



L'AUDACE ! L'ENGAGEMENT LE PARTAGE L'EXCELLENCE



LECTURER

In the field of Processing, Analysis and Representation of spatial information

Institution :	IMT Mines Alès (Ecole nationale supérieure des mines d'Alès)
Research Unit :	UPR LSR (Laboratory for the Science of Risks)
Location :	Alès
Type of contract :	Permanent
Starting date :	01/09/2023

Presentation of CREER and EUREQUA team of the UPR LSR

Within the School, IMT Mines Alès, the Environment and Risk Research and Education Centre (CREER) conducts research activities in the fields of industrial environment and risk. It includes:

- ▶ The "Water Resources and Territories" team (ERT),
- ▶ The "Risk and air quality assessment" (EUREQUA) team.

The EUREQUA team (12 teacher-researchers, including 7 HDRs, 3 research engineers, 3 technicians, 10 doctoral students) is developing research on the management of major risks, pollution by VOCs, and odour-related nuisances and annoyances. The fields of application concern industrial, natural and chronic risks related to industrial discharges or confined environments (indoor air, work environment).

Since 1^{er} January 2021, the EUREQUA team has been part of the Laboratory for the Science of Risks (LSR), a research unit of IMT Mines Alès dedicated to the development of research work focused on risk management and, more specifically, on improving the safety, security and well-being of populations and future generations in the face of technological, chronic, natural and health risks.

The environment in which our societies evolve is subject to disturbances of both anthropogenic and natural origin, which occur on highly variable scales of time and space. These disturbances can lead to major imbalances and situations that are complex to control. The consequences of these situations are in all cases costly in human terms, or in terms of material goods, resources and organisation. These situations sometimes evolve into major crises, with a more or less long-term impact on human populations (impact on health), the environment (ecological impact), infrastructures (impact on property) or even lifestyles (impact on society and the economy). Different forms of risk are to be considered, whether they are linked to technological, natural, chronic or health aspects.

The Laboratory for the Science of Risks (LSR) is the result of the union of knowledge and know-how present within IMT Mines Alès to develop a science of risks. The research developed in the LSR is at the crossroads of engineering sciences, numerical sciences, environmental sciences, and human and social sciences, with the objective of improving the safety, security, and well-being of populations and future generations in the face of technological, chronic or natural risks.



Today, the LSR has 23 lecturers (including 14 HDR), 26 PhD students and 7 technical staff, and is equipped with an organisation and leadership that are equal to the challenge represented by this mix of communities at the service of society and the environment. Indeed, the LSR was built on the basis of a double scientific approach by crossing, on the one hand, the following "research themes":

- ▶ Characterization and reduction of hazard;
- ▶ Vulnerability assessment and resiliency;
- ▶ Engineering of complex systems in the face of risk;
- ▶ Crisis management.

These themes form transversal and federating scientific questions that can be applied to various types of risk; and on the other hand, "application fields", which represent objects of study (technological risks; chronic risks; natural risks and exceptional health risks).

Job description

Teaching activities

The teacher-researchers of the Institut Mines-Télécom are responsible for the development of teaching programmes, the coordination of teaching teams and the actions carried out in the field of educational innovation. The person recruited will therefore be required to participate, according to his/her areas of expertise and know-how in educational engineering, in the school's teaching activities, which include

- ▶ Initial training for general engineers;
- ▶ Initial training for specialised engineers by apprenticeship;
- ▶ Specialised training (master's degrees, specialised masters);
- ▶ Doctoral training.

The teacher-researchers will participate in the teaching assignments in the Energy, Environment and Risks (EER) and ISERM (Underground Engineering and Mineral Resources Exploitation) departments, as well as in the specialised Industrial Safety and Environment Masters

The person will be particularly involved in the teaching of geomatics in the EER and ISERM teaching departments, but also in supporting the various teaching projects involving spatial analysis and the use of GIS (Energy project and Oleum project, case study "gas filling centre" and "crisis management", teaching on GIS and crisis). The person will also participate in the other teaching missions of the EER department such as the "Research and Development" missions, the case studies implementing spatial analysis, the follow-up of the internships and the participation in the juries of the end of study projects.

With regard to supervisory activities, the person recruited will be required to participate, as part of the initial generalist training, in research and supervision of field missions within the framework of the pedagogy-action developed by the school, as well as in tutoring students, under student status, and under salaried status (apprentices).



Research activities

The person recruited will work in collaboration with the staff of the Laboratory for the Science of Risks and will thus contribute to the development of research in the field of prevention, risk assessment, risk control and crisis management.

