Geomatics Lab – BSc Thesis
Geography Department, Humboldt-Universität zu Berlin

Title:

A comparison of remote sensing data sources for quantifying Berlin's degree of imperviousness

Sub title

Supervisors
Sebastian van der Linden, Akpona Okujeni

Thematic Background
Remote sensing, image processing, urban environments, multi-senor data

Objectives
- Collect imagery acquired over Berlin from different satellite sensors (e.g., Rapid Eye, Landsat, SPOT-5)
- Develop a comprehensive reference database based on the European Urban Environmental Atlas
- Develop an image spectral library of relevant surface materials
- Select an appropriate image processing workflow for sub-pixel mapping (unmixing) to quantify Berlin's degree of imperviousness
- Draw conclusions on the potential of the different datasets and the value of the map for potential end-users

This work is closely linked to the UrbanEARS (Urban Ecosystem Analysis supported by Remote Sensing) project (https://www.geographie.hu-berlin.de/en/professorships/geomatics/projects/urbanears).

Target group
Motivated bachelor students with solid knowledge in remote sensing and image processing.

Pre-requisites (please contact the supervisors for specifications)
- Relevant skills and training in remote sensing.

Dates, Duration & Application procedure
- No specific starting dates; duration 3 month
- Interested students are asked to contact one of the supervisors