

Marine and Offshore: Building up a 3D Submarine Drone on 3DEXPERIENCE Platform



NICOLAS BAUDIN
INTERNSHIPS IN FRANCE INITIATIVE

CentraleSupélec + Dassault Systèmes

Name of the hosting institution in France	CentraleSupélec
Name of the host laboratory / research team	Group of Electrical Engineering - Geeps
Address	8-10 rue Joliot Curie 91190 Gif sur Yvette
Web site	www.centralesupelec.fr
Name of the supervisor	Anthony Kholer
Function	associate professor
Email	anthony.kolar@centralesupelec.fr

Internship offer

Topic of the internship (title)	Marine and Offshore: Building up a 3D Submarine Drone on 3DEXPERIENCE Platform			
Proposed dates of the internship	Start:	2019-11-04	End	2020-04-30
Scientific and academic objectives of the internship (detailed description of the internship content, work expected from the intern and expected outcomes):				
<p>In Marine and Offshore Industry Solutions (M&O IS) organization, on a project based definition approach, build a Digital Mock-up of submarine drone (ROV) using the integration within the 3DEXPERIENCE Platform of RLFP concepts (Requirements / Logical / Functional / Physical). All concepts are based on Industry 4.0 paradigm and will cover the integration of a wide range of activities allowing to demonstrate the Digital Twin Concept based:</p> <ol style="list-style-type: none"> 1- Project Management 2- Preliminary Design based on requirements (Kinematic, System Engineering, ...) 3- Simulation and optimization (CFD, FEM, Knowledge ware, Multiphysics analysis) 4- Details Design (Kinematic, Mechanical, Tubing, Piping, Electrical, System Engineering, ...) 5- Manufacturing (additive Manufacturing) 				
Name of industrial partner	Dassault Systèmes			
Role of the industrial partner in the internship project	Hosting the intern and providing expertise and skills and platform tools on M&O Project development			
Main contact at the French industrial partner	Alain Marianne			
Main contact at the French industrial partner's branch in Australia	Frédéric Dot			
Name of the Australian partner institution	Flinders			
Name of lab/department/team involved in the collaboration at the Australian partner institution	Electrical or Mechanical Eng			
Main contact in the Australian partner institution	Tony Kyriacou			
Function of the main contact in the Australian partner institution	Defence Partnership Director			
Email address of the main contact in the Australian partner institution	tony.kyriacou@flinders.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	Bachelor's degree with honours or Master's student
Discipline	Naval Architecture / Mechanical Design / Computational Fluid Dynamic / Finite Element Modeling / System Engineering / Electrical and Electronic
Required qualities, knowledge and skills	<ul style="list-style-type: none"> •Team work spirit. •To be able to analyze quickly and to produce synthesis in a high tech environment. •Keen to design complex mechanism in a digital environment. •Experience and skills on Mechanical Design and System Engineering modeling are needed. •Skill on Finite Element Modeling and Computational Fluid Dynamic are a must.
Other specific eligibility criteria	Australian citizenship