Implementing Complete Satellite Mapping and Its Validation with Ground-based Measurements

The Professorship of Environmental Sensing and Modeling (ESM) is looking for Bachelor students for using novel spatio-temporal kriging approach for the mapping of CO₂ concentration from the OCO-2 satellite.

**Goal of the research:**
- Implementation of a spatio-temporal interpolation method using a data fusion approach
- Validation of the interpolated surface using TUM – ESM ground based network

Bounding box (lower-left, upper-right) 
\[(36.46, -96.77); (38.37, -97.36)]

OCO-2 Swath, before and after Interpolation

**Tasks to be carried out:**
- Understanding the basics of spatial interpolation, OCO-2 measurements and its sampling/swath
- Implementing spatio-temporal interpolation for OCO-2 measurements
- Writing report

**Personal requirements:**
- Basic knowledge in MATLAB or Python or R programming

The topic is suitable for Bachelor Thesis and Forschungspraxis

**If you are interested please contact us:**
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