

3D Eye tracking for man-machine interaction and visual training

IMT Atlantique



NICOLAS BAUDIN
INTERNSHIPS IN FRANCE INITIATIVE

Name of the hosting institution in France	IMT Atlantique
Name of the host laboratory / research team	Lab-STICC (UMR CNSR 6285) / LATIM (UMR INSERM 1101)
Address	Technopôle Brest-Iroise CS 83818 – 29238 Brest Cedex 3
Web site	https://www.imt-atlantique.fr/en/school/departments/optics
Name of the supervisor	Vincent Nourrit
Function	Associate Professor
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Phone number	+33 6 71 04 48 64

Internship offer

Topic of the internship (title)	3D Eye tracking for man-machine interaction and visual training.			
Proposed dates of the internship*	Start	15/10/2020	End	15/02/2021

* The supervisors have indicated the dates proposed are flexible and are able to be postponed subject to COVID-19 border closures.

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

Eye trackers are nowadays common tools in numerous fields from cognitive science to human-computer interface passing by marketing, visual rehabilitation or gaming. Currently, no commercial 3D active glasses with embedded eye tracker are available despite the importance of 3D and eye tracking for numerous applications. A prototype of 3D active glasses integrating an eye tracker has been developed at IMT Atlantique as part of a collaboration with two companies (E3S who manufactures the liquid crystal glasses and Orthoptica, specialized in orthoptics tools). The aim of the project is to develop the software to be able to carry out a number of tests, using this prototype, in the context of man-machine interaction and/or visual training. The main challenge will be developing a platform generating the visual stimulus (C# or python), collecting and processing the eye tracker data (python).

Name of industrial partner	Orthoptica – http://orthoptica.com/ E3S (Eyes Triple Shut) - http://www.eyes3shut.com/fr/
Role of the industrial partner	Provider of vision technologies
Main contact at the French industrial partner	Dusan Iorgovan
Name of the Australian partner institution	University of Adelaide
Name of lab/department/team involved in the Collaboration at the Australian partner institution	Psychology / Computer Science
Main contact in the Australian partner institution	Anna Ma-Wyatt
Function	Associate Professor / Professor
Email	anna.mawyatt@adelaide.edu.au
Phone number	+618 8313 5660

Outside of this ongoing collaboration, will applications coming from students of other eligible Australian universities be considered by the hosting institution in France?	No
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Expected profile of applicant

Level of study	Master's student
Discipline	Psychology or Computer Science
Required qualities, knowledge and skills	Programming skills (python and ideally C#)