

SOLAR-TRAIN is an innovative project focused on durability and life time assessment of photovoltaic modules. As part of the H2020 Marie Skłodowska-Curie Actions (MSCA) Innovative Training Networks (ITN) SOLAR-TRAIN invites applications for 14 Marie Skłodowska Curie fellowships starting in March 2017. The successful candidates will join the project as early stage researchers (ESRs) for three years with the possibility to enroll a PhD programme and finish with a PhD thesis.

The Centre for Renewable Energy Systems Technology (CREST) is a Centre within Loughborough University focussing on the application of renewable energy technologies. Loughborough University is a top ten University in the UK and CREST has been named as one of the top five research centres worldwide for renewable energy technologies. The Applied Photovoltaics Group within this Centre focusses on the performance of photovoltaic technologies. This includes precision measurements, failure analysis and energy forecasting from microscopic cell structures to gigawatt scale systems.

As of **March 1st** the following Marie Skłodowska Curie fellowship will be assigned:

Accelerated and Realistic Ageing of Photovoltaic Modules

Project description

The aim is to develop a test sequence that allows the prediction of life-time energy yield of photovoltaic modules. PV modules are supposed to last 20-25 years in the field but are exposed to varying environments. There is currently no method allowing to predict lifetime or how devices degrade in the field. This ESR will work specifically on multi-stress sequences, i.e. simultaneous application of UV and humidity. The objectives of this project will be:

- ✓ Develop LED-based light source to deploy in existing environmental chambers
- ✓ Investigate achievable acceleration factors theoretically as well as practically
- ✓ Quantify the impact of different environments on ageing
- ✓ Investigate theoretically and practically the influence of different materials and manufacturing conditions on PV module durability

Work will be carried out on bespoke modules which will be produced in-house. An excellent laboratory infrastructure is available, including ability to produce PV modules ourselves.

Your profile

- ✓ Higher degree (MSc, Diploma) in physics, engineering or mathematics that qualifies for enrollment to a doctoral programme.
- ✓ Compliance with the mobility rules laid out in the [MSCA ITN guidelines](#): At the time of recruitment, candidates **must not have legally resided or have had their main activity** in the country of their host organization for more than 12 months in the last 3 years.
- ✓ Good knowledge and skills in electrical, automation or systems engineering or related areas.
- ✓ Experience in hardware development and PV technologies are advantageous
- ✓ Openness for interdisciplinary collaboration and topics.
- ✓ Willingness to move to countries within EU for ESR placement and temporary secondments
- ✓ Meet all requirements for PhD registration at Loughborough University (www.lboro.ac.uk)
- ✓ Be **eligible for home student fees** for Loughborough University

Application

Please apply till **11 December 2016** according to the instructions on project website www.solar-train.eu