Bachelor/Master-Thesis

Calibration setup for a spectral sensor for recording light quality in forests

European forests are suffering greatly from the challenges of climate change. To maintain their health, scientists need high-resolution temporal and spatial data on the health of forests. In our research in the *ECOSENSE collaborative research center*, we have developed a wireless sensor node that uses a multispectral light sensor to record light quality in the form of *Photosynthetically Active Radiation (PAR)*.

Accurate and reliable measured values are the core of any research. In order to guarantee this, a suitable calibration setup must be realized as part of a final thesis.

Your tasks:

- **Development** of the calibration setup
- **Calibration** of the spectral sensor according to international standards using state-of-the-art methods, both qualitatively with regard to individual wavelengths and quantitatively with regard to intensity

Your profile:

- Microsystems Engineering, Embedded Systems Engineering, Physics, or similar
- Experience in working with scientific instruments and laboratory equipment
- Experience in programming (Python, MATLAB) for data analysis and automation
- Knowledge of spectral analysis methods and techniques is an advantage

If you would like to work in a highly motivated team and feel comfortable screwing in the lab as well as programming, please send us your transcript of records, your CV and a letter of motivation:

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