Clément Rodrigues

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EDUCATION

ICAM
(Institut Catholique d'Arts et Métiers)
MEng - Mechanical & Controls
Sep 2011 - Sep 2014 | Toulouse, FR

UNIVERSITÉ PAUL SABATIER
DUT - Mechanical & Aerospace
Sep 2009 - Jun 2011 | Toulouse, FR

LYCÉE VICTOR HUGO
A levels - Sciences
Sep 2006 - Jun 2009 | Toulouse, FR

COURSEWORK

MASTERS
Applied Mathematics
Thermodynamics
Material Properties
Finite Element Analysis
Controls
Industrial Process Optimization
Project Management

DUT
(2 year degree)
Aerospace Sciences
Material and Processes
Non-destructive Control
Structural Analysis
Manufacturing

SKILLS

COMPETENCIES
Dynamic Simulation
Mechanical Design
Project Management
Failure Assessment

SOFTWARE
Engineering:
Catia • Adams • Abaqus • Matlab
Programming:
C • VBA

LANGUAGES
French • Mother tongue
English • Fully Fluent
Italian • Intermediate
German • Beginner

HOBBIES/INTERESTS

Rugby *(13 years playing)*
Diving *(Freediver lvl 2 & Scuba diver lvl 1)*
Aerospace
Traveling

INDUSTRY EXPERIENCE

SAFRAN MESSIER-BUGATTI-DOWTY | Performance Engineer
Oct 2014 – Oct 2016 | V.I.E. Contract | Toronto, ON, Canada

- Carried out Taxi and Dynamic Braking dynamic simulations as part of the Bombardier Global 7000/8000 performance assessment.
- Re-designed the Adams Shimmy model with flexible bodies and insured its fidelity through a modal frequency response analysis and a stiffness study.
- Harmonized performance methods across UK, France and Canada by writing the first Adams model descriptions for North-American aircraft programs.

AIRBUS | Apprentice Mechanical Engineer
Sep 2011 – Sep 2014 | Toulouse, France

- Performed weight saving and systems optimization studies to meet the A330NEO requirements, which involved modifying flight controls as well as revising existing mechanical systems.
- Modified fuel and hydraulic systems within the A330 center tank by improving electrical continuity in order to avoid any static discharge.
- Implemented electronic flight bags (EFB) for A330, which required the modification of the cockpit layout while taking the pilots requirements into account.

Jun 2012 – Sep 2012 | Filton, United Kingdom

- Designed A320neo mechanical and electrical systems at the wing/fuselage and wing/pylon interfaces.
- Assessed electrical harnesses compliance with regards to engine fire risks.

AVIO | Design Intern
Apr 2011 – Jun 2011 | Colleferro, Italy

- Designed and modeled the roll generator for Vega launcher, including the nozzles, pipes and propellant flow optimization.
- Achieved several repairs on Ariane 5 boosters and implemented them while they were in production.

DESIGN EXPERIENCE

SPACEX | Industry Advisor for Ryerson's Hyperloop Team
Aug 2015 – Present | Toronto, ON, Canada

Responsible for design validation and performance analysis of the Hyperloop Deployable Wheel System developed for the Hyperloop Competition.

- Winner of the Subsystem Innovation Award by SpaceX during the competition finals in Texas (124 Universities, more than 1000 students).
- Design patent pending with Messier-Bugatti-Dowty, our main partner.

ICAM MATERIAL LAB | Scientific Memoir
Sep 2013 – Feb 2014 | Toulouse, France

Performed corrosion research in support of my Masters' Degree

- Performed a failure assessment on a boiler affected by corrosion to settle a litigation between the manufacturer and the customer.
- Studied corrosion between carbon fiber composite and treated aluminium on behalf of Ratier Figeac, a subsidiary of UTC Aerospace Systems.

ICAM | Head of R&T for the Research and Industrial Day
Apr 2012 – Apr 2013 | Toulouse, France

Managed 26 people during one year in order to organize the Research and Industrial Day, a one day conference about the energy challenge within the embedded systems, involving students, industry professionals and scientists.