

Vacancy

Shape the photovoltaic technology of tomorrow in a young and highly motivated team.

The **International Solar Energy Research Center Konstanz** is a research institute with about 60 employees for the development of solar cells, solar modules and renewable energy systems. We are an experienced team of scientists, engineers and students. We have state-of-the-art processing and characterization facilities and many years of experience with PV systems and smart grid applications. In national and international research projects we cooperate with the leading international institutes and companies in the photovoltaic industry. For more information visit our website: www.isc-konstanz.de.

As soon as possible we desire to fill the vacancy of an

Expert for Digitalization in Industry or Computer Scientist/ Engineer (f/m/d)

The position is initially limited until October 2025 (project duration). A subsequent extension is intended with the appropriate order situation.

You will be part of a team of scientists who are developing future manufacturing processes for solar cells and modules - with a focus on digitization - as part of two research projects.

After an orientation phase, you will be responsible for working on a work package on Industry 4.0 (machine learning, digital twins, predictive maintenance) in an international publicly funded project on future manufacturing processes for solar cells and modules.

You will

- develop machine learning models (using tools like Keras/TensorFlow).
 - for predictive maintenance of PV manufacturing equipment.
 - for increasing the yield of a PV production line (e.g. by finding better combinations of equipment parameters).
 - for quality control (image analysis).
- develop digital twins of PV modules.
- lead the work package on Industry 4.0.
- integrate digital systems into existing laboratory and production processes via interfaces.

- collect data in a production line and maintain the software that collects machine data in a central database and the corresponding API for accessing the data.
- support other projects, for example the further development and maintenance of a framework in the energy management sector.

This is how you inspire us with:

- Knowledge of machine learning and Python programming language, preferably also Java or C#.
- Experience in working with SQL-based databases and interested in practical applications and the support of single-board Linux computers.
- You bring a willingness to learn about modern production processes of solar cells and modules.
- Your experience in programming and sensor programming/installation, you should be able to help out in other areas of the institute on a temporary basis if needed.
- Team spirit as well as an independent and goal-oriented way of working are among your greatest strengths.
- You are characterized by a high degree of flexibility, commitment and resilience.
- Experience, preferably in an industrial environment, in the mentioned field of activity.
- Good knowledge of English

We offer you:

- A structured induction is a matter of course for us.
- An attractive salary according to the TVL-West collective agreement plus special benefits.
- A friendly and motivated team that will support you.
- Independent work and confidence in your abilities.
- An extension of the employment relationship is considered if funding is available.

Please send your **application with the usual documents** and preferably by e-mail - to the ISC Konstanz e.V., Rudolf-Diesel-Straße 15, 78467 Konstanz; **petra.hoffmann@isc-konstanz.de**.

For questions, please contact

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