2018-00311 - Computational Advanced Diffusion MRI

**Contract type:** Public service fixed-term contract  
**Level of qualifications required:** Graduate degree or equivalent  
**Other valued qualifications:** Engineer/Ph.D in computational neuro-imaging.  
**Fonction:** Temporary scientific engineer

### About the research centre or Inria department

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.

**Team Presentation**

**Team web site:** [https://team.inria.fr/athena/](https://team.inria.fr/athena/)

The successful candidates will work within the Inria Athena lab. ideally located at the heart of the French Riviera, close to Nice, Monaco, Cannes and Antibes (France).

### Context

CoBCoM has the overall goal to develop new generation of computational models and methods for identifying and characterizing the structural and functional connectivities of the brain, while integrating complementary non invasive brain imaging modalities as diffusion MRI, EEG and MEG. Clinical applications to high-impact diseases are also considered.

To know more: The article Computational brain connectivity mapping: A core health and scientific challenge published in Medical Image Analysis, MedIA 33(1), Oct. 2016, Pages 122{126 summarizes some challenges and target areas for CoBCoM and the rationale behind them.

### Assignment

Engineer Position up to 2 years is offered within the framework of the European Research Council (ERC) Advanced Grant CoBCoM: Computational Brain Connectivity Mapping. started on Sept. 1st 2016 for a duration of 5 years.

### Main activities

CoBCoM has the overall goal to develop new generation of computational models and methods for identifying and characterizing the structural and functional connectivities of the brain, while integrating complementary non invasive brain imaging modalities as diffusion MRI, EEG and MEG. Clinical applications to high-impact diseases are also considered.

To know more: The article Computational brain connectivity mapping: A core health and scientific challenge published in Medical Image Analysis, MedIA 33(1), Oct. 2016, Pages 122{126 summarizes some challenges and target areas for CoBCoM and the rationale behind them.

### Skills
Required Diploma and experience:
Applicants for an Engineer Position must have an engineer diploma from High Engineering School and some experience/knowledge in computational brain imaging using dMRI, EEG, MEG, with a strong experience in programming using Python, C, C++, Matlab and building software libraries.

Benefits package
- Restaurant on site
- Financial participation for public transport
- Social and sporting activities
- French courses

Remuneration
- Targeted hiring date: ASAP
- Location: Sophia Antipolis Site
- Gross Salary per month: depends on the experience

General Information
- Theme/Domain: Optimization, Learning and Statistical Methods
- Town/city: Sophia-Antipolis
- Inria Center: CRI Sophia Antipolis - Méditerranée
- Starting date: 5/1/18
- Duration of contract: 2 years
- Deadline to apply: 7/1/18

Contacts
- Inria Team: ATHENA
- Recruiter: Deriche Rachid / rachid.deriche@inria.fr

The keys to success
Required qualities (desired – essential):
- An Engineer/PhD in Computational neuro-imaging with a good knowledge/experience in diffusion MRI, EEG & MEG
- A publication record in high quality journals and conferences in computational brain imaging
- Strong programming skills (including Python, C, C++, Matlab, etc.)
- Proficiency in English, both spoken and written

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). Authorisation 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.