

INESC TEC | Post Doctoral Research Grant (AE2024-0234)
INESC TEC

Direct Link: <https://www.AcademicKeys.com/r?job=238322>

Downloaded On: Jun. 30, 2024 10:29am

Posted Jun. 28, 2024, set to expire Oct. 28, 2024

Job Title	INESC TEC Post Doctoral Research Grant (AE2024-0234)
Department	CPES
Institution	INESC TEC PORTO, , Portugal
Date Posted	Jun. 28, 2024
Application Deadline	Jul. 27, 2024
Position Start Date	Jun. 27, 2024
Job Categories	Graduate Student
Academic Field(s)	Engineering - Other
Apply Online Here	https://www.inesctec.pt/en/opportunities/engineering-AE2024-0234
Apply By Email	
Job Description	

Research Opportunity

Engineering

Work description

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- 1) Model and validate Digital Twins (DT) of power generation plants for the creation of a fault database. The models will be based on the technical specifications of each plant and validated using SCADA system data.
- 2) Develop machine learning (ML) algorithms for fault diagnosis and malfunctions in power generation plants, using SCADA system data combined with synthetic data from Digital Twins (DT).
- 3) Develop a recommendation system that will support operation and maintenance (O&M) teams by providing strategic information on the current status of various equipment in the power generation plant.
- 4) Validate the developed methodologies with real data and different use cases focused on the energy transition.
- 5) Disseminate the work in international journals and/or conferences.

Academic Qualifications

PhD degree in:

- Electrical and Computer Engineering;
- Electrical Engineering;
- Energy, Applied Mathematics;
- Physics;
- Computer Science;
- Industrial Engineering or similar.

Minimum profile required

- Past experience with system modelling (e.g., Modelica, MATLAB Simulink)
- Python programming skills
- Academic knowledge of energy systems and/or renewable energy
- A minimum of 2 publications in Q1 journals

Preference factors

- Experience in the development of Digital Twins (DT)
- Experience in applying machine learning (ML) algorithms to engineering problems
- Knowledge or experience of energy systems problems

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Maintenance stipend: € 1801,00, 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 27 Jun 2024 to 27 Jul 2024

Centre

Power and Energy Systems

Scientific Advisor

[Tatiana Guedes](#)

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**
- Flexible working time, health insurance, discounts in hotels, transportation, etc.

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- **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