Mechanical Engineer

I am a Masters graduate engineer in mechanical engineering sciences, with a major in computational mechanics.
I am motivated and passionate by the study of solids structures and I would like to apply my knowledge on a practical project, and in this sense I postulate to the job offer *Piping Systems Estimating Engineer*.

Valentin Duvivier
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Education

Bachelor - Sorbonne University **Sept. 2017 – Jan. 2020**
Bachelor of fluids, solids, electronic mechanic - 60 ECTS *Paris, FRANCE*

Bachelor - KTH Royal Institute of Technology **Jan. 2020 – June 2020**
Bachelor of fluids, solids, electronic mechanic - 60 ECTS *Stockholm, SWEDEN*

Master - Sorbonne University **Sept. 2020 – Sept. 2022**
Master of computational mechanics on fluids and solids mechanics - 60 ECTS *Paris, FRANCE*

Relevant Coursework

- Finite element analysis
- Finite element non-linear structures
- Aeroelasticity
- Design optimisation in aerodynamic
- Slender structures : beams, plates and shells
- Catia V5 (CAO)
- Break and damage of 2D-3D structures

Experience

Laboratory internship **Sept. 2019 – Jan. 2020**
Institut des systèmes intelligents et de robotique (ISIR) *Sorbonne University*

- Optimisation of mechanical actuators of Kilobots modules and development of IR communication for swarm robotics.

Association member **Sept. 2019 – Oct. 2020**
Top Aero association *Sorbonne University*

- Conception of spatial module CANSAT in partnership with the CNES. Mechanical dimensioning of a system of springs with a testing phase during the 2020 C'space at Tarbes, FRANCE.

Laboratory internship **Apr. 2021 – July 2021**
Jean le Rond ∂'Alembert Institute *Sorbonne University*

- Optimal dynamical stabilization of a passive oscillator : application to an inverted electromagnetic pendulum. Experimental and numerical study of energy wells through Floquet stability as an extension of Kapitza's pendulum.

Projects

Post-graduate project | *Romarin project — Centimetric sub-marine module – 1 year* **Sept. 2018 - June 2019**

- Design of a ROV-type submarine module for underwater exploration, followed by tank tests at Saint Cyr l'Ecole.

Graduation project | *Project plane in ground effect - 6 months* **Jan. 2020 - June 2020**

- Numerical computation and building of an aircraft with a wingspan of 2 meters, with a personal work focused on the static and dynamic stability of the aerodynamic system. Graduation project in collaboration with KTH (Stockholm).

Technical Skills

Languages: Python, C, C++, Matlab, Arduino

Numerical tools: Ansys, Abaqus, Catia V5 (CAO), MATLAB/SIMULINK, ParaView

Technologies/Frameworks: Linux, GitHub, WordPress, LaTeX

Languages/Hobbies

Languages

French - Native
English - Advanced (C1)
Spanish - Intermediate (B1)

Tutoring

Teaching sciences (mathematics and physics) to students from secondary school to undergraduate.

Hobbies

Watching sport/esport
Video Games
Exercising