2018-00880 - Researcher position on "stochastic processes and modeling of large networks" ERC Advanced NEMO project

**Contract type :** Public service fixed-term contract

**Renewable contract :** Oui

**Level of qualifications required :** Graduate degree or equivalent

**Fonction :** Temporary scientific engineer

## Context

Inria promotes "scientific excellence in the service of technology transfer and society." Inria employs 2,700 people from the world’s leading universities to tackle the challenges of computer science and mathematics. His open model allows him to explore original paths with his industrial and academic partners. Inria is at the origin of many innovations creating value and jobs. The position will be attached to the INRIA center in Paris (https://www.inria.fr/en/centre/paris/) and more specifically to the DYOGENE research team.

NEMO, NEtwork MOTion, is an inter-disciplinary ERC project centered on network dynamics. The inter-disciplinarity spans from communication engineering to mathematics, with an innovative interplay between the two. NEMO’s focus is on stochastic geometry. NEMO’s aim is to introduce dynamics in wireless stochastic geometry. The aim is to have, through these dynamical versions, the same academic and industrial impact on wireless networks as static stochastic geometry has today. NEMO will leverage structural interactions of INRIA with Ecole Normale Supérieure on the mathematical side, and with Nokia Bell Labs and Orange on the engineering side. This will create in Europe a group focused on this mathematicscommunication engineering interface, and to become the top innovation group of the field worldwide.

Web site for additional job details


## Assignment

The ERC NEMO project is hiring a junior researcher with a strong background probability theory and interests in network science. He/she will be hired for five years to work on all scientific challenges and research tracks of the project. He/she will help oversee the work of postdocs, students. He/she will also help developing relations with our network of external collaborators.

The researcher’s main mission will be to conduct original research activities within the framework of the ERC Nemo project. The following topics: stochastic processes, random graphs, stochastic geometry, point processes, modeling of large networks. He/She will also have a global co-supervision mission of the ERC research group.

### Main activities

To contribute :

- research work on the topics listed above 80%
- supervising PhD students and postdocs working on these topics 10%
- to the animation of scientific life 5%
- reporting process to the ERC 5%

### Skills

Mathematics: PhD or equivalent

Engineering: PhD or equivalent

ENGLISH: Excellent

PhDs in one of the fields listed above leading to original results on stochastic processes and/or modeling of large networks.

The profiles can be of various kinds: for example basic training in probability theory with interests on large random graphs, basic training in statistical physics with interests on particle systems, basic training in the field of communication networks with solid foundations in mathematics, etc.

The position should be seen as an exceptional opportunity to do top-level research for 5 years (3 years with possibility of renewal for 2 additional years) on the themes of the ERC Nemo.

### Benefits package

- Subsidised catering service
- Partially-reimbursed public transport

### Remuneration

- Duration: 3 years with possibility of renewal for 2 additional years
- Targeted hiring date: 01/01/2019
- Location: Paris
- Gross Salary per month: according to experience

### General Information

- **Theme/Domain :** Networks and Telecommunications
- **Town/city :** Paris
- **Inria Center :** CRI de Paris
- **Starting date :** 2019-01-01
- **Duration of contract :** 3 years
- **Deadline to apply :** 2018-12-31

### Contacts

- **Inria Team :** DYOGENE
- **Recruiter :** Baccelli Francois / francois.baccelli@inria.fr

### About Inria

Inria, the French National Institute for computer science and applied mathematics, promotes "scientific excellence for technology transfer and society." Graduates from the world’s top universities, Inria’s 2,700 employees rise to the challenges of digital sciences. With its open, agile model, Inria is able to explore original approaches with its partners in industry and academia and provide an efficient response to the multidisciplinary and application challenges of the digital transformation. Inria is the source of many innovations that add value and create jobs.

### Conditions for application

#### Defence Security

This position is likely to be situated in a restricted area (ZRR), as defined in Decree No. 2011-1425 relating to the protection of national scientific and technical potential (PPST). Authorization to enter an area is granted by the director of the unit, following a favourable Ministerial decision, as defined in the decree of 3 July 2012 relating to the PPST. An unfavourable Ministerial decision in respect of a position situated in a ZRR would result in the cancellation of the appointment.

#### Recruitment Policy

As part of its diversity policy, all Inria positions are accessible to people with disabilities.

**Warning :** you must enter your e-mail address in order to save your application to Inria. Applications must be submitted online on the Inria website. Processing of applications sent from other channels is not guaranteed.