

# POST-DOCTORAL RESEARCHER

Date update : 06/02/2023

Job localisation	IMT Mines Albi – ICA - 81000 Albi (France) INSA de Lyon – MATEIS - 69621 Villeurbanne (France)
Department	Institut Clément ADER – ICA UMR CNRS 5312

## 1. JOB ENVIRONMENT

A school of the ministry in charge of industry, IMT Mines Albi is a school of the Institut Mines-Télécom, the leading group of engineering and management schools in France. At the forefront of industrial and academic issues on the international scene, it acts as a territorial scientific and economic engine by combining its 4 missions in a virtuous circle that brings innovation and in particular research teams, distributed within its 3 centers, which work on the emergence and improvement of industrial processes, in particular on its 4 technological platforms.

This position is open within IMT Mines Albi and is attached to the Institut Clément Ader Albi (ICA-Albi) centre. This centre is part of the Institut Clément Ader (ICA - UMR CNRS 5312), a laboratory whose five supervisory institutions are IMT Mines Albi, INSA Toulouse, ISAE-SUPAERO, Université Paul Sabatier and CNRS. ICA-Albi has about 75 people and carries out research in three of the ICA research groups: the MSC group (Composite Materials and Structures), the SUMO group (Surface, Machining, Materials, Tools) and the MICS group (Measurement, Identification, Control, Monitoring). ICA-Albi is in charge of the MIMAUSA research and innovation platform (Processing of aeronautical materials and active monitoring).

The activities of ICA-Albi are mainly oriented towards problems of the aeronautics, space and energy industrial sectors. They particularly concern :

- the study of new materials and processes, mainly in the fields of metals and composites but also in those of ceramics, polymers and multi-materials,
- tools and moulds for shaping, based on multidisciplinary approaches (materials, mechanics, heat, environment, instrumentation),
- the development of new metrological techniques based on non- or low-intrusive optical sensors, for experimental photo-thermo-mechanics and process and system monitoring.

The MATEIS laboratory (Materials: Engineering and Science, UMR CNRS/INSA Lyon 5510) is specialised in the field of microstructure/property relationships of different classes of materials, in particular for structural applications. The MATEIS members participating in the SANTIAG project are part of the "Ceramics and Composites" group, and more particularly in the transverse theme on composites. This position is part of a 3-year collaborative project between the Institut Clément Ader (ICA - UMR CNRS 5312) and MATEIS (UMR CNRS 5510) laboratories on the development of a geopolymer core sandwich concept for intermediate temperatures.

## 2. RESEARCH ACTIVITIES CONCERNED BY THE PROJECT

IMT Mines Albi is recruiting a Post-Doctoral Researcher (M/F) in the Material Science speciality, for a 18month fixed-term contract. The candidate will have missions and activities mainly related to the formulation of geopolymer suspensions, to the processing of materials (skins, core, sandwiches) and to the characterization of the properties (microstructures, mechanical, thermal, ...) of the constituents (skins, core) and interfaces. He/she will also contribute to the tasks dedicated to recyclability and to the creation of an economic and environmental database. The candidate will be attached to the Materials-Processes-Properties axis of the MSC group.

## 3. CONDITIONS OF REALIZATION

Status: 18-month fixed-term contract under public law.

<u>Workplace</u>: The main place of work is located in the laboratories of the ICA-A centre, within IMT Mines Albi, with a cumulative stay of about 12 months on this site. It is also planned to spend 6 months in the MATEIS laboratory, within INSA Lyon, mainly at the beginning of the contract.

### 4. DURATION OF THE PROPOSED MISSION

18-months

### 5. REQUIRED QUALIFICATION TO PERFORM THE MISSIONS

A category B driving licence (or equivalent) is recommended.

#### 6. EXPECTED SKILLS

Knowledge:

Material science, inorganic chemistry, processing routes of composites <u>Know-how:</u>

Microstructural characterization, results analysis, synthesis and writing skills

Skills to be:

Autonomy, rigour. spirit of synthesis.

#### 7. TRAINING AND PROFILE

At the starting date of the post-doc, no later than 1<sup>st</sup> july 2023, the candidate should have obtained a PhD degree within the last 3 years, in the fields of materials.

Additional skills in one or more of the following areas will be appreciated: composite processing routes, mechanical testing, life cycle assessment.

### 8. SPECIAL CONDITIONS

As the position is open in a restricted area (ZRR) of the ICA, the recruitment is subject to the opinion of the senior defence and security official of the Ministry of Economy and Finance. Access to the CEA site is also subject to a specific procedure.

#### 9. OTHER INFORMATIONS

#### For any information:

<u>Job informations</u>: Mr. Thierry CUTARD – Full Professor (e-mail : <u>thierry.cutard@mines-albi.fr</u> - phone : (+33) 5 63 49 31 61)

<u>Administrative informations</u>: Mr. Thomas BRENAC, Human Resources Manager (e-mail: <u>thomas.brenac@mines-albi.fr</u> - phone : (+33) 5 63 49 33 65)

Closing date for applications: 28 th of April 2023

Starting date: no later than 1st July 2023.

#### **10. CONDITIONS FOR SENDING APPLICATIONS**

To apply, fllow the link bollow : <u>https://institutminestelecom.recruitee.com/o/postdocotrat-specialite-science-des-materiaux-cdd-18-mois</u>

#### Documents to be sent by mail to the following address: :

- Letter of application
- Resume (CV)
- Copy of diplomas.

#### Important :

Within the framework of the general regulations on data protection, candidates are informed that the data concerning them will be kept by the administration for a maximum period of 2 years unless they request otherwise specified in the motivation letter.