

Centro de Física da Universidade do Minho

EXPRESSION OF INTEREST (for doctorates) – Drivolution Agenda- Transition to the factory of the future.

14th February 2024

In the scope of the “Drivolution Agenda - Transition to the factory of the future, it is planned to hire a doctoral researcher to carry out activities within the sub-project: “Development of new coatings for application on tools and injection molds to improve the performance and longevity of the existing materials increasing the productivity gains.”

The activities to be carried out in the subproject include:

- Development of nanostructured thin films using physical vapor deposition (PVD) techniques, particularly magnetron sputtering;
- Development of thin film sensors based on thermo and piezoresistive effects;
- Integration and testing of thin film sensor arrays in polymer injection molds and stamping.

We are looking for researchers with a PhD in Physics or related scientific fields, preferably with knowledge in the areas of Thin Film Deposition by PVD and who have completed their PhD at least 5 years ago.

Proven experience will be considered in:

- The scientific area of the competition, specifically in the development of thin films by PVD, using unconventional geometries such as Glancing Angle Deposition (GLAD), based on intermetallic thin films with a titanium matrix, and deposited on various types of substrates, including polymers, for sensing purposes;
- Research and development experience in industrial solutions;
- Co-authorship of at least forty (40) articles indexed in Scopus, with an h-index of 15 or higher, of which at least five (5) should be directly related to thin films for sensory applications and/or signal acquisition;
- Experience in the acquisition, processing, and treatment of electrical signals;
- Proven project management experience;
- Relevant and proven experience in supervising/co-supervising postgraduate students.

Pursuant to Article 6 of the Career Regulation, Recruitment, Hiring and Performance Assessment of Research Personnel under Private Law at the University of Minho, the figure of guest researcher under private law will be used. In accordance with the provisions of Regulatory Decree no. 11-A/2017, of December 29, the contract to be signed with the candidate who will be selected will correspond to the category of Guest Researcher equivalent to Assistant Researcher on an exclusive dedication basis with gross monthly salary of 3,427.59 €. Other benefits include food allowance per working day, 22 working days of vacation per year, parental leave of 120 to 180 days in accordance with current law. Mandatory deductions for Social Security and IRS are deducted from the gross salary.

This announcement opens the invitation, for a period of **10 working days**, counting from the date of publication on the ECUM institutional page, to submit an expression of interest to a pool of interested parties, by sending a **letter of motivation** and a **CV in Science ID format** to project PI Doctor Armando Ferreira (armando.f@fisica.uminho.pt) until 28/02/2024.

