**Three-year Ph.D. position in Psychology / Human Movement Sciences in Montpellier**

\* Three-year Ph.D. position in Psychology, Human Movement Sciences

\* **Research unit**: Laboratoire Epsylon, EA 4556, Université Paul Valéry, Montpellier

* **Salary**: ~1600€/monthly

\* **Application deadline**: August 1st 2023

\* **Starting date**: October 1st 2023

**Supervisors**: Pr; Stéphane Raffard (Laboratoire Epsylon, Université Paul Valéry Montpellier 3), Pr; Ludovic Marin (Laboratoire Euromov, Université de Montpellier), & Pr. Richard Schmidt (Holy Cross College, USA).

**Project**

Severe impairment of social functioning is one of the hallmarks of schizophrenia. Prominent hypotheses have suggested that social deficits result mainly from social skills impairments and social cognition abnormalities. If recent findings have demonstrated that Embodied Conversational Agents (ECA) have the potential to engage individuals with social deficits such as autism in various forms of social learning, the benefit of using ECA remains largely unexplored in schizophrenia. This project built on recent advances in ECA and movement sciences, offers to assess whether nonverbal social cues generated by an ECA can promote the achievement of social interaction between a patient and an ECA. It will furthermore investigate whether these social learnings can be generalized for patients to human-human interaction.

Specifically, the aim of this PhD is to study, describe and analyze disruptive behaviors in individuals with schizophrenia which might have short and long-term negative impact on social and behavioral adjustment with others.

The project methodology is constructed around the complementary competences of the five different partners of the consortium.

Epsylon (University of Paul Valery, Montpellier) will coordinate the project and supervise all aspects regarding schizophrenia patients related to psycho-experimental studies (Workpackage 1; WP1), computational modeling for the ECA (WP2 and WP3) and clinical protocols (WP4). UM (University of Montpellier) will analyze nonverbal behaviors during human-human and human-ECA interactions (WP1). The results will be used to build and fine-tune the computational models controlling the ECA. These models will be developed in close collaboration between ETIS (University of Cergy-Pontoise) for natural gestures motion trajectories planification and real time adaptation (WP2) and ISIR (University of Paris-Sorbonne) for modulating the ECA behavior by acting on the number of displayed multimodal behaviors, their timing of production and on their expressivity (WP 3). Finally, CHU (Montpellier Hospital) will run therapy protocols with schizophrenia patients (WP4).

**Required profile**

* The ideal candidate has a background in psychology, movement sciences and motor control, cognitive science, neuroscience or any other relevant discipline for the project.
* - Previous experience with programming (e.g., MATLAB, R etc.) and data analysis can be an asset. Commitment to open science is expected (i.e., publish data and scripts on <https://osf.opi.org.pl/en/)>.
* Spoken language requirement: English and French (for experiments with patients)
* have a strong interest for clinical populations

**Tasks required for the PhD:**

-       Running experiments and collect behavioral data

-       Analyzing data in R

-       Investigating diverse populations (e.g., adults from the general population, and individuals with schizophrenia)

-       Writing articles and disseminations through established channels (conferences, seminars…)

**How to apply**

Please send your file to [stephane.raffard@univ-montp3.fr](mailto:stephane.raffard@univ-montp3.fr) r as a single PDF file (with the file name starting with the name of candidate) including the following documents:

-  Detailed CV

-  Research statement along the lines of the project (max. 3 pages)

-  Transcripts of previous undergraduate and graduate education

-  Motivation letter (max. 2 pages, including a description of the competence that could be useful for carrying out the planned research)

-  Contact details of one or two referents (optional). Letters of recommendation are not required.

**Deadline to apply**: August 1st 2023

**Contact**: Pr. Stéphane Raffard : stephane.raffard@univ-montp3.fr