

## JOB SPECIFICATION FOR CALL FOR APPLICATIONS

**Date of update:** December 2021

**Job title:** Post-doctoral position in agile service composition in multicloud environments

**Localisation :** PALAISEAU (France)

**Entity / Service:** Télécom SudParis / RS2M Department

**Position of supervisor:** Director/professor Djamel Zeglache

**Category and job occupation in IMT:** II – P

**Category in the public service:** A

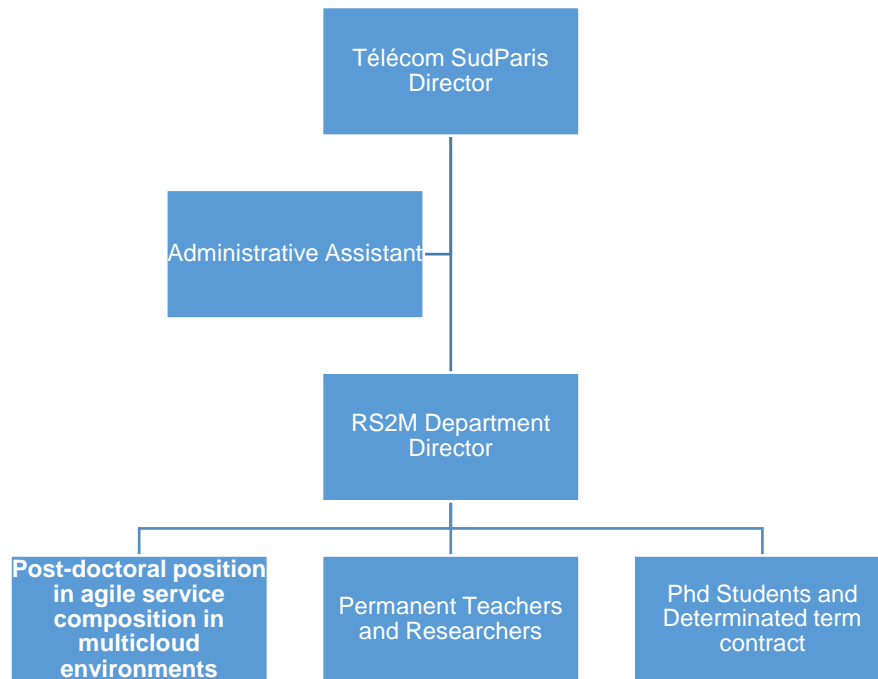
2 year renewable contract

### ABOUT TELECOM SUDPARIS

Telecom SudParis is a public graduate school for engineering, which has been recognized on the highest level in the domain of digital technology. The quality of its courses is founded on the scientific excellence of its faculty and on teaching techniques that emphasize project management, innovation and intercultural understanding. Telecom SudParis is part of the Institut Mines-Telecom, the number one group of engineering schools in France, under the supervision of the Minister for Industry. Telecom SudParis with Ecole Polytechnique, ENSTA Paris, ENSAE Paris and Telecom Paris are co-founders of the Institut Polytechnique de Paris, an institute of Science and Technology with an international vocation.

Its assets include: a personalized course, varied opportunities, the no.3 incubator in France, an ICT research center, an international campus shared with Institut Mines-Telecom Business School and over 60 student societies and clubs.

### THE POSITION IN THE ORGANIZATIONAL STRUCTURE:



## MISSIONS :

The research and development work planned in this internal project consists of contributing to the production of a service architecture capable of composing jointly network services and application level services.

This work is conducted in teamwork and a collaborative context involving academia and industry.

The objective is to extend existing TOSCA based orchestrators to dynamic service composition and life cycle management systems in multi-domain and multi-cloud environments.

## ACTIVITIES :

The research and development work concerns the joint composition of network and application services in a context of hosting services in heterogeneous multi-cloud infrastructures. The objective is to extend orchestrators based on TOSCA (Topology and Orchestration Specification for Cloud Applications) by specifying how to describe functional and non-functional aspects of application and network services to enable migration and portability without constraining users, tenants or stakeholders. The goal is to produce a description of these services and the associated orchestration and life cycle management processes for instantaneous composition through dynamic establishment of interactions and agreements between actors.

The goal is to produce the specifications and the domain specific language that can enable such composition and ease integration of these developments in service orchestrators and managers processes.

## TRAINING AND SKILLS:

### Level of training and / or experience required:

- PhD or Doctorat for less than 3 years in computer science and networks

**Essential skills, knowledge and experience:**

- In depth knowledge of service composition and management architectures
- Mastering of service description and descriptors and domain specific languages, service orchestration and management, Business Process management and workflows
- Software engineering skills essential. Reasoning and inference highly desired

**Advantageous skills, knowledge and experience:**

- TOSCA based orchestrators, Machine learning, Cooperative Multi-agent systems, formal models

**Abilities and skills:**

- Capable of team work, autonomous, scientific rigor, software development skills, real abilities to contribute to editing of deliverables in collaborative and advanced skills in publishing results and accomplishments both in French and English in highly ranked journals and conferences.

**TO APPLY:**

Please send a cover letter and CV before the January 11th, 2022, at this URL:

<https://institutminestelecom.recruitee.com//en/o/postdoctorant-en-description-et-composition-de-services-reseaux-et-applicatifs-conjointes-fh>

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Information of the candidate on the processing of personal data: <https://bit.ly/2QeOZhl>