

Two funded PhD positions are available at the [Psychology and Neuroscience of Cognition \(PsyNCog\) research unit](#) (University of Liège, Belgium), under the supervision of Dr. Christel Devue (Cognitive Psychology research group). We are seeking two highly motivated candidates to work on two different research projects.

Position 1 – A cost-efficient mechanism of face learning - Interactions between stability in appearance and learning conditions (3 years funding)

The aim of the project is to test a new integrative theory of human face learning (introduced in a recent paper [here](#)) that explains how recognition performance changes as familiarity with faces develops. We hypothesise that the relative stability of a given face's appearance interact with learning demands to determine the level of details that are stored in memory over time and the quality of facial representations. In that framework, recognition errors are viewed as the flip side of an otherwise efficient and economical mechanism.

This theory will be tested with (online) behavioural and eye-tracking experiments that will track the development of facial representations. A new understanding of human face learning will help address limits of facial recognition technologies and contribute to the improvement of the treatment of people with debilitating face recognition difficulties.

Position 2 - Spatio-temporal compression in memory for real-world events (4 years funding)

Most of the current knowledge on episodic memory comes from laboratory studies in which participants memorize stimuli under artificial conditions. Yet, a new line of research suggests that information processing can manifest in dramatically different ways in the lab and in the real world. Here, we aim to determine how real-life events, and people and objects that populate these events, are represented parsimoniously to deal with storage limitations inherent to the human cognitive system. More specifically, we will investigate how the complexity of real-world events is summarized and compressed in episodic memory along the two crucial dimensions of space and time.

This question will be examined using a novel experimental paradigm that leverages information gathered by wearable camera technology and mobile eye-tracking. This project is part of a broader project in collaboration with Dr. Arnaud D'Argembeau and will imply to collaborate with another PhD student. The candidate will focus on the spatial aspects and on person recognition (including face processing).

Profile

We are seeking two highly motivated candidates with:

- A Master's degree in Experimental/cognitive psychology, cognitive neuroscience or equivalent.
- A strong affinity with or interest in episodic memory and/or face processing.
- Excellent academic records.

- Strong research skills including experimental designs and statistical analyses
 - Experience with experiment programming software (e.g. OpenSesame, E-prime, PsychoPy).
 - Coding skills (e.g., R, Matlab, or Python).
 - Excellent writing and oral communication skills.
 - A good command of English.
 - Organisational and time management skills.
 - Enthusiasm, self-motivation, team spirit and benevolence.
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- Experience with eye-tracking is a plus.
 - Experience with image and/or video editing software is a plus.
 - A command of or willingness to learn French is a plus for Position #2.

Environment

The [Psychology and Neuroscience of Cognition \(PsyNCog\) research unit](#) is recognized internationally for its research on human memory. It includes several research groups that investigate different aspects of memory and perception, creating a dynamic research environment. The Psychology department is located on a wooded campus ([Sart Tilman](#)) about 15 minutes' drive from the centre of Liège and well connected via public transports.

Procedure

To apply, please send the following to cdevue@uliege.be with email subject "Application for PhD position #1 – Face learning" or "Application for PhD position #2 – Spatio-temporal compression":

- A cover letter detailing your background and motivations.
- A curriculum vitae, including a link to a copy of your master thesis and a list of research projects in which you were involved, with a brief description of your contribution.
- Transcripts and diplomas for bachelor's and master's degrees.
- Contact details of at least two academic references who agreed to be contacted.

Applications will be accepted immediately and candidates will be considered until the positions are filled. Selected candidates will be invited for an interview online. Please contact Christel Devue (cdevue@uliege.be) for more information or informal inquiries.

Expected starting date: as soon as possible (negotiable but no later than December 2023).

Christel Devue

Lecturer

[Cognitive Psychology and Neuroscience \(PsyNCog\)](#)

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