

INESC TEC | RESEARCHER (AE2024-0361)
INESC TEC

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Posted Aug. 30, 2024, set to expire Dec. 30, 2024

Job Title	INESC TEC RESEARCHER (AE2024-0361)
Department	CPES
Institution	INESC TEC PORTO, , Portugal
Date Posted	Aug. 30, 2024
Application Deadline	Sep. 10, 2024
Position Start Date	Aug. 16, 2024
Job Categories	Graduate Student
Academic Field(s)	Engineering - Other
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Job Description	

Research Opportunities

Electrical Engineering

Work description

The work to be developed by the researcher is framed within the activities of the Laboratory of Smart Electrical Grids and Electric Vehicles at INESC TEC. The activities to be carried out, and for which the candidate's collaboration is expected, are as follows:

1. Design and specification of power conversion systems, considering applications related to hybrid

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- AC/DC grids and green hydrogen production;
2. Design and specification of electric vehicle charging systems, considering applications related to hybrid AC/DC grids, particularly hybrid electric vehicle charging solutions (AC and DC) integrating energy storage and renewable production;
 3. Development of digital twins of components/assets, such as photovoltaic generation systems, electric vehicle chargers, hydrogen electrolyzers, among others;
 4. Collaboration in the application of artificial intelligence algorithms for optimizing the operation and maintenance of facilities with renewable energy production;
 5. Production, testing, validation, and demonstration of technological solutions developed for different projects or service provisions for the industry.

An opportunity is offered to join a dynamic and motivated team and to integrate into a challenging research and experimental environment, working on highly relevant and contemporary topics.

Academic Qualifications

- Bachelor or Master electrical and computer engineering; electronics;
- Power electronics;
- Energy systems;
- Other related.

Minimum profile required

- Experience in specifying, designing, and implementing power electronics systems and printed circuit boards;
- Experience in simulation (e.g., MATLAB/Simulink or Modelica) and microcontroller programming for power conversion systems (e.g., Texas Instruments C2000);
- Experience in implementing and developing communications, such as MODBUS (TCP/RTU), CAN, REST, among others.

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Preference factors

- Experience in developing and testing embedded systems based on Linux and programming (e.g., Python, C);
- Experience in testing power electronic converters in both laboratory and field environments, using equipment for thermography, power/energy analysis, efficiency, and electromagnetic compatibility;
- Fluency in English (written and spoken);
- Good autonomy and teamwork capabilities.

Application Period

Since 16 Aug 2024 to 10 Sep 2024

Centre

Power and Energy Systems

Scientific Advisor

[Justino Miguel Rodrigues](#)

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