In this respect, she/he will have to be involved in the research programmes of the Laboratory: contribution to the setting up of projects, to their implementation and valorisation on the theme of modelling and spatial representation of the components of major risk (hazard, vulnerability, risk and resilience)

In this context, the work of the person recruited will question the theories, concepts, approaches and tools for analysis, modelling and spatial representations of

the various components of major risk mentioned above as a support for decision-making. From a thematic point of view, the work could concern, for example, the following fields of application :

- ▶ Vulnerability and resilience of a socio-technical system
- ▶ Major industrial or natural hazards
- ▶ Transport of dangerous goods

Finally, the person recruited will have to promote his/her research activities through the publication of scientific articles of rank A as well as the realisation of national and international conferences.

Valorisation and technology transfer activities

In addition to these actions, she will be in charge of researching and setting up research contracts with industrialists as well as writing funding applications to public bodies or international programmes. In this capacity, she may be required to interface with the contracting partner, take charge of the scientific objectives defined in the project, lead the project team and monitor its progress, as well as the related communication.

On the other hand, the person should be able to understand the process of commercial exploitation of research results in order to be able to identify opportunities to contribute to cooperation between academic research, industrial research and the production sectors.

Finally, the person recruited will be required to carry out, in his/her field of scientific and technical competence,

actions intended to support companies or the school's incubator in order to encourage the creation of spin-offs and the development of technological companies.

From an administrative point of view, the person recruited will be placed under the responsibility of the EUREQUA team leader (IMT Mines Alès). Regarding the scientific management of his/her research activities, he/she will be placed under the scientific responsibility of the Director of the Risk Sciences Laboratory. She will mainly carry out her teaching missions within the framework of the common core of the initial training of general engineers at IMT Mines Alès, of the 2ER teaching department (IMT Mines Alès), and of the specialised master's degree in "Industrial Safety and Environment" (IMT Mines Alès).

Profile

- ▶ The person recruited **should have a PhD** in geography, geomatics, spatial planning or major risk management.
- ▶ He/she will have in-depth knowledge of spatial data processing (especially statistical methods), analysis and representation. He/she will have to master GIS software, know web mapping tools and the rules of graphic semiology
- ▶ The person recruited will also have expertise in the field of risk science and systems approaches. The ability to develop research in collaboration with other disciplines (physics, chemistry, organisational sciences or social sciences) will be appreciated. Previous participation in the implementation of a contractualized research project of the ANR or European type or directly with a state or private partner will also be appreciated. The candidate must also demonstrate his/her capacity for valorization through the various publications he/she has produced.
- ▶ A good command of scientific English is expected.
- ▶ International and/or corporate experience would be a positive differentiator.



- ▶ This position requires an involved, dynamic person with a notable intellectual curiosity, attracted by teamwork, training, research or collaborative projects. The incumbent will show autonomy, initiative, adaptability and rigour.
- ▶ He/she will be genuinely motivated by teaching and pedagogy, particularly active forms of teaching, as well as by partnerships with companies.

Application



Administrative requirements for application

Recruitment by recruitment commission is open in the speciality of geography, geomatics, regional planning or major risk management.

The position offered by IMT Mines Alès is a full-time, permanent contract.



How to apply ?

To collect an application file, please send a request by email to recrutements@mines-ales.fr

The application, including a curriculum vitae describing teaching activities, research work and relations with the economic and industrial world (maximum 10 pages) and, at the discretion of the candidates, letters of recommendation, should be sent to

IMT Mines Alès
For the attention of Ms Géraldine Brunel
Human Resources Management Department
6 avenue de Clavières
30319 Alès cedex

An electronic transmission is also requested from recrutements@mines-ales.fr



Recruitment calendar

Closing date for application :
14/04/2023

Indicative target date for pre-selection-comitee : 01/06/2023

Indicative target date for the recruitment comitee : 01/09/2023



Contacts details

- ▶ On job content :

Recherche :

Anne Johannet,
CREER Director
email : anne.johannet@mines-ales.fr
+33 (0)4 66 78 53 49

Laurent Aprin,
EUREQUA Team leader
email : laurent.aprin@mines-ales.fr
+33 (0)4 66 78 27 58

Enseignement :

Miguel LOPEZ FERBER,
Head of EER Department
email : miguel.lopez-ferber@mines-ales.fr
+33 (4) 66 78 27 04

- ▶ On administrative aspects :

Géraldine BRUNEL,
Head of Human Resources Management
email : geraldine.brunel@mines-ales.fr

+33 (0)4 66 78 50 66