

INESC TEC | Research Grant (AE2025-0155)  
INESC TEC

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Posted Apr. 4, 2025, set to expire Aug. 4, 2025

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|-----------------------------|---|
| <b>Job Title</b>            | INESC TEC   Research Grant (AE2025-0155)  |
| <b>Department</b>           | HUMANISE  |
| <b>Institution</b>          | INESC TEC<br>PORTO, , Portugal  |
| <b>Date Posted</b>          | Apr. 4, 2025  |
| <b>Application Deadline</b> | Apr. 16, 2025   |
| <b>Position Start Date</b>  | Apr. 3, 2025  |
| <b>Job Categories</b>       | Graduate Student  |
| <b>Academic Field(s)</b>    | Engineering - Other   |
| <b>Apply Online Here</b>    | <a href="https://www.inesctec.pt/en/form/notice/5399">https://www.inesctec.pt/en/form/notice/5399</a> |
| <b>Apply By Email</b>       |   |
| <b>Job Description</b>      |   |

Research Opportunities

**Informatics, Electronics and Digital Systems**

**Work description**

1. Familiarization with the LLVM / MLIR ecosystem, especially with the current state of the in-house compilation tools that will be the target of the work.
2. Study the current linking method, which combines low-level code ( LLVM-IR code or standard dialects), originated by C/C++ input, with code generated through the custom DSL and dialect.
3. Propose and implement an improvement to the linking process, to generate RISC-V binaries

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compatible with the target system.

4. Propose and implement code generation for an additional target (RISC-V with V extension), to demonstrate the reuse of the intermediate build layers for different targets.
5. Write the scholarship activity report.

### Academic Qualifications

- Degree in computer engineering or related field.
- Master's student in computer engineering or related field.

### Minimum profile required

- C/C++ programming experience.

### Preference factors

- Experience in compilers (parsing, and IRs), and LLVM and/or MLIR ecosystem.
- Basic knowledge of assembly generation.

**Maintenance stipend:** € 1040.98, 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 03 Apr 2025 to 16 Apr 2025

### Centre

Human-Centered Computing and Information Science

### Scientific Advisor

[João Bispo](#)

### 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**

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- 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