



# OPPORTUNITY TO DO SCIENTIFIC WORK

Send your CV till 30 October

## Get in touch with us

Send your CV with a motivation letter to:  
[research.fellows.cdrsp@ipleiria.pt](mailto:research.fellows.cdrsp@ipleiria.pt)

Virtual Visit to three of our nineteen Laboratories:  
<https://goo.gl/maps/ZmuXcDNoM832>

# OPPORTUNITY TO DO SCIENTIFIC WORK

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**The Centre for Rapid and Sustainable Product Development (CDRSP) of the Polytechnic Institute of Leiria intend to hire, in a short time, 15 to 25 new collaborators within scientific grants.**

**These grants are available for people with a degree and Master degree or PhD Degree.**

**Send an email with your CV to our human resources department through the e-mail: [research.fellows.cdrsp@ipleiria.pt](mailto:research.fellows.cdrsp@ipleiria.pt)**

## **We need candidates with the following backgrounds:**

Mechanical Engineering and related areas; Material Engineering and related areas; Physical Engineering and related areas; Chemical Engineering and related areas; Computed Engineering and related areas, Product Design and related areas, Computational Modeling, Mathematics and related areas; Civil Engineering and related areas and Aeronautics Engineering and related areas; Biomechanics, Biotechnology and related areas; Electronic Engineering and related areas;

## **Candidates that present the following skills:**

- Good knowledge on Computer Aided Design (CAD) tools/applications;
- Good knowledge on Computer Aided Engineering (CAE: structural; fluids; rheological) tools/applications;
- Good knowledge on Computer Aided Manufacturing (CAM) tools/applications;
- Knowledge on Additive Manufacturing (AM);
- Knowledge on characterization of materials equipments and processes;
- Ability to create calculation algorithms based on scientific models;
- Knowledge on implementation of calculation algorithms through programming languages;
- Knowledge on the connection of computers with multiple processors for parallel computation;
- Knowledge on processes and materials applied to Tissue Engineering and Regenerative Medicine mainly through the use of additive manufacturing technologies;
- Knowledge on the field of programming and implementation of algorithms;
- Knowledge on the synthesis and test of materials;
- Computational Modeling experience;

## Candidates must also:

- be available to full daytime schedule;
- be enthused to learn and explore new ideas, contributing to the register those ideas into patents, as well as its computational validation or lab experiments;
- be open to explore with fields of scientific investigation;
- be open to a more theoretical work as well as to a more practical and experimental work;
- present spirit of initiative by suggesting new ideas and projects;
- contribute in the elaboration/writing of scientific papers, technical reports, projects proposals/submission;
- contribute on the organization of other works necessary towards the well-functioning of the CDRSP and its 19 laboratories;
- be motivated to pursue the academic formation through master, PhD and/or Post-Doc degree;
- be available to participate in meeting, fairs, congress, workshops and other activities of dissemination, investigation and formation in Portugal and Worldwide.

## COME AND JOIN THIS TEAM



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## Manufacturing a better future

CDRsp is an IPLeiria organic research center. It was founded in May 2007 following the strategy outlined in the Lisbon European Council. Lisbon Strategy, also known as Lisbon Agenda intended an economic competitiveness, a social cohesion and a sustainable development.

This research center is a leader of a portuguese network named "Additive Manufacturing Initiative" (PAMI), which operates in the field of the fundamental research and development of new techniques for additive manufacturing. PAMI network is part of the National Road Map of Strategic Research Infrastructures and proposes a smart distribution of the excellent infrastructures located in the central region of Portugal focusing different areas of expertise (manufacturing, tooling, material, medical and electronics) aiming the increase of competitiveness and the ability of settle down a high performance productive sector.

CDRsp has an administrative, academic and scientific autonomy. The organization and management are carried out by a direction body, supported by its scientific board and by an international advisory board. The direction includes a director and two vice directors. CDRsp is a multidisciplinary research center whose main objectives fall into the pursuit and realization of research and technological development projects that lead to new products and to more efficient and sustainable materials and/or processes. Research services provision, advanced training and consultancy in CDRsp strategic areas are also important activities that complement its action. The activity of CDRsp covers several areas; however it has focused much of its work on processing and characterization of new materials for applications in very demanding and high performance fields like engineering, medical, automotive and aerospace.

The growth of CDRsp, concerning both fields as basic research or industrial application projects, has been exponential since the year 2008 to present. This growth, in terms of actions, projects, technical reports, journal articles, books, among others, has been supported by new members and new fellows. CDRsp has a reputation in research areas like polymeric materials processing and characterization, sustainable product development, additive manufacturing and tissue engineering.

This Center is currently involved in several research and development projects funded by FCT, European Commission, ADI, IAPMEI through PORTUGAL 2020 program and with companies. In addition and related with all national and international projects in which the Center is involved, IPLeiria and CDRsp itself built a strong relationship with international research institutes and companies, thereby contributing to the upgrade of the technological state of portuguese companies. CDRsp performance is also guided by the establishment and/or strengthening of partnerships with National Research Centers, University Laboratories and Technological Centers.

Since November 2015, CDRsp is located in a new scientific and technological infrastructure that allocates the researchers within the industrial environment. This infrastructure is provided with several facilities for laboratory practice, advanced training and development of outreach and dissemination activities with a view that aims to an effective technology transfer and exchange of knowledge between industry, and academia.

The new building was funded by the Sistema de Apoio a Infraestruturas Científicas e Tecnológicas (SAICT), do Programa Operacional do Centro - MaisCentro. It had loan agreement approved by the Comissão de Coordenação e Desenvolvimento Regional do Centro (CCDR Centro), with a global financial support of € 3.2 m for building and equipment.

The scientific infrastructure inaugurated on April 21, 2016, is located in the Industrial Park of Marinha Grande and supports the activities of this Research Unit of the Polytechnic Institute of Leiria, CDRsp - Centre for Rapid and Sustainable Product Development.

This infrastructure is the support for R & D + I activities, advanced training and development of outreach and dissemination activities always with the goal of an effective knowledge and technology transfer between academia and industry. It consists in 19 laboratories, with the following highlights:

- Direct Digital Manufacturing Laboratory (Focus on Additive Manufacturing: metal, polymer, composites, ceramics, etc..)
- Development and Systems Integration Laboratory
- Manufacturing Technology Laboratories
- Synthesis and Materials Characterization Laboratory
- Cell Culture and Tissue Engineering Laboratory
- Reverse Engineering and Metrology Laboratory

This infrastructure aims to contribute to scientific and technological advances leading to more efficient and appropriate products, materials and processes through the development of new technologies, their theoretical foundations and the development of methodologies based on strong scientific basis.

In this context, the Direct Digital Manufacturing big area including the additive manufacturing technologies is the main focus of CDRsp action in its diversified vectors: materials, automation, manufacturing systems, predictive models and simulation, among others. As said before, applications relate to a wide range of fields and may include medical applications, special tools, aerospace, automotive, etc.