



Call for candidates for a doctoral position at GEP

REF. G2307

Published: 16/07/2023

Deadline: 30/08/2023

Reference: G2307

Research Activities: Electrical Engineering – Photovoltaic Systems

Candidate: Ph.D. Student

Location: Benguerir

Duration: 36 months

Eligibility: Be enrolled in a doctoral thesis at a National University

DESCRIPTION

As part of the development of its R&D activities in the photovoltaic (PV) systems and technologies, The **Green Energy Park** announces the opening of 1 **Ph.D.** funded position in “**PV Emerging Technologies & Solutions Test & Characterization in Outdoor Conditions**”.

The objective of this project is to evaluate and assess the performance of various cutting-edge photovoltaic (PV) technologies, and solutions (inverters, tracking systems, coating, cleaning solutions etc..), within the outdoor testing facility located at GEP. The project specifically focuses on investigating the behavior of these PV technologies and solutions in the semi-arid climate. By conducting rigorous testing, our aim is to support decision-making toward the best suitable solutions and technologies for different applications and contribute to the successful integration of PV modules/systems. Through comprehensive characterization, we will gain insights into the performance and durability of new PV innovations under real-outdoor conditions of Morocco.

The main outcomes of the project will be:

- Comprehensive knowledge and insights into the behavior and performance of PV technologies in semi-arid climates, surpassing existing understanding.
- Thorough evaluation and analysis of performance and durability data, providing valuable information and insights for local stakeholders.
- Contributing to the broader field of PV technology development by informing the design and implementation of next-generation PV technologies and solutions.

The selected Ph.D. candidate will have access to state-of-the-art research facilities and resources at the GEP. They will collaborate with a multidisciplinary team of experts and researchers and have the opportunity to present their findings at international conferences and publish in reputable scientific journals.



ROLE OF Ph.D. STUDENT

We are seeking a highly motivated candidate to join our team and contribute to the advancement of photovoltaic technology. The successful candidate will conduct research to study the performance and durability of newly developed PV technologies. During her/his journey in GEP, the Ph.D. student will have to perform the following tasks:

- Detailed bibliographic study and state-of-the-art on recent advances in PV systems and solutions.
- Participating in PV related market studies and due diligence.
- Investigating the performance characteristics of emerging photovoltaic technologies under various environmental conditions.
- Assessing the durability and reliability of these technologies through extensive testing and analysis.
- Developing methodologies for accurate characterization and evaluation of the new PV systems and solutions.
- Identifying recommendations to improve the integration of the new PV technologies and solutions in the local context.
- Training and scientific activities of GEP through publications, scientific communications, patents, etc.

REQUIREMENTS

The candidate must have a **Diploma of Engineering or a Master's Degree in electrical engineering**, be enrolled in the first or second year of doctoral studies in a Moroccan university, with advanced skills in **Electrical & Photovoltaic systems**, and have extensive knowledge in **PV Systems characterization** and **Data analysis**. We are looking for an autonomous student capable of innovation and initiative, wishing to work on a multidisciplinary research project:

- Consciousness of the new advancements in PV technologies and excellent knowledge of recent advances in PV performance analysis and testing fields.
- Mastery of simulation software for Electrical Engineering, especially of PV systems modeling.
- Excellent coding skills in Python / MATLAB / MySQL.
- Good knowledge of optimization algorithms.
- Knowledge in experimental techniques used for testing and characterization of PV modules.
- Good level in English and French, creative spirit, and autonomy.
- Strong interest in interdisciplinary research.

The candidate should send the following documents to contact@greenenergypark.ma

- A curriculum vitae
- Copies of university degrees (doctorate registration certificate)
- A research proposal linked to the project description and to one of the issue areas of the call (2000 words, containing an explanation of topic, Scientific background of candidate, Methodology for completion of research proposal)
- Letter of recommendation by the PhD supervisor professor.