

# CONVOCATORIA DE PRÁCTICAS INTERNACIONALES CALL FOR INTERNATIONAL INTERNSHIP

## 1. INFORMACIÓN DEL SUPERVISOR Host applicant information

NOMBRE Name

CARGO Position

CONTACTO Contact: Email

Teléfono Phone

DEPARTAMENTO/FACULTAD/INSTITUCIÓN Department/Faculty/Institution

BBCO Group, Faculty of Psychology, Vrije Universitet Brussels

TIPO DE ORGANIZACIÓN Organization type

University

ORGANISMO PUBLICO

SI Yes

NO

SIN ANIMO DE LUCRO

SI Yes

NO

Public Body Non-Profit

TAMAÑO Size

WEB

<https://bbco.research.vub.be/home-brainbody-and-cognition>

DISPONIBILIDAD PARA EVALUAR INFORMES DE CONVALIDACION DE CREDITOS ECTS

¿Es una prioridad para el supervisor que el estudiante valide los créditos?

Availability to evaluate ECTS credit validation reports

Is it a priority for the supervisor that the student validates ECTS credits?

Yes

## 2. DESCRIPCION DEL PROYECTO Project description

FECHAS ORIENTATIVAS DE REALIZACION DEL PROYECTO

Wished/approximate dates for the mobility period

June – September 2023

FLEXIBILIDAD DE FECHAS Si

Flexibility in dates

NO

TÍTULO DEL PROYECTO Project title

THE SOCIAL CEREBELLUM AND PREDICTIVE SEQUENCING IN AUTISM

## NUMERO DE HORAS DE TRABAJO POR SEMANA Number of working hours per week

20 hours

### PROGRAMA Detailed programme of the traineeship

Many studies, covering a large range of mentalizing tasks, have provided empirical support for the view that the cerebellar Crus builds internal models of social interactions that identify the chronological sequences of social events while inferring the underlying mental state of the other persons, in order to predict the sequences of other people's actions and prepare suitable (sequences of) responses by the self. This mechanism allows to better anticipate social interactions in an automatic, smooth and intuitive way and to fine-tune these

anticipations, making it easier to understand others' social behaviors and mental states (e.g., beliefs, intentions, traits) which are essential for efficient social interaction.

In our lab, we propose several work packages to test essential aspects of this general hypothesis. Part of the proposal involves a set of new sequencing tasks (i.e., serial response time tasks) which allow to manipulate random versus repeated sequences, short versus long time windows of sequences, and random versus

repeated chunks of sequences. Testing these manipulations on neurotypical and autistic individuals will shed more light on the core difficulties of autism, and may provide a human analogue and test-bed for the processing difficulties of autistic individuals. Apart from behavioral evidence, research using fMRI will investigate the critical role of the posterior cerebellum Crus in autism. Another part of the proposal uses these insights for developing and testing novel training programs for young adults with autism.

## CONOCIMIENTOS, HABILIDADES Y COMPETENCIAS QUE HAN DE ADQUIRIR LOS ESTUDIANTES

Knowledge, skills and competences to be acquired by the end of the traineeship

- To run behavioral computer tasks in the laboratory.
- The protocol to obtain fMRI images, especially of cerebellum.
- Statistical analysis of data.
- Group work in international laboratory.
- How to present scientific results in a conference/journal.
- Professional approach to autistic patients.

## MONITORIZACION Monitoring plan

- Daily: the student will work day to day with another master student and the PhD students of the group.
- Weekly: the student will participate in the lab meetings of the group, with the IP, postdocs, PhD students and the rest of the team.
- Monthly: individual meetings with the host, Rocío Martínez-Regueiro, to monitor learning, resolve queries and other issues.

The student will be able to participate in the training activities of the center, as well as to attend to scientific meetings programmed during the months of stay.

## EVALUACIÓN Evaluation plan

The student will elaborate a poster for a scientific meeting with the main results of her/his work. Active participation in laboratory assignments and attendance to group meetings will be valued.

A certificate will be issued with the tasks and skills acquired.

## ESPECIFICACIONES ADICIONALES EN LA INSTITUCIÓN DE ACOGIDA

Additional specifications of the host institution

The student must attend to free safety course to participate in fMRI tasks.

## OTRA INFORMACIÓN RELEVANTE Other relevant information

None.

## 3. PERFIL Y REQUISITOS DEL ESTUDIANTE Student profile and requirements

### AREA/S DE ESTUDIO Research area/s

Preferably Psychology students. Other related areas, such as Medicine or other Health Sciences, or ej.other profiles interested in the Química, Biología, Ingeniería, Informática... (bioinformatics, etc.) are welcome.

### NIVEL DE ESTUDIO Level of studies

Senior/final years students or Master students.

## REQUISITOS PREVIOS DE CONOCIMIENTOS TECNICOS O EXPERIENCIA

Student required expertise and technical knowledge:

General knowledge of the central nervous system. Basic knowledge of statistics is beneficial as well.

## IDIOMA Y NIVEL MINIMO RECOMENDADO PARA REALIZAR LAS PRACTICAS Language and minimum level recommended for internships

English (B1)

## REQUISITOS ADICIONALES DE LA INSTITUCION DE ACOGIDA

Additional requirements set by the host institution

None