

Alban LEANDRI

French Citizen, 24 YO, Single

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🌐 Native French, Fluent English, Spanish basics

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🚗 "B" French driver license

Mechanical, Energy & Environment Engineer

SKILLS

Solid & Fluid mechanics, Thermal & Energy engineering, Heating & Cooling systems, Computational Fluid Dynamics, Mechanical Design & FEM Analysis, Eco-design & Product Lifecycle Management, Manufacturing Technologies, Quality, Non-destructive testing, Materials & Surface sciences, Energy Efficiency in Buildings, Hybrid Renewable Energy Systems, Optimization, Global marketing, Business planning, Project & Complex Process Management, Leadership skills...

EDUCATION

- 2009-2011:** Master of Science in Engineering, major in **Industrial Technologies**, HES-SO, Lausanne, Switzerland.
- 2006-2008:** Engineer degree in **Mechanical Engineering**, Geneva Engineering School, Switzerland.
- 2004-2006:** Technology degree (DUT) in **Thermal & Energy Engineering**, J. Fourier University, Grenoble, France.
- 2004:** French high-school diploma in sciences, major in **Biology**, Lycée Jean Monnet, Annemasse, France.

COMPUTING EXPERIENCE

Operating Systems:	Windows (XP, Vista, Seven), CAE LINUX.
Office:	Lyx (LateX editor), Word, Excel, Powerpoint, Paint, Photoshop.
Industrials:	Pro/Engineer Wildfire v2, SolidWorks 2010, Code ASTER (EDF).
CAD:	Fluent, Gambit, Worbench Ansys 12, OpenFoam, CFDesign.
CFD:	Lesosai 6.0, Eco-Bat (Building), SIMAPRO (LCA of Products/Goods).
Energy, Eco & PLM:	Matlab, Maple, Mathematica, Labview, R.
Calculation:	Basics in Visual Basic (Excel, Pro/E), Fluent UDF (C language).
Programming:	

WORK & TRAINING EXPERIENCE

- Sep.2009-Apr.2011:** **Design and testing of 2 microgravity experiments simulating the static capillary orientation of the propellant under residual lateral accelerations occurring into surface tensions spacecraft tanks, CMEFE (Institute of Mechanical engineering, fluid mechanics and energetics), Swiss.**
Master degree's semester & graduation aerospace work in cooperation with Thales Alenia Space and ESA.
☞ Preparation of an "on-board" embedded system for ESA's parabolic flights campaign. *6 months.*
☞ Designing and experimentation of an "on-ground" buoyancy test bench. Interfacial tensions/contact angles measurements in liquid/liquid systems. Application of low surface energy fluoropolymer coatings. Comparison between experimental & numerical results. *6 months.*
Contact: ✉ Roberto.PUTZU@hesge.ch, Fluid dynamic, Numerical simulation, ☎: 00 41 22 54 62 655.
- Spring 2010:** **Thermal and environmental analysis of a bioclimatic house, Prez-vers-Siviriez, Swiss.**
In the scope of the course "Buildings with high energy and environmental performance".
☞ Modeling of a passive house envelope according to its architectural plans, an onsite visit and assumptions for the calculation of the heating requirements using *Lesosai 6.0*.
Environmental impact assessment of the used materials and linked processes using *Eco-bat 3*.
Proposal of ameliorations to decrease the ecological print and energy consumption of any future similar project for the obtainment of Minergie-Eco label. *2 months.*
Contact: ✉ Stephane.CITHERLET@heig-vd.ch, LESBAT, Building Physics, Prof. & Dr. Eng EPFL.
- Jan.2009-Aug.2010:** **Numerical Modeling & Simulation in fluid dynamics and energy, CMEFE Institute, Geneva.**
Internship first, then HES Assistant (modeling & meshing with Gambit, simulations with Fluent 6).
☞ Aero-thermal numerical analysis of phenomena occurring at the opening of a fast train DC circuit breaker (located on the roof) to enhance the design of the encapsulation (breaker housing) and avoid to resort to expensive laboratory tests. Sécheron SA company. *4 months.*
☞ Hydrodynamics CFD study of the existing flow in the gap for the proposal of a new strategy of flushing and evacuation of erosion debris during EDM Machining to "die sinking".
Project mandated by Charmilles Technologies in the scope of a CTI. *4 months.*
Contact: ✉ Patrick.HAAS@hesge.ch, CMEFE, Fluid & Numerical simulation, ☎: 00 41 22 54 62 654.
✉ Jacques.RICHARD@hesge.ch, IMEC, Production methods, ☎: 00 41 22 54 62 602.

