



The Interdisciplinary Research Laboratory in Life Cycle Assessment and Circular Economy (LIRIDE) research focus on life cycle assessment and Industrial Ecology. Internationally recognized for its work and its previous years of applied scientific research, the LIRIDE research group supports the industry, SME, governments, and organizations in their path towards a truly sustainable development supported by life cycle assessment and industrial ecology. At Sherbrooke University (Canada), LIRIDE offers a friendly and professional working environment, and is inviting applications for the postdoctoral position further described below.

---

## ID PROJECT : PHD LIRIDE-LABS

---



[APPLY NOW](#)



[www.liride.info](http://www.liride.info)

---

## MULTI-OBJECTIVE OPTIMIZATION OF THE ENVIRONMENTAL AND ECONOMIC LIFE CYCLE PERFORMANCE OF ALUMINUM TOWER DESIGNS

---

**Description:** This research project aims to develop a methodology for integrating environmental life cycle and cost analysis (ELCCA and LCCA) around structural concepts of self-supporting towers defined according to an equivalent geometry for an aluminum, steel or wood lattice tower. These options all meet the technical and functional constraints. The decision making process to select the best option becomes complex depending on the function of the tower under study. The developed methodology would allow to determine according to technical, environmental and economical criteria, which options are then to be preferred for a tower?

Taking into account the great variability in the data that will represent each of the life cycles, the integration of sensitivity analysis and uncertainty analysis becomes essential. Sensitivity analyses could address the issues of variability of results by changing the impact assessment model, the allocation approach, and the lifetime of the towers. Finally, for the uncertainty analysis, the Monte-Carlo approach will be recommended to evaluate the influence of the data quality on the multi-objective optimization

**Day-to-day work.** The work will be carried out within an interdisciplinary team at LIRIDE, in close collaboration with the partner. In addition, a part of your work is to communicate regularly with the partner on the progress of your project, to publish your results in peer-reviewed journals and to present them at international conferences.

---





---

**ID Project : PhD LIRIDE-  
LABS**

---



[APPLY NOW](#)



[www.liride.info](http://www.liride.info)

---

**MULTI-OBJECTIVE OPTIMIZATION OF THE  
ENVIRONMENTAL AND ECONOMIC LIFE CYCLE  
PERFORMANCE OF ALUMINUM TOWER DESIGNS**

---

**Qualifications.** Your qualifications should include a master's degree in civil, environmental, mechanical, engineering or similar level of studies with excellent grades. Interest in modelling and programming is an important advantage. Your enrollment will be contracted according to standard regulations at Sherbrooke University. The project will start as soon as possible or upon mutual agreement.

**Application:** We look forward to receiving your online application including 1) a letter of motivation, 2) CV, 3) diplomas & transcripts and 4) contact details of two referees. We will start interviewing candidates during the summer 2021. Applications will be accepted until the position is filled.

**Further information:** Questions regarding the position should be directed to Prof. Dr. Ben Amor, [ben.amor@usherbrooke.ca](mailto:ben.amor@usherbrooke.ca).

Please also visit our website <https://www.liride.info/recrutement>

