



## **Post-doctoral position on Computational Cognitive Neuroscience of Executive Functions**

The Neuropsychology Lab at the University of the Balearic Islands (Majorca, Spain) is hiring a 2-year full-time postdoctoral research fellow to join an ongoing project on Computational Cognitive Neuroscience (CCN) of executive functions.

The project is inspired by the active (Bayesian) inference framework, and aims to address some paradoxes in the frontal lobe literature by re-examining frontal and non-frontal components of scalp-recorded P3-like cortical responses in terms of prediction errors (e.g., [https://doi.org/10.1162/jocn\\_a\\_01662](https://doi.org/10.1162/jocn_a_01662) ).

The successful candidate will hold a PhD in Physics, Biology, Psychology, Neuroscience, or related fields. The job entails modelling and analyses of a large dataset of behavioral and EEG data from young and elderly healthy controls and brain injured patients, with a special focus on analyses of Bayesian surprise, event-related potentials, oscillatory EEG signals, and/or effective connectivity (e.g., DCM). Access to patients datasets will be available in liaison with colleagues at UC Berkeley and Cambridge University. The postdoc will work closely with Professor F. Barceló as part of an international research team.

### **We request:**

- \* Experience in advanced modelling & analysis of EEG data (i.e., DCM, MPVA);
- \* Solid programming skills (e.g., MATLAB, Julia, R, or equivalent);
- \* Track record of first-author CCN publications: motivation & great writing skills;
- \* A theoretical background on executive functions would be a plus.

### **We offer:**

- \* Full time dedication to research activities;
- \* Outstanding publishing and international networking opportunities;
- \* Full access to onsite facilities (computing, EEG/ERP, neuropsych. tools, etc);
- \* We support Open Science initiatives (e.g., Neuroscience Gateway; OSF);
- \* A gross salary from 32.000 € to 38.000 € /year according with experience;
- \* A travel allowance of 1.800€/year for research visits and conferences;
- \* Full security coverage (health and accident insurance, paid time off benefits);
- \* Supported by the Spanish Research Agency (AEI PID2019-106045GB-I00);
- \* The University of the Balearic Islands is an Equal Opportunity Employer.

Suitable candidates should send their updated CV in pdf format, a letter of motivation, and the names and addresses of two referees to Francisco Barceló ([f.barcelo@uib.es](mailto:f.barcelo@uib.es)). The initial appointment is for 1 year (renewable for a 2<sup>nd</sup> year), starting January 1<sup>st</sup> 2023. Selection of candidates and interviews will be ongoing until November 30<sup>th</sup>, or until the position is filled. Informal inquiries from suitable candidates are welcomed. For more information visit: [www.mcst.es](http://www.mcst.es).