

Two PhD positions in Operations Research

We are looking for **two** PhD students who will work on a topic at the intersection of Operations Research and Energy Systems: **energy systems models' transparency**. By using techniques from multiple OR and ML fields (sensitivity analysis, parametric optimization, machine learning - including Large Language Models) you will explore how models can be more transparent - about their hypotheses (and their impact), about their results and about their quality.

You will work on both the theoretical foundations of transparency in large LP and MILP optimization models but also apply your results on existing, real-life models and related software already having a large impact.

This is a fully-funded 3-year contract, based on a recently accepted Energy Transition Fund project. You will work in a growing team specialized in this subject. The two PhD candidates recruited via this call will have two separate but related subjects and will work together during the project.

Position

- **3-year**, fully-funded contract at the University of Liège, Montefiore Institute.
- **Competitive salary**
- Opportunity to collaborate with industrial/public partners and to present your research at international conferences

Profile

- A Master's degree in Engineering (applied mathematics or computer science), Mathematics, Computer Science or similar.
- Interest in optimization in general - basic training in linear and discrete optimization.
- Basic programming skills are a strong requirement, and good programming skills are a plus.
- English (written & oral) is mandatory.
- Speaking French is a plus.

Practical:

- Apply by sending an email to Pr Quentin Louveaux (q.louveaux@uliege.be), Pr Damien Ernst (dernst@uliege.be), Dr Guillaume Derval (gderval@uliege.be) and Dr Bardhyl Miftari (bmiftari@uliege.be), containing:
 - Your CV
 - A (short) motivation letter, describing your research interests
 - Contact details for 2 academic references
 - A link to your Master's thesis
 - Academic transcript (results) of your two last academic years
- You can submit anytime between now and September 15th, 2025. We may select the candidates before this date - submit your candidature as soon as possible if you are interested.