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Deadline for application: XX April 2024

Ref. 24/055

Research line: Methodologies for fast inspection

Area: Advanced Materials for Energy

Group: Solar Energy Materials and Systems, SEMS

Group leader: Prof. Alejandro Pérez Rodríguez

Position for the development of optical inspection methodologies and systems for industrial process monitoring

Description: The Catalonia Institute for Energy Research (IREC) is a research center focused on sustainable energy solutions. The Solar Energy Materials and Systems (SEMS) research group, seeks to incorporate an optical engineer to developed and advanced optical methodologies and systems optimized for the application in the monitoring of the production of thin fill solar cells in the frame of the “Methodologies for fast inspection” research line. Salaries will be paid in accordance with the IREC’s salary policy, depending on the candidate’s qualification and professional experience.

Tasks to develop:

- Development of the optical methodologies for the inspection of the production of complex systems like thin film photovoltaic devices
- Process of the big data for the inspection methodologies development
- Design of the optical systems using the specialized software (like Zemax)
- Development of the optical systems compatible with the inspection of the production of complex systems like thin film photovoltaic devices
- Creation of protocols and manuals for the use of the implemented optical systems
- Programming of optical systems and additional electronic and mechanical components
- Calibration of developed optical systems
- Installation of the developed optical systems in the premises of different research partners of the SEMS group

Qualifications and experience required:

Essential:

- To be in possession of a master degree in engineering or equivalent before the incorporation date
- Previous demonstrable experience of at least 2 years in development of optical methodologies and systems
- Experience in installation of the new equipment and protocols/manual writing
- Experience in development of software for optical and electronic systems (including CCD cameras, XYZ gantries, monochromators, etc.)

Preferred:

- Programming skills and experience in LabVIEW, Python and Zemax or equivalent
- Previous experience in research centres
- Publications in the scientific journals

Personal skills:

- Communication skills and language knowledge (English and Spanish)

Required documents:

Send the CV and master diplomas (or certificates) to Dr. Maxim Guc (mguc@irec.cat) and Dr. Victor Izquierdo Roca (vizquierdo@irec.cat) indicating the Ref. 24/054 in the subject of the e-mail.

Starting date: Not later than 1st of June 2024