

**INESC TEC | Research Grant (AE2025-0323)**  
**INESC TEC**

Direct Link: <https://www.AcademicKeys.com/r?job=260942>

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Posted Aug. 8, 2025, set to expire Dec. 8, 2025

**Job Title** INESC TEC | Research Grant (AE2025-0323)  
**Department** CTM  
**Institution** INESC TEC  
PORTO, , Portugal

**Date Posted** Aug. 8, 2025

**Application Deadline** Aug. 13, 2025

**Position Start Date** Jul. 13, 2025

**Job Categories** Graduate Student

**Academic Field(s)** Electrical and/or Electronics  
Computer Science  
Engineering - Other

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**Job Description**

Research Opportunities

**Informatics, Electronics and Digital Systems, Digital Electronics, Microprocessors, Heterogeneous Systems**

**Work description**

1. Literature review on WiFi localization, with special attention to the WiFi 6 standard, and on the design of reconfigurable smart surfaces (RIS) in the 5GHz band, as well as their respective

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integration and control methods.

2. Design of a RIS with at least 16x16 elements, for operation at the 5GHz central frequency, considering support for at least two levels of control over the operational status of each RIS unit element.
3. Validation through simulation and anechoic chamber testing of the RIS operation and functional characteristics (i.e., signal redirection and channel manipulation capabilities).
4. Conceptualization and implementation of a RIS-based localization methodology, including a strategy for positioning the RIS (one or multiple) relative to other WiFi points, and a method for channel manipulation and data processing.
5. Physical integration of the RIS into the base localization system, including adaptation of cabling, power supply, and interface with RIS control boards and control software, and adaptation of the existing software in the base system for localization.
6. Collection of experimental data in an indoor environment and construction of an annotated dataset ("ground truth") for later analysis.
7. Evaluation of the effectiveness of the proposed methodology, including quantitative analysis of location accuracy, comparing it to the baseline system without RIS.
8. Integration with a centralized system by sending the collected data and/or estimated positions.
9. Preparation of a technical report with results and/or contribution to a scientific article.

### Academic Qualifications

- Master's degree in electrical engineering, computer science, or a related field.

### Minimum profile required

- Experience in CST PCB design.
- Experience in antenna design.
- Fluency in English (written and spoken).

### Preference factors

- Knowledge of WiFi communications.
- Familiarity with RIS or metasurfaces.

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- Embedded software.
- Fluent in Portuguese and English (written and spoken).

**Maintenance stipend:** € 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, 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 31 Jul 2025 to 13 Aug 2025

### Centre

Telecommunications and Multimedia

### Scientific Advisor

[Nuno Miguel Paulino](#)

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### 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.
- **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

**Phone Number**      222094000

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**Contact E-mail**      rh@inesctec.pt