capacity to adapt climate change. This is focused on the literature review on the Phase-Change Materials (PCM) applications. • Analysis of environmental conditions based on real data from sensors and monitoring of educational spaces in the context of PCM application into the building. • Research into solutions based on PCM and ventilation as passive cooling strategies in educational buildings. • Evaluation of BioScool strategies in educational spaces and Implementation of pilot actions in real environments. • Improving Energy Efficiency in Educational Buildings evaluated using digital tools (such as TRNSYS) applied to proposed solutions. • Preparation of a report compiling all relevant information obtained and PCM selection through multicriteria analysis. • Characterization of the selected PCM and optimization considering design iterations. • Conceptual design and generation of alternative modular PCM capsule designs. Selection of the final design. • Detailed modeling of the modular PCM capsule. Preparation of the simulation environment. Execution of Multiphysics simulations. • Writing of reports, research articles, and conference contributions |
| Academic background: | Bachelor of Engineering and Master of Engineering |
| Other training: | Thermal characterization using DSC and use of rheology in energy materials, Thermal Conductivity Measurements using HFM 706 Lambda Series or similar, Risk |

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| | prevention in laboratory, CFD Simulation using ANSYS or similar, Solidworks 3D Modelling. | |
| Contract duration: | 17 months or until the end of the project (31/12/2028), whichever occurs first | |
| Remuneration: | Gross Annual Salary: BS: 34.295,84 € | Financing: Funded under grant agreement 0437_THESILO_4_E, co-financed at 75% by the European Regional Development Fund (ERDF) within the framework of the Interreg VI-A Spain-Portugal (POCTEP) 2021-2027 programme. |
| Details of the selection process: | | |
| <ul style="list-style-type: none"> - Technical test: No - Language : Yes (will be evaluated during the interview) - Job interview : Yes | | |
| Evaluation: evaluable criteria and subcriteria | MERIT AND CURRICULAR EVALUATION PHASE (COMPETITION). Until 60 points | |
| | <ul style="list-style-type: none"> • Academic qualification (15 points) • Experience in the physical, thermal, and chemical characterization of PCMs (10 points) • Experience in 3D modeling, CFD and multiphysics simulation (10 points) • Experience in the use of tools for data modeling and analysis (10 points) • Participation in R&D&I projects (e.g., BSc/MSc thesis in research) (5 points) • Motivation letter (10 points) | |
| | INTERVIEW PHASE (OPPOSITION). Until 40 points | |
| <ul style="list-style-type: none"> • Suitability of knowledge, experience, and other required qualifications (12 points) • Competence, aptitude, skills, and abilities: ability to work in a multidisciplinary team, ability to work independently, and critical thinking (12 points) • Communication skills in English and/or Spanish (6 points) • Interest in integrating into the organization and in performing the duties of the advertised position (10 points) | | |

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Authority: José Luis Canito Lobo, Director Gerente FUNDECYT-PCTEX

Signature: Badajoz, as of the date of the electronic signature