**Supervisors: Vincent Walsh and Marinella Cappelletti**

**Topic: *Learning in healthy ageing***

**Idea summary:**

Working memory and inhibitory skills are known for being very important in several everyday activities and cognitive tasks, and they are also known for declining with age.

The current project aims to study the effect of training on working memory and inhibitory skills, and the impact of any training-induced improvement on other cognitive abilities, such as attention, space especially number processing. We will be testing older healthy participants who will undergo intensive training based on an established paradigm. Half of the participants will also receive brain stimulation (transcranial direct current stimulation), whilst the other half of the participants will receive sham stimulation.

We will test the predictions that (1) people receiving brain stimulation and training may improve more than those receiving just training, and that (2) transfer to untrained but related skills may reflect the amount of improvement of working memory and inhibitory skills.

**Required Skills:**

Basic Statistics (SPSS, Excel); excellent organisational skills, previous experience in testing participants and programming in Matlab would be preferable.

**Required commitment:**

The task includes preparing the experiment (consent forms, experimental instructions, and running sheets), helping with recruiting the participants, running the experiments, backing up the data and participating in the analysis of the data.

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