

# Enhanced user experience with eye tracking

Université Côte d'Azur + Thales



**NICOLAS BAUDIN**  
INTERNSHIPS IN FRANCE INITIATIVE

<b>Name of the hosting institution in France</b>	Université Côte d'Azur
<b>Name of the host laboratory / research team</b>	Laboratoire I3S
<b>Address</b>	Euclide B, 2000 Route des Lucioles, 06900 Sophia Antipolis
<b>Web site</b>	<a href="https://www.i3s.unice.fr/">https://www.i3s.unice.fr/</a>
<b>Name of the supervisor</b>	Fillatre
<b>Function</b>	Full Professor
<b>Email</b>	lionel.fillatre@univ-cotedazur.fr
<b>Phone number</b>	+33 (0)4 89 15 43 32

## Internship offer

**Topic of the internship (title)** Enhanced user experience with eye tracking

**Proposed dates of the internship** **Start:** 2019-09-01 **End** 2020-01-31

**Scientific and academic objectives of the internship (detailed description of the internship content, work expected from the intern and expected outcomes):**

Description: Thales DMS Underwater Business Line is a leader in Underwater defense equipment including (but not only) Sonar suite for submarines and surface ships. Thales is producing high quality systems, constantly focusing on its customer needs. Enhancing user experience is an important part of its research and development activities. The I3S laboratory is one of the largest information and communication science laboratories in the French Riviera. It is interesting in collaborating with Thales on the development on new enhanced used experience. It is especially concerned with the development of systems based on signal and image processing.

Tasks: The intern will work in the sonar software development team on new interaction mechanisms for the Human Computer Interface (HCI). Many activities are already in progress to find new ways of displaying sonar outputs. Thales wants also to test new input devices. Eye tracking will be the first new pointing device to consider. Foreseen work scheduling:

- Study of the eye tracking system that is already available on a prototyping laptop.
- Integration of the eye tracking in a 3D HCI prototype.
- Integration with another prototype that Thales is developing on speech control. Other possible user inputs: Other input devices can also be studied (3D mouse, gesture recognition).

<b>Name of industrial partner</b>	Thales DMS Underwater Business Line
<b>Role of the industrial partner in the internship project</b>	The company's branch in Australia can take part in the selection process. The industry in France will supervise the intern
<b>Main contact at the French industrial partner</b>	Pascale Sole
<b>Main contact at the French industrial partner's branch in Australia (if applicable)</b>	Tim Cain
<b>Name of the Australian partner institution</b>	Flinders University
<b>Main contact in the Australian partner institution</b>	Tony Kyriacou
<b>Function of the main contact in the Australian partner institution</b>	Defence Partnership Director
<b>Email address of the main contact in the Australian partner institution</b>	tony.kyriacou@flinders.edu.au
<b>Outside of this ongoing collaboration, will applications coming from students of other eligible Australian universities be considered by the hosting institution in France?</b>	Yes

## Expected profile of applicant

<b>Level of study</b>	Master 2 <sup>nd</sup> year
<b>Discipline</b>	Signal and image processing, computer science
<b>Required qualities, knowledge and skills</b>	- Basics in image processing - Skills in computer science: Unity 3D, Java 8, Linux, Windows 10.
<b>Other specific eligibility criteria</b>	Australian citizenship