Summer 2008:

Life Cycle Assessment (LCA) of a network transformer, ABB Sécheron SA company, Geneva.
HES Assistant, in IMEC (Institute of manufacturing processes, materials, and fluid mechanics).

☞ After 30 years of electrical power conversion, once the "end-of-life" comes, network transformers used to be renewed. The emergence of a new alternative allowing their upgrade by remanufacturing/retrofit led to the need of the evaluation of environmental impacts of both scenarios for their comparison and demonstration of the most environmental friendly solution according to the country/origin of electricity.

This work was mandated by ABB Sécherons, Geneva. *1 month.*

Contact: ✉ Jacques.RICHARD@hesge.ch, IMEC, Ecodesign & Eco-engineering, ☎: 00 41 22 54 62 602.

✉ Pierre.LORIN@ch.abb.com, ABB Sécheron, Transformers Service, Head of Technology. ☎: 00 41 22 306 25 69.

✉ Serge.THERRY@ch.abb.com, ABB Sécheron, Groupe Expert Service, Transformer design. ☎: 00 41 58 586 20 03.

✉ Pierre.BOSS@ch.abb.com, ABB Sécheron, R+S Technical Manager, ☎: 00 41 58 586 20 03.

Spring 2008:

Eco-design & Life Cycle Assessment of car powertrain systems, Geneva Institute of Technology.

Bachelor degree's graduation work.

☞ Environmental analysis of the educational "Biomobile 2" project given a specific scenario, reflecting a mixed use of vehicle, for both urban and road. Comparison of environmental impacts between thermal, electric and hybrids powertrain systems in order to grant the best environmental impact alternative of the concept car on its whole life cycle. *2 months.*

Contact: ✉ Jacques.RICHARD@hesge.ch, IMEC, Ecodesign & Eco-engineering, ☎: 00 41 22 54 62 602.

✉ Eric.VITTECOQ@hesge.ch, Mechanical design & Eco-design, Structural FEM analysis, ☎: 00 41 22 54 62 480.

Spring 2006:

Application of vegetal oil in air blown burners, CUENOD SA company, Annemasse, France.

Technology (DUT) degree graduation work.

☞ Conversion to vegetal oil (rapeseed oil, fryer oil...) of a NC-21 type air-blown burner originally designed to burn oil fuel (210 kW), in the context of a more environmental friendly use for drying hay in a farm. *2 months.*

Contact: ✉ Eduardo.ZAMUDIO@cuenod.fr, IMEC, Burners Technical Expert.

✉ Edward.HAILE@cuenod.fr, R&D director.

2005 - 2009:

Student jobs:

☞ Inventories, sales, customer consulting, delivery & orders picking, replenishment, logistic, for commercial stores, cutting machine operator in a workshop, baggage handling agent in Geneva International Airport...

MISCELLANEOUS

Personality traits:

I am open minded and comprehensive, having a suited team spirit to be efficient in an environment where teamwork, cooperation and sharing knowledge are necessary. I am willing to take initiatives to get things done, to test and improve myself, and defend the interests of the responsibilities which I am entrusted. Therefore, I know well how to benefit from external skills and manage them around a common task. Nevertheless, I can be independent, pursue my goals and overcome challenges with perseverance, relying on my own resources, my critical and analytical thinking. I have good problem solving and process improvement capabilities, I am pragmatic and inventive. My natural curiosity led me to become a self-taught, while my education granted me the ability to learn quickly and process information. Finally, the flexibility in the way I work allows me to continually prioritize tasks at hand. On a personal perspective and according to me, a main issue of short human existence is self-improvement & awareness, allowing us to better enjoy our lives. That's finally why I have a strong taste for discovery and gain from new activities, where, in the arising case, my charisma, sensibility and intuition would help me to adapt myself to various environments.

Pro/Extra-pro interests:

Nature & Universe mysteries, Sciences, Smart engineering, High technologies, Environment, Sustainable development, Hybrid technologies, New & Renewable energies, Animals, Biology and Life Sciences, Traveling and see our planet, Immerse myself within new cultures, Self development and learning...

Extracurricular activities:

Sports:

Football, Ski, Snowboard, Swimming, Gym, Biking, Jiu-jitsu, Running, Fishing...

Hobbies:

Cinema, Music, Reading, Party, Meditation & Tao...

Travels:

Spain, Croatia, England, Nederland, France, Switzerland, Thailand, Czech Republic...