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THE FRENCH AEROSPACE LAB

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PROPOSITION DE STAGE EN COURS D'ETUDES

Référence : **DTIS -2021-**
(à rappeler dans toute correspondance)

Lieu : Salon-de-Provence

Département/Dir./Serv. : DTIS

Tél. : 0490170121

Responsable(s) du stage : Andrea Desantis

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DESCRIPTION DU STAGE

Thématique(s) : Ingénierie cognitive et interaction homme-système

Type de stage : ☒ Fin d'études bac+5 ☒ Master 2 ☐ Bac+2 à bac+4

Intitulé : A study on the role of the sense of control on sensory processing

Sujet : Numerous human activities rely on an interaction with automated systems. Automation technology shifted the role of operators from active controllers to passive supervisors of highly automated systems. This shift greatly reduced operators' experience of control and in turn their anticipatory power. Notably, the fact of not being in direct control of the operations performed by the machine may decrease operators' ability to predict the decisions and consequences of the actions of the machine, and may also decrease the processing of sensory information. This, in turn, reduces the ability of operators to anticipate potential problems and the actions to perform in case of failure. Within this framework, this internship aims at investigating the functional role of control experience (the experience of being in control of one's action and of the consequences these actions generats) on sensory processing. The internship will take place at the French aerospace lab (ONERA) in Salon-de-Provence. The successful candidate will join the Cognitive Engineering and Applied Neuroscience team of the ONERA and will be supervised by Andrea Desantis. Travel to Marseille will be essential as the experiments will be conducted at the Institut de Neurosciences de la Timone.

The trainee will be required to:

- Conduct a review of the literature on the sense of agency and its influence on sensory processing.

- Participate in the design, programming, data collection and analysis of an experiment involving EEG and psychophysics.

Est-il possible d'envisager un travail en binôme ? **Non**

Méthodes à mettre en oeuvre :

☐ Recherche théorique ☐ Travail de synthèse

☐ Recherche appliquée ☐ Travail de documentation

☒ Recherche expérimentale ☐ Participation à une réalisation

Possibilité de prolongation en thèse : **Oui**

Durée du stage : Minimum : 5 mois Maximum : 6 mois

Période souhaitée : Beginning between January and February 2022

PROFIL DU STAGIAIRE

Connaissances et niveau requis :	Ecoles ou établissements souhaités :
- Programming experience with Matlab (or Python).	Master in Cognitive Science or related disciplines

- Knowledge of visual psychophysics. - Experience with statistical approaches such as permutation tests, ANOVA etc.	