

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 write a PhD thesis.

The University of Ljubljana is the largest university in Slovenia (6.000 staff, 50.000 students). The Laboratory of Photovoltaics and Optoelectronics (LPVO) at the Faculty of Electrical Engineering is the central research group for photovoltaics in Slovenia with expertise from wafer-based c-Si and thin-film materials, technologies and device physics, both on cell and module level. Current research interests are devoted to optical and electrical modelling and simulations of record cells incorporating advanced photonic structures for improved light harvesting. Intensive work is also conducted in upscaling effects from cells to modules and reliability aspects.

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

### **Potential, Temperature and Humidity Induced Degradation of PV Modules**

#### **Project description**

The project will advance the state of the art in the potential induced degradation (PID) of PV modules in correlation with temperature and humidity throughout the whole life-time. Expected results are elaboration of climatic parameter zones for Europe and models for correlated climatic degradation factors. Specific objectives are:

- ✓ To review climatic parameters and the real field data and correlate them to PID effects on PV modules with emphasis on electrical potential, temperature and humidity
- ✓ To extract climatic parameter zones across Europe that affect the degradation process of free-standing or roof-top PV modules
- ✓ To build an indoor PID measurement setup in a climatic chamber for accelerating testing of PV modules, improving the state of the art fixed in the relevant IEC standards
- ✓ To produce mini-modules of different materials to be used for accelerated ageing and validation of energy yield degradation models
- ✓ To establish a link to outdoor climatic conditions by exposure to different stress tests to extract potential, humidity and temperature acceleration factors that contribute to the degradation

#### **Your profile**

- ✓ Higher degree (MSc, Diploma) in physics, electrical engineering or mathematics that qualifies for enrollment to a doctoral programme at the University of Ljubljana
- ✓ 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
- ✓ Experienced in working with measurement equipment, modelling and simulation of physical phenomena
- ✓ Openness for interdisciplinary collaboration and topics
- ✓ Willingness to move to countries within EU for ESR placement and temporary secondments
- ✓ Fluent in English

#### **Application**

Please apply till **11 December 2016** according to the instructions on project website [www.solar-train.eu](http://www.solar-train.eu)

