



SCIENCE & CREATIVITY TO INVENT A SUSTAINABLE WORLD



POSTDOCTORAL RESEARCHER Project Decision support for the industrialization of the functional economy (P3S4ALL)

Institution	IMT Mines Alès (National School of Mines of Alès)
Main assignment	Center for Teaching and Research in Computer Science and Systems (CERIS)
Administrative residence	Alès (Gard department – Occitanie region)
Type of contract	16-month fixed-term contract – Public law contract – Full-time
Start date	January 2, 2026

Presentation of our institution and the CERIS Center

The Institut Mines-Télécom

The Institut Mines-Télécom (IMT), a major institution under the French Education Code, is a public scientific, cultural, and professional institution (EPSCP) under the supervision of the ministers responsible for industry and digital technology. As the leading group of engineering schools in France, it brings together 11 public engineering schools across the country, which train 13,500 engineers and PhDs. IMT employs 4,500 people and has an annual budget of €400 million, 40% of which comes from its own resources. IMT has two Carnot institutes, 35 industrial chairs, produces 2,100 A-rank publications and 60 patents annually, and carries out €110 million worth of contract research.

IMT Mines Alès

Founded in 1843, IMT Mines Alès currently has 1,400 students (including 250 foreign students) and 380 staff members. The school has three high-level scientific and technological research and teaching centers working in the fields of materials and civil engineering (C2MA), the environment and risks (CREER), and artificial intelligence and industrial and digital engineering (CERIS). It has 12 technology platforms and 1,600 partner companies.

At IMT Mines Alès, each person plays a key role in our Sustainable Development and Social Responsibility (SD&SR) approach. We are committed to promoting environmentally friendly practices, fostering diversity and inclusion, and ensuring ethics in our activities. We encourage all our employees to adopt a responsible approach in their daily actions and to propose innovative ideas that reinforce our positive impact on society and the environment.



CERIS Center

CERIS has two research teams: ISOAR for Systems and Organization Engineering for Risk Activities, and I3A for Computer Science, Image Processing, and Artificial Intelligence. CERIS also has two teaching departments: 2IA for Computer Science and Artificial Intelligence and PRISM for Industrial Performance and Mechatronic Systems, as well as two technology platforms, AIHM for Alès Imaging and Human Metrology and PFM for Mechatronics Platform.

The successful candidate will conduct research within the ISOAR team in the field of model- and data-based complex systems engineering. They will teach mainly, but not exclusively, according to their skills and interests, within the PRISM department.

ISOAR

The ISOAR team (Systems and Organization Engineering for Risky Activities) currently has eight teachers/researchers (including four professors and five HdR) and more than 16 doctoral students. These professors/researchers develop tool-based methods to support and assist a group of multi-disciplinary actors involved in engineering or reengineering projects for systems known to be complex. These may be critical infrastructures (e.g., for the production of goods and services), socio-technical systems (e.g., companies), or technical systems (e.g., mechatronic products). These projects involve and engage these stakeholders in terms of accountability and control of various types of risks (e.g., project, product, process, environmental, economic, or regulatory). This generally leads to a need for collaboration, mutual understanding, modeling and simulation, iterative and confident progress, justification, and decision support. To this end, the ISOAR team is promoting a research focus on model-based engineering (MBE) and model-based system engineering (MBSE).

The "Industrial Performance and Mechatronic Systems" (PRISM) department

The Industry of the Future area of excellence is a new way of thinking about and organizing business, relying heavily on key principles, resources, and technologies that have an impact on organization, methodology, and technology. The PRISM department offers students the opportunity to specialize in industrial and mechatronic systems engineering in order to meet the challenges of digital transition in the service of performance. It is built around strong skills in complex systems engineering.

Job description

The CERIS ISOAR team, in collaboration with the I2M laboratory at ENSAM Bordeaux, is at the forefront of research on product-service systems (PSS). As part of the **P3S4ALL** project, the objective is to develop decision-making tools for the implementation of sustainable economic models based on the functional economy.

You will actively contribute to the **P3S4ALL** (Sustainable Product-Service System for All) project, which focuses on the simulation and design of sustainable PSS systems. Your main tasks will include:

- ▶ **Three-dimensional modeling and simulation** of PSS scenarios.
- ▶ Development of **indicators for evaluating sustainable PSS solutions** and reconfigurable systems.
- ▶ **Collaboration** with multidisciplinary teams from the LSR and I2M laboratories to integrate simulation and optimization approaches.
- ▶ **Participation in the creation of an intelligent simulation tool** for testing different product/service combination scenarios and evaluating their environmental and economic viability.
- ▶ **Drafting** of technical reports and promotion of results (publications, conferences).



Required profile and general evaluation criteria

Required skills, knowledge, and experience:

- ▶ Expertise in modeling and simulation (BPMN, DEVS, RO languages).
- ▶ Experience in the field of reconfigurable systems and processes.
- ▶ Skills in monitoring environmental and economic indicators.
- ▶ Proficiency in collaborative tools for managing multidisciplinary projects.
- ▶ Expertise in supply chain management and operational research.
- ▶ Specialization in order acceptance and scheduling, supplier selection, order allocation, and batch sizing.
- ▶ Use of advanced methods: mathematical modeling, stochastic models, ϵ -constraint method, NSGA-II algorithm, heuristics, and rolling horizon approach.

Minimum education and/or experience required:

- ▶ PhD with specialization in industrial engineering, modeling, or similar disciplines.

Application



Administrative conditions for application

The position offered by IMT Mines Alès is a 16-month, full-time, fixed-term contract under public law, governed by the provisions of the Institut Mines-Télécom management framework, profession P, Postdoctoral Researcher, category II.

Salary: to be determined based on profile and experience.



Application

Applications (CV and cover letter) should be sent exclusively to:

<https://institutminestelecom.recruitee.com/o/post-doctorante-projet-aide-a-la-decision-pour-lindustrialisation-de-leconomie-de-la-fonctionnalite-p3s4all-cdd-16-mois-imt-mines-ales>



Recruitment schedule

Application deadline:

November 13, 2025

Provisional date for the selection panel:

11/28/2025

Desired start date:

January 2, 2026



Contact persons

- ▶ **Regarding the job description:**
Grégory ZACHAREWICZ, Professor, P3S4ALL Project Manager
✉: gregory.zacharewicz@mines-ales.fr
- ▶ **For administrative matters:**
Géraldine BRUNEL, Director of Human Resources
✉: geraldine.brunel@mines-ales.fr