# Internship offer

**Topic of the internship (title)**
Effect of circadian rhythms and task dynamics on team cognition processes

**Proposed dates of the internship**

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<th>Start</th>
<th>End</th>
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<td>01/09/2022</td>
<td>29/01/2023</td>
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**Scientific and academic objectives of the internship:**

**Objective**: Investigation on the effect of fatigue (especially the circadian rhythm and the change in task dynamics), on the processes of team cognition.

**Detailed missions**: During naval operators, teams have the role of monitoring what is happening around (and inside) the ship, for example to prevent any incursion or abnormal event. This monitoring task often consists of long periods of monotony and sudden need for reaction. The general purpose of this internship is to study, through the scope of fatigue, the effect of a quick change in task characteristics coupled with circadian rhythm: long period of monotony (i.e absence of stimuli or routine tasks) and a sudden situation to handle (i.e decision making) on team performance.

The internship would be divided into three stages:

- Based on the outcomes of a first Baudin’s internship in 2018-2019, the student will define the main metrics useful for analysing the quality of team cognition processes.
- Then he/she will design an experiment on a simulator enabling the study of teamwork (e.g. C3Fire), with different settings in task dynamics and at different hours of the day.
- Finally, the intern will conduct an experiment with between 10 and 20 participants, and he/she will analyse the experimental data.

**Industrial partner**

**Name of industrial partner**
Naval Group Research (CEMIS/EIFH department)

**Role of the industrial partner in the internship project**
Scientific support and expertise in the domain to define the topic and the possible use cases for the internship. Meetings with Naval Group Research will be planned during the internship to continue the scientific discussion and the progress on the topic.

**Main contact at the French industrial partner**
Chantal Mais

**Email**
chantal.mais@naval-group.com

**Australian partner**

**Name of the Australian partner institution**
University of South Australia

**Name of lab/department/team involved in the collaboration at the Australian partner institution**
Behaviour-Brain-Body Research centre (BBB)

**Main contact in the Australian partner institution**
Siobhan Banks

**Function**
Full Professor, Head of BBB centre

**Email**
Siobhan.Banks@unisa.edu.au

**Outside of this ongoing collaboration, will applications coming from students of other eligible Australian universities be considered by the hosting institution in France?**

No

**Expected profile of applicant**

**Level of study**
College of engineering (last year) or University (Master degree program)

**Discipline**
Human Factor, Psychology

**Required qualities, knowledge and skills**
Knowledge in human factors, skills in experimental design and statistical analysis