

INESC TEC | Research Grant (AE2024-0291)
INESC TEC

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Posted Aug. 16, 2024, set to expire Dec. 16, 2024

Job Title	INESC TEC Research Grant (AE2024-0291)
Department	CPES
Institution	INESC TEC PORTO, , Portugal
Date Posted	Aug. 16, 2024
Application Deadline	Aug. 25, 2024
Position Start Date	Jul. 25, 2024
Job Categories	Graduate Student
Academic Field(s)	Engineering - Other
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Job Description	

Research Opportunity

Electrotechnical Engineering

Work description

- 1) Investigate the state of the art of isolated and non-isolated DC/DC converter topologies.
- 2) Study the state of the art of control algorithms for photovoltaic panel converters.

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- 3) Simulate and design an isolated DC/DC converter for photovoltaic panels with an interface to a DC network.
- 4) Develop the thermal analysis of the converter.
- 5) Design the high-frequency transformer for the converter.
- 6) Develop the printed circuit board (PCB) for the power board and control board.
- 7) Develop the firmware (FW) with control algorithms for the converter using a microcontroller. 8) Test the converter in a laboratory environment.
- 9) Write complementary articles if innovative results are obtained.

Minimum profile required

Previous academic background in applied electrotechnical engineering, informatics, automation or similar.

Preference factors

- Previous experience (or academic training) in power electronics;
- Aptitude for manual work in a laboratory setting;
- Knowledge of microcontroller programming in C;
- Knowledge in developing printed circuit boards.

Maintenance stipend: € 990,98 or 1259,64, 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, enrolment or tuition fees, during the grant duration, under the terms established in the internal document: "Payment of Tuition fees to grant holders".

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

Application Period

Since 25 Jul 2024 to 25 Aug 2024

Centre

Power and Energy Systems

Scientific Advisor

[José Silva](#)

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**
- 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**

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- 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