



The Institute of Applied Physics at the University of Bern is searching for a

## **Postdoctoral Fellow (80-100%) Polarimetric Calibration of Microwave Radiometers for Earth Observations**

The microwave remote sensing division develops passive millimeter-wave radiometers for atmospheric research and climate studies with space borne and ground based instruments. It has a vast expertise in the design of radiometric calibration targets, which include the on-board and on-ground targets for the Second Generation of Meteorological Operational Satellites (MetOP-SG) and the Submillimeter Wave Instrument on the Jupiter mission JUICE. Currently we are starting with industry partners the development of the polarimetric on-ground calibration system for the Copernicus Imaging Microwave Radiometer (CIMR), which is an international project with the European Space Agency (ESA). The target has to cover a frequency range of 1.4 to 37 GHz and to operate in a thermal vacuum chamber at cryogenic temperatures.

### **Job description**

Your main tasks will be electromagnetic simulations of the interaction between the calibration system and the antenna feeds of the CIMR instrument, the characterization of magnetic absorber materials at cryogenic temperatures, and to participate in the test campaigns of the final target. Based on the RF and thermal simulations you will also derive the radiometric error budget for the calibration of the CIMR instrument. Throughout the lifetime of this project you will interact with spaceflight hardware and learn about ESA project management. You will be part of an international project team with some of the leading companies in Europe and with opportunities for travel.

### **Your profile**

You have a PhD degree or similar industrial experience in electrical engineering or physics. A background knowledge in numerical high frequency electromagnetic simulations (e.g. HFSS or CST) is expected. Further experience with high frequency material measurements, magnetic materials, antenna design or radiometric calibration would be helpful, but are not mandatory. A high level of written and spoken English is required. You enjoy working in an interdisciplinary and multinational research environment.

The position is available immediately with an initial duration of 2 years. Applications will be accepted until the position is filled. Starting salary will be between 88'000 and 117'000 CHF per year, depending on your previous work experience. The University of Bern supports diversity and gender equality, and it offers attractive working conditions.

Applications (including motivation letter, CV, list of publications, diplomas, contact details of referees) or questions regarding the position should be sent by email to Dr. Axel Murk ([axel.murk@unibe.ch](mailto:axel.murk@unibe.ch)).