Call for Master's Student Project

**Project Title:** Remote Sensing of the Surface Temperature on Greenland

**Project Description:** We are seeking a motivated master's student to join our research team for a student project focused on the calibration and evaluation of MODIS surface temperature data. This project aims to enhance the accuracy of MODIS data by using automatic weather station data for calibration and filling data gaps with ERA5 reanalysis data.

**Objectives:**

1. **Recalibrate MODIS Data:** Utilize the latest version of MODIS data to improve calibration accuracy.
2. **Evaluate Orbital Drift Influence:** Assess the impact of orbital drift on the accuracy and reliability of MODIS surface temperature measurements.
3. **Explore Alternative Data Sources:** Investigate and propose potential replacements for MODIS data to ensure long-term sustainability and accuracy of surface temperature monitoring.
4. **Time series analysis:** Perform trend analysis to the harmonized time series of LST data.

**Responsibilities:**

* Conduct data calibration using automatic weather station data.
* Integrate ERA5 reanalysis data or CARRA to fill gaps in MODIS data.
* Analyze the influence of orbital drift on MODIS data accuracy.
* Research and evaluate alternative data sources for future use.
* Document findings and contribute to research publications.

**Requirements:**

* Experience with remote sensing, data analysis, and basic programming (e.g., Google Earth Engine, Python, R, MATLAB).
* Familiarity with MODIS and ERA5 data is a plus.
* Strong analytical and problem-solving skills.
* Ability to work independently and as part of a team.

For more information, please contact Andreas Westergaard-Nielsen (awm@ign.ku.dk), Shunan Feng (shf@ign.ku.dk)