

INESC TEC | Research Grant (AE2025-0209) INESC TEC

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Posted May 23, 2025, set to expire Sep. 21, 2025

Job Title	INESC TEC Research Grant (AE2025-0209)
Department	CPES
Institution	INESC TEC PORTO, , Portugal
Date Posted	May 23, 2025
Application Deadline	Jun. 5, 2025
Position Start Date	May 22, 2025
Job Categories	Graduate Student
Academic Field(s)	Engineering - Other Electrical and/or Electronics
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Job Description	

Research Opportunities

Electrical Engineering - Electricity Markets

Work description

The use of the coalition concept is growing with the need to allow small consumers to participate in electricity markets that are designed for larger consumers and retailers. Through a coalition, small consumers are able to participate in wholesale markets for the purchase and sale of energy (when they have their own generation), and even participate in flexibility markets. However, organizing these

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coalitions is not a trivial task, and a management entity, for example, an aggregator, is traditionally needed to determine the entities that will be part of each coalition.

The expected work in this area concerning the description given is as follows:

- Study in detail the existing models in the game theory literature for the study of modeling dynamic coalitions.
- Formulate the energy and flexibility transaction problem using game theory with dynamic coalitions.
- Assessment and discussion on the practical applicability of this type of models compared to traditional approaches.
- Development and implementation of an optimization module for the aforementioned model in a Python environment.
- Prepare a scientific report on activities and write scientific articles.

Minimum profile required

- Basic knowledge of the energy and flexibility market problems.
- Basic knowledge of optimization.
- Knowledge of the Python programming language.
- Fluency in English (written and spoken).

Preference factors

- Experience in the study, development and implementation of game theory.
- Experience in modeling energy and flexibility market problems.
- Experience in scientific research activities.
- Programming skills in Python.

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Maintenance stipend: € 1040.98 or 1309.64, according to the table of monthly maintenance stipend for FCT grants , paid via bank transfer. Grant holders may be awarded potential supplements, according to a quarterly evaluation process (Articles 19, 21 and 22 of the Regulations for Grants of INESC TEC and Annex II), up to a maximum limit of 50% of the monthly maintenance stipend.

INESC TEC supports costs with registration, enrollment or tuition fees, during the grant duration, under the terms established in the internal document: "Payment of Tuition fees to grant holders".

The grant holder will benefit from health insurance, supported by INESC TEC.

Application Period

Since 22 May 2025 to 05 Jun 2025

Centre

Power and Energy Systems

Scientific Advisor

[Tiago André Soares](#)

What we offer

- **Multicultural and collaborative environment**
- A multicultural, international and collaborative environment that makes it easier to exchange ideas, work in networks and create synergies.
- **International projects**
- The possibility of working in international projects with some of the most important companies in the field.
- **Mentoring**

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- Mentoring with the best researchers in the fields of electrical and industrial engineering, bioengineering, information technology and physics.
- **Self Improvement**
- The possibility of participating in international conferences, workshops, seminars and vocational training.
- **Other Benefits and Perks**
- Flexible working time, health insurance, discounts in hotels, transportation, etc.
- **Informal Events**
- Annual informal events, such as the multicultural party.

For more information: [Click Here](#)

Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact

Portugal

Contact E-mail rh@inesctec.pt