

Virtual Twin Subs Experience

Dassault Systèmes Dassault Systèmes



Name of the hosting institution in France	Dassault Systèmes
Name of the host laboratory / research team	M&O Industry Solutions
Address	10, Rue Marcel Dassault, Paris Campus 78140 Vélizy-Villacoublay France
Name of the supervisor	Alain Marianne
Function	Solution Technical Senior Manager
Email	alain.marianne@3ds.com
Phone number	00 33 6 13 66 65 23

Internship offer

Topic of the internship (title)	Model Based System Engineering / VirtualTwin Subs Experience			
Proposed dates of the internship	Start	04/11/2024	End	31/05/2025

Scientific and academic objectives of the internship:

In Marine and Offshore Industry Solutions department within an Industry 4.0 environment, you will be part of a team in charge to build up a Digital Twin submarine on 3DEXPERIENCE platform.

Your main mission will be to define the Virtual Twin of a submarine drone, during the conception phase in a Cyber-System Environment. Development tools will rely on our MBSE (Model Based System Engineering) suite and RFLP concepts (Requirement Functional Logical Physical).

Key activities:

- Working with senior engineers & in discussions with customers during requirements definition & analysis.
- Converting operational needs into technical requirements specifications.
- Working with Business Development and Program Management during capture & proposal phases.
- Define functional systems and sub systems from initial scenarios, requirements and regulations in Marine & Offshore domains in dedicated software applications.
- Simulate System Models in context of System of System.

Trainings and qualifications:

Dassault Systèmes will provide a set of trainings with qualification on the following product:

- 3DEXPERIENCE CATIA
- Dymola-Modelica
- NO Magic – CAMEO /

Internship duration: 5 months minimum and should start before end of 2024.

Industrial partner

Does the project involve a French industry partner?	Yes
Name	Dassault Systèmes / Marine and Offshore Industry Solutions
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	Alain MARIANNE
Email	Alain.marianne@3ds.com
Main contact industrial partner's branch in Australia	DS Australia Pty. Ltd. (Adelaide) University of Adelaide - North Terrace Campus, PO Box 13005, University of Adelaide, SA 5005, Australia: +61 3 9274 2299
Email	[Insert here]

Australian partner

Is the internship project proposed in the framework of an existing collaboration with an Australian partner university?	Yes
Name of the Australian partner institution	THE UNIVERSITY OF ADELAIDE
Lab/department/team involved in the collaboration	School of Electrical and Mechanical Engineering
Main contact in the Australian partner institution	David Harvey

Function	Associate Professor Director, Digital and Systems Engineering
Email	david.harvey@adelaide.edu.au
Outside of this ongoing collaboration, will students from other Australian universities be considered by the hosting institution in France?	No

Expected profile of applicant

Level of study	Bachelor of Honour: BEng (Hons)
Discipline	Main topics : Naval Architecture / System Engineering / Mechanical Design Optional: Computational Fluid Dynamic; Finite Element Modeling
Prerequisite knowledge, qualities and skills	Teamwork 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. Development done on projects using MatLab - Simulink or equivalent. Skills on Finite Element Modeling and Computational Fluid Dynamic are a must.
Language of Internship	English
Other specific eligibility criteria	Australian Citizenship

Je soussigné(e) [Prénom / Nom / Fonction] atteste par la présente que [nom de l'université XXX / de l'Ecole XXX / du laboratoire XXX, du partenaire industriel XXX] s'engage, en cas de sélection d'un candidat pour le stage [sujet du stage proposé] proposé dans le cadre de l'initiative *Stages en France* du programme d'aide à la mobilité Nicolas Baudin :

- à assurer la mise en place de la convention de stage, et le suivi administratif (circuit de signature, validation par les autorités préfectorales) et ;
- à veiller que le candidat recevra une gratification de stage (obligatoire selon le montant minium en vigueur au moment de la tenue du stage en France). La source du financement de la gratification est laissée à l'appréciation du maître de stage.

Fait à [Ville]

Le mercredi 3 avril 2024

Signature, cachet