

## PhD Call for application

SECTOR: Higher Education Institution

LOCATION: France, Grenoble

RESEARCHER PROFILE:

□ *First stage researcher,*

**INSTITUTION: Univ. Grenoble Alpes, University of Innovation**

One of the major research-intensive French universities, Univ. Grenoble Alpes\*\*1 enjoys an international reputation in many scientific fields, as confirmed by international rankings. It benefits from the implementation of major European instruments (ESRF, ILL, EMBL, IRAM, EMFL\*2). The vibrant ecosystem, grounded on a close interaction between research, education and companies, has earned Grenoble to be ranked as the 5th most innovative city in the world. Surrounded by mountains, the campus benefits from a natural environment and a high quality of life and work environment. With 7000 foreign students and the annual visit of more than 8000 researchers from all over the world, Univ. Grenoble Alpes is an internationally engaged university.

A personalized Welcome Center for international students, PhDs and researchers facilitates your arrival and installation.

In 2016, Univ. Grenoble Alpes was labeled «Initiative of Excellence ». This label aims at the emergence of around ten French world class research universities. By joining Univ. Grenoble Alpes, you have the opportunity to conduct world-class research, and to contribute to the social and economic challenges of the 21st century ("sustainable planet and society", "health, well-being and technology", "understanding and supporting innovation: culture, technology, organizations" "Digital technology").

\* ESRF (European Synchrotron Radiation Facility), ILL (Institut Laue-Langevin), IRAM (International Institute for Radio Astronomy), EMBL (European Molecular Biology Laboratory), EMFL (European Magnetic Field Laboratory)

### Key figures:

- + 50,000 students including 7,000 international students
- 3,700 PhD students, 45% international
- 5,500 faculty members
- 180 different nationalities
- 1st city in France where it feels good to study and 5th city where it feels good to work
- ISSO: International Students & Scholars Office affiliated to EURAXESS

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<sup>1</sup> Univ. Grenoble Alpes



#### **MANDATORY REFERENCES:**

CDP TITLE: **NEED for IoT**

SUBJECT TITLE: **Supply Chain Risk Management methodologies for the nano-electronic industry**

RESEARCH FIELD: **Economics**

SCIENTIFIC DEPARTMENT (LABORATORY'S NAME): **CERAG**

PARTNER LABORATORIES: SPINTEC, CEA Tech

DOCTORAL SCHOOL'S: **EDSG**

SUPERVISOR'S NAME: **Karine EVRARD SAMUEL**

#### **SUBJECT DESCRIPTION:**

Nowadays rare metals play an important role in the emergence of new technologies and especially in the nano-electronic industry with the rapid growth of IoT, generating billions of electronics objects disseminated all over the world in homes, buildings, cars, phones, etc. Up-to-now, the issue of the availability of natural resources to develop and produce these objects has been largely ignored. However recently, the World Bank warned that the energy transition will require lots of minerals and metals to build ever more digital and low-carb connected devices and the networks to handle the huge quantity of data generated by these devices. The risks of scarcity of certain minerals is already a reality and the risks of future disruptions in the electronic supply chains are rapidly growing. The aim of this doctoral work is to establish a first state of art of the risks that faces the nano-electronic supply chain, and propose methods and tools to anticipate future disruptions. The research will be develop in three steps: 1) modeling electronic supply chains; 2) assessing the criticality of materials used; 3) providing a decision making tool allowing a better anticipation of risks by researchers and companies.

#### **ELIGIBILITY CRITERIA**

Applicants:

- must hold a Master's degree (or be about to earn one) or have a university degree equivalent to a European Master's (5-year duration),

Applicants will have to send an application letter in English and attach:

- Their last diploma
- Their CV
- A short presentation of their scientific project (2 to 3 pages max)
- Letters of recommendation are welcome.

Address to send their application: [karine.samuel@grenoble-inp.fr](mailto:karine.samuel@grenoble-inp.fr)

#### **SELECTION PROCESS**

Application deadline: **15<sup>th</sup> June 2018** at 17:00 (CET)

Applications will be evaluated through a three-step process:

1. Eligibility check of applications in between June 15<sup>th</sup> and June 22<sup>th</sup> 2018
2. 1st round of selection: the applications will be evaluated by a Review Board by June 25<sup>th</sup> 2018.
3. 2nd round of selection: shortlisted candidates will be invited for an interview session in Grenoble by July 6<sup>th</sup> 2018. Results will be given by July 12<sup>th</sup> 2018.

TYPE of CONTRACT: temporary-3 years of doctoral contract

JOB STATUS: Full time

HOURS PER WEEK: 35

OFFER STARTING DATE: 01/09/2018

APPLICATION DEADLINE: 15 June 2018

Salary: between 1768.55 € and 2100 € brut per month (depending on complementary activity or not)