

1- FLAG-ERA Post-doctoral fellowship in the Cerco laboratory (Toulouse, France) on computational neurosciences and multisensory integration

Starting date: first semester of 2021

A postdoctoral research position is available to work at the Cerco laboratory under the supervision of Benoit Cottureau (CNRS researcher) and in close collaboration with Timothée Masquelier and Céline Cappe (both CNRS researchers). This position is funded by a European FLAG-ERA project (<https://www.humanbrainproject.eu/en/about/project-structure/partnering-projects/domino/>) driven by the University of Amsterdam, the Italian Institute of Neuroscience, the Panteion University in Greece and the Cerco.

The aim of the project is to develop computational models that explain the normal and abnormal development of multisensory integration (in particular of audio-visual integration) in the mammal brain. These models will be based on spiking neural networks and regulated by bio-inspired plasticity rules (see e.g. Chauhan et al., 2018). They will be validated from electrophysiological recordings performed in mice by the Dutch partners of the project.

The applicant should have a solid background in computational neurosciences, signal processing as well as very good programming skills. Knowledge on sensory systems would be highly appreciated. As the project is international and will necessitate multiple interactions between the different partners, the applicant should be keen on working in interdisciplinary environments, and should be fluent in English (French is not mandatory).

Toulouse is the second university hub in France (after Paris). It is also an attractive city with high quality of life located in the south west of France (close to the Pyrenees, the Mediterranean sea and the Spanish border).

The position is for up to 24 months with standard French salaries. Applications should be sent to benoit.cottureau@cirs.fr including a CV and 2 names of references.

Reference:

Chauhan, T., Masquelier, T., Montlibert, A., & Cottureau, B. R. (2018). Emergence of binocular disparity selectivity through Hebbian learning. *Journal of Neuroscience*, 38(44), 9563-9578.