



# Postdoc opening

## Optimisation for dictionary learning & matrix factorisation

### Announcement

Applications are invited for a **2-year postdoc position** supervised by **Cédric Févotte** (CNRS senior scientist). The position is part of project FACTORY (*New paradigms for latent factor estimation*), funded by the **European Research Council** under a Consolidator Grant (2016-2021). The successful candidate will be based in **Toulouse, France**.

The scope of project FACTORY is **dictionary learning** and **matrix factorisation** for data analysis at large, with an emphasis on statistical estimation in mean-parametrised exponential models, non-convex optimisation, stochastic & approximate inference, representation learning (including neural architectures), and applications in **signal processing** (e.g., audio, hyperspectral imaging) & **data mining** (e.g., collaborative filtering).

The European Research Council offers highly competitive funding for scientific excellence. The successful candidate will enjoy an inspiring and resourceful environment, with the possibility of travelling to conferences and visiting other national or international labs.

More information at <http://projectfactory.irit.fr/>

### Host institution and place of work

The successful candidate will be employed by the **Centre National de la Recherche Scientifique** (CNRS, the National Center for Scientific Research). CNRS is the largest state-funded research organisation in France, involved in all scientific fields. FACTORY is hosted by the **Institut de Recherche en Informatique de Toulouse** (IRIT), a joint laboratory of CNRS and Toulouse universities & engineering schools. IRIT is among the largest computer & information sciences labs in France. Toulouse is the fourth-largest city in France, the capital of the Occitanie region in the South-West of France, and is praised for its high quality of living. The physical location for the project is the ENSEEIHT campus (Signal & Communications group), in a lively neighbourhood of the city center.

### Candidate profile and application

Prospective applicants should have a PhD in **machine learning**, **signal processing**, **applied mathematics**, **statistics**, or a related discipline, good programming skills, and good communication skills in English, both written and oral. Applications from candidates with a good background in optimisation or stochastic simulation are particularly encouraged. *The successful candidate will have the flexibility to choose a research topic within the range of the project, according to his/her experience and preferences.*

The net monthly salary is 2300€ for researchers with less than 2 years of professional experience after the PhD, and starts from 2700€ in other cases. The position comes with health insurance & other social benefits.

Applicants are requested to send a CV, a brief statement of research interests and the contact details of two referees in a single PDF file.

Applications and informal enquiries are to be emailed to **cedric(dot)fevotte(at)irit(dot)fr**