

DOCTORAL RESEARCH FUND ANNOUNCEMENT 2024

Open Call for PhD Research Fellowship

Energy Communities (ECs) have emerged as a promising challenge towards the climate mitigation to comply with the 2050 decarbonization goals. In this context, the Clean Energy Package for All Europeans established the terms of Renewable and Citizen Energy Communities respectively to deliver environmental, economic and/or social benefits for their members. In this paradigm, citizens have an active role in reducing and shifting electricity demand from the utility grid, by generating, sharing and/or trading locally generated renewable energy, such as solar energy. Currently, there is a critical lack of systematic literature analyzing together the sensitivity of technical performance of key RES design combinations and how these factors influence it.

Yet, RECs vary in diverse dimensions, including their size, number of prosumer households, PV systems, grid constraints to cite some of them. Despite the steps undertaken in normative terms, the taxonomy of the RECs' forms is still ongoing.

Hence, a comprehensive understanding of **how REC configurations affect the key performance metrics to optimize the electricity consumption is missing as well as a lack of systematic research to analyze together the potential combinations of key RECs design and identify the optimal cost-effective mix.**

University of Mons (Faculty of Architecture and Urban Planning and Faculty of Engineering) and the Centrale Lille Institut (Laboratoire d'Electrotechnique et Electronique de Puissance de Lille) offer a PhD vacancy in the aim to grow into research excellence in a joint research program in this field.

In a 3-year project, the two universities will develop a joint PhD thesis within a twofold scope:

- Enhancement and optimization of the energy performance of urban forms and configurations through an efficient technological planning to enable the technological performances of RECs through a data-driven methodological toolkit;
- Spatial identification and responsive urban design for minimization of the RECs' constraints and the maximization of their benefits to reduce the demand for electricity consumption.

APPLICATION SUBMISSION

The Call is open from 20/01/2024 to 20/02/2024 at 23:59 (Belgian time)

The application and all supporting documents described in the Call tender must be submitted via e-mail to: sesil.koutra@umons.ac.be or stephane.brisset@centralelille.fr.

Each applicant may submit only one application, under penalty of cancellation of all submitted applications.

Applicants providing false declarations or committing acts of plagiarism will be excluded from the application without prejudice of taking other corrective and punitive disciplinary measures.

TYPE AND DURATION OF FELLOWSHIPS

Aiming to support advanced training, PhD Research Fellowships will be granted to applicants that fulfil the requirements to join a study cycle that allows to obtain a joint PhD degree and that wish to develop research work that allows obtaining that degree.

The research activities will take place in University of Mons (Belgium) (18 months) and Centrale Lille (France) (18 months).

The first research stay at University of Mons needs to start between 01/09/2024 and 01/10/2024.

The grant is not renewable.

ADMISSIBILITY

The following citizens may apply to this call:

- National citizens or citizens of other Member States of European Union;
- Third-country citizens;
- Citizens holding a political refugee.

We are looking for interested students holding a Master Degree in the field of **mechanical, electrical or architectural engineering** and related fields of study to support us in our current research work.

FELLOWSHIP GRANTING REQUIREMENTS:

It is mandatory to enclose, under penalty of non-admissibility to the Call, the following documents to the application:

- **Elements of identity card/citizen card/passport;**
- **Curriculum Vitae**
- **Motivation Letter** (1 page A4, max)
- **Records of study results** and documents that prove the study results of the candidate, including a ranking.
- **Legalized copy of your diplomas** needed at the moment of admission/enrolment as a PhD student.¹

Candidates who obtained Master degrees at other universities or institutions of higher education than University of Mons or Centrale Lille:

- have to include copies of **all documents** which prove the **study results** mentioned: diplomas, transcripts of records and documents stating the **ranking** among fellow students **and/or the percentile score**. An *exception* is made if the university cannot provide the ranking or percentile score but in that case a *statement* (letter, email) from a lawful representative ((vice-)rector, (vice-)director, dean, ...) of that university is needed, explaining that they cannot deliver the ranking and percentile score.

The study results have a major impact on the evaluation of the application. This means that applicants need to prove that they are top students (in terms of study results). It is strongly recommended to provide official documents (ranking among fellow students, percentile score....) to attest this.

Scientific activities and experiences since master diploma.

In this field you can briefly explain in which activities you have been involved since receiving your master's degree. These activities can be of all kind. It is important for the selection committee to have a clear understanding of what activities you have been involved in so far. You can list activities, experiences and achievements that may be relevant to assessing your potential to enter a PhD program. If you have already started your PhD, please indicate the current stage of your PhD.

¹ Only applicants who have completed the cycle of studies leading to Master's degree by the end of the application period will be admitted. If they do not yet have a certificate of course completion, a declaration of honor from the applicants that they have completed the necessary qualifications for the purposes of the competition will be accepted by the end of the application deadline.

Other study/research activities

Please indicate other professional/research activities in between your studies and professional career (if applicable).

If you have pursued scientific/scholarly studies/training outside the homeland (other than those mentioned in the diplomas), they can be listed here.

Master Thesis

If you hold a Master's degree, please give the title of the Master's thesis (dissertation) and the requested information, as well as a brief description of the research topic.

Scholarly/scientific publications by the candidate

GIVE AN OVERVIEW OF ALL PUBLICATIONS IN ACCORDANCE WITH THE CATEGORIES MENTIONED BELOW:

- List all publications, divided into the categories mentioned below and mention all authors of each publication.
- For each category, order the publications chronologically and number them.
- Only mention publications that are published, in press or accepted for publication.
- Also state explicitly which publications are in press or accepted for publication.

EVALUATION CRITERIA:

The evaluation considers the applicant's merit and, for the best ranked candidates to assess their suitability to the project.

Based on the evaluation of the candidates' scientific and curricular background, the panel, in accordance with the evaluation criteria mentioned below, presents a justified proposal for admission or exclusion for each of the candidates.

Candidate's merit, with a weight of 70%, considering:

- Academic merit, with a weight of 50%
- Personal CV/ research experience, weight of 15%
- Motivation letter, weight of 5%

Scientific potential and adequacy to the project, with a weight of 30%.

RESULT DISCLOSURE:

All candidates will receive a letter or e-mail with the selection result. Details on the feedback procedure will be mentioned in this letter.

LANGUAGE:

The applications for doctoral grants for candidates are submitted in French or English.

INFORMATION

For further general information, please contact the Research Coordinators, e-mail to sesil.koutra@umons.ac.be or stephane.brisset@centralelille.fr.