

RENEWABLE ENERGIES CHAIR

RESEARCH SCHOLARSHIP FOR MASTER DEGREE - 1 VACANCY

17 of July of 2023

A call for tenders is open for one scholarship for a master degree level within the scope of the european project Saltopowe - European facility on Molten SALT technologies TO power and energy system applications (GA n. 101079303), with conclusion date 30/11/2025, under the following conditions:

Scientific Area: Thermodynamics and Energy Engineering

Admission requirements:

- Master degree in Solar Energy Engineering, Mechanical Engineering, Physics or other Engineering field addressing Thermodynamics and thermal conversion and/or thermal energy storage equipment and systems. This is an eliminatory condition,
- Registration in a doctoral program covering the mentioned scientific areas,
- Strong background in renewable energy systems, with expertise in thermal energy storage systems and Carnot batteries,
- Experience in modelling, simulation and conducting techno-economic assessments of thermal systems with TES for CSP applications,
- Ability to work independently and in a team environment,

As set forth FCT Research Scholarship Regulation No. 950/2019 of December 16, 2019, article 3 and 6, candidates for “BI” (Research Grants) must comply as a rule condition for the award of the scholarship, the effective inclusion in study cycles leading to the attribution of academic degrees or in courses not leading to an academic degree. Courses that do not confer an academic degree correspond to the courses provided for in subparagraph e) of paragraph 3 of article 4 of Decree-Law No. 74/2006 of 24 March and must be developed in a higher education institution in association with at least one R&D unit, including a course plan in one or several research areas of the unit.

Work plan:

- Develop expertise to support advanced research on the innovative utilization of MS technologies in flexible and high-capacity stand-alone energy storage and inter-grid integrator solutions.
- Focus on the integration of renewable energy sources and the development of Carnot batteries.
- Conduct a techno-economic assessment of these technological approaches.



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- Develop the design, construction, and commissioning of the heat and power interfaces of the existing RI for the coupling of a high-temperature electrolyser and a shell-and-tube pyrolysis reactor.
- Ensure facility integration requirements set by UEvora-CER, coordination, security, technical requirements for heat and power supply, and infrastructure integration.
- Design, install, and commission a data server for experimental data monitoring, processing, and remote access.
- Define a standard procedure for a common policy alignment of strategies for a future implementation of new MS Technologies in various applications.
- Propose new tools and approaches for the integration of the outcomes of SALTOpower activities.
- Define concrete cost-target and market penetration/share on a long-term view.

Applicable legislation and regulations: The granting of the Research Scholarship will be carried out upon the signing of a contract between the University of Évora and the scholarship holder, as set in the template [former.fct.pt/apoios/Minuta_Contrato_Bolsa.docx](https://www.fct.pt/apoios/Minuta_Contrato_Bolsa.docx), pursuant to the Research Scholarship Statute (Law No. 40/2004 of August 18 and Decree-Law No. 123/2019 of August 28) and in accordance with the legislation and Regulation of Research Grants of the Foundation for Science and Technology, IP in force, regulation nº950/2019 of December 16, 2019: <https://files.dre.pt/2s/2019/12/241000000/0009100105.pdf> and other applicable rules.

Place of work: The work will be carried out at the Renewable Energies Chair at the University of Évora, under the scientific supervision of Dr. Pedro Horta.

Duration of the scholarship: The scholarship will have a duration of 12 months, starting on September of 2023. The scholarship contract may be renewed for a maximum period of 12 months or until the end of the budget allocation for the funding project.

Amount of monthly maintenance allowance: The amount of the scholarship corresponds to **€1199,64**, according to the table of scholarships awarded directly by FCT, I.P. in Portugal (https://www.fct.pt/wp-content/uploads/2023/02/Tabela-de-Valores-SMM_2023.pdf), payments being made monthly, by check or bank transfer.

Selection methods: The selection methods to be used will be the following:

Academic Qualifications: 50%

Classification: 50%

Adequacy: 50%

Curriculum Analysis: 50%

Scientific Activity: 50%

Experience in requested topics: 50%



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Composition of the Selection Jury:

President - Radia Ait El Cadi (Researcher - Renewable Energies Chair)

1st Effective - Diogo Canavarro (Assistant Researcher - Renewable Energies Chair)

2nd Effective - Afonso Cavaco (Researcher - Renewable Energies Chair)

1st Alternate - Luís Fialho (Principal Researcher - Renewable Energies Chair)

2nd Alternate - Pedro Horta (Coordinating Researcher - Renewable Energies Chair)

Advertising/notification of results: The final results of the evaluation will be published, through a list ordered by final grade obtained, posted in a visible and public place at the University of Évora (Cátedra Energias Renováveis, Edifício do Anel, Mitra) and the approved candidate will be notified through email.

To ensure the right of prior hearing of interested parties, the Final Classification project will be announced by any written means to all interested parties. After communicating the provisional list of the results of the evaluation, candidates have a period of 10 working days to express their opinion in a preliminary hearing of interested parties.

Application deadline: The tender is open from 18th of July to 1st of August of 2023 and the results of the selection will be published by 8th of August of 2023.

Applications must be formalized, obligatorily, by sending an application letter with the following documents: Curriculum Vitae, certificate of qualifications, reference or recommendation letters and other supporting documents considered relevant.

For the purposes of application, the evidence may be replaced by a declaration of honor signed by the candidate, but the failure to demonstrate that evidence, in the contracting phase, possession of the required degree on the deadline for application or the non-presentation of proof of enrollment in the study cycle or non-degree course, for scholarships with this component, imply the cancellation of the candidate's application.

Academic degrees obtained in foreign countries require registration by a Portuguese Institution in accordance with Decree-Law no. 66/2018, of August 16 and Ordinance No. 33/2019, of January 25th.

The presentation of the certificate is mandatory for the signing of the contract. More information can be obtained at: <https://www.dges.gov.pt/pt/pagina/recognition?plid=374>

Applications must be sent by email to:

Dr. Pedro Horta

Cátedra Energias Renováveis da Universidade de Évora

e-mail: catedraer@uevora.pt



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