

# 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	Département Optique
Address	Technopôle Brest-Iroise, 29217 Plouzané
Name of the supervisor	Vincent Nourrit
Function	Associate Professor
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## Internship offer

Topic of the internship (title)	3D Eye tracking for man-machine interaction and visual training			
Proposed dates of the internship	<b>Start</b>	01/11/2021	<b>End</b>	31/01/2022

### Scientific and academic objectives of the internship:

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)

## Industrial partner

Name	Orthoptica
Role of the industrial partner in the internship project	Provide hardware and technical support
Main contact	Dusan Iorgovan
Email	dusan.iorgovan@orthoptica.com

## Australian partner

Name of the Australian partner institution	The University of Adelaide
Lab/department/team involved in the collaboration	CNRS IRL Crossing
Main contact in the Australian partner institution	Anna Ma-Wyatt
Function	Professor
Email	anna.mawyatt@adelaide.edu.au

Outside of this ongoing collaboration, will students from other Australian universities be considered by the hosting institution in France?	Yes
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## Expected profile of applicant

Level of study	BSc/MSc
Discipline	Computer science / Psychology
Prerequisite knowledge, qualities and skills	Ideally : good programming skills in Python, C#, Unity