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Ageing in Vision and Action Laboratory
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INTERNSHIP PROJECT PROPOSAL

Visuo-podal integration and balance in aging

Normal aging is characterized by the alteration of both sensory (visual, proprioceptive, vestibular) and cognitive (attention, memory) functions. This project focuses on age-related changes in multisensory integration capabilities, which can hinder the interaction of older adults with their environment and lead to loss of autonomy. In particular, we are interested in evaluating the impact of healthy aging on the integration of visual and podal information. The objective of this internship is to develop and implement an experimental protocol to assess visuo-podal integration during both static and dynamic postural balance, while also examining the effects of additional cognitive load.

The experiments will comparatively study three age groups (young, middle aged, and older adults) from the SilverSight experimental cohort using Virtualis MotionVR posturography platform. This work will also apply statistical analysis methods to correlate recorded data and a variety of sensory-cognitive assessments already available for each participant of in the SilverSight cohort study (i.e., neuroimaging, clinical, and psychophysical data).

The successful student will:

- Study the neuroscience literature on age-related changes in sensorimotor and cognitive functions;
- Run the experiments using to assess visuo-podal integration in static & dynamic balance conditions, with and without additional cognitive tasks;
- Perform data analysis.

Host unit: Aging in Vision and Action team at the Vision Institute (http://www.institut-vision.org). The Vision Institute is a leading European research centre on physiological and pathological vision. It brings together on one site basic, clinical and industrial research. It promotes the sharing of concepts and techniques, the encounter of complementary skills and expertise and the emergence of new lines of research. Aging in Vision and Action team studies the impact of healthy and pathological aging on visual perceptual and cognitive functions.

Duration: 4-6 months

Location: Vision Institute, 17, rue Moreau, 75012 Paris

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