

INESC TEC | Research Initiation Grant (AE2025-0275)

INESC TEC

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Posted Jul. 11, 2025, set to expire Nov. 10, 2025

Job Title	INESC TEC Research Initiation Grant (AE2025-0275)
Department	CPES
Institution	INESC TEC PORTO, , Portugal
Date Posted	Jul. 11, 2025
Application Deadline	Jul. 24, 2025
Position Start Date	Jul. 11, 2025
Job Categories	Graduate Student
Academic Field(s)	Engineering - Other Electrical and/or Electronics
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Job Description	

Research Opportunities

Electrotechnical

Work description

The growing decentralization of energy systems and the emergence of prosumer-driven communities have brought new opportunities for integrating energy communities into ancillary service markets. However, effective participation requires innovative business models that address challenges such as

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market access, aggregation strategies, and regulatory requirements. To support this integration, it is essential to analyze the existing ecosystem and propose viable frameworks that align with both technical capabilities and economic incentives. Building on this context, the expected work in this area includes:

- Conduct a comprehensive review of existing literature, regulatory frameworks, and technical reports related to the participation of energy communities in ancillary service markets.
- Identify barriers and opportunities for energy communities to act as aggregators or engage with existing aggregators to provide services such as frequency regulation, voltage control, and reserve capacity.
- Develop a conceptual framework for the strategic participation of energy communities in ancillary services, considering stakeholder roles, incentive mechanisms, and operational constraints.
- Implement and test the proposed model using a simulation-based or real-world case study within an existing energy community tool.
- Prepare a scientific report on the activities and write scientific articles.

Academic Qualifications

- Electrical Engineering, Computer Science, Applied Mathematics, Informatics or Similar.

Minimum profile required

- Basic knowledge of data analysis.
- Basic knowledge of energy systems.
- Knowledge of the Python programming language.
- Fluency in English (written and spoken).

Preference factors

- Interest or basic experience in the operation and aggregation of energy communities.
- Interest or experience in the study of system services;.
- Experience in scientific research activities.
- Programming experience in Python.

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Maintenance stipend: € 651.12, 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, enrolment 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 11 Jul 2025 to 24 Jul 2025

Centre

Power and Energy Systems

Scientific Advisor

[Igor Rezende Castro](#)

What we offer

- **Multicultural and collaborative environment**
- A multicultural, international and collaborative environment that makes it easier to exchange

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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**
- 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

INESC TEC - Instituto De Engenharia De Sistemas E
Computadores, Tecnologia E Ciência
Portugal

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