Teledetection

Component
École Nationale Supérieure d'Électrotechnique d'Électronique d'Informatique d'Hydraulique et des Télécommunications

In brief

- **Ametys Code:** M34HO9ZP
- **Open to exchange students:** Yes

Presentation

Objectives

· Install the software and libraries required for remote sensing processing.

· Apply geoprocessing (including OTB).

· Adjust the display configuration of a multiband image to highlight land uses of interest.

· Identify the characteristics of an image in a GIS.

· Classify a multi-band remote sensing image in an 'expert' manner based on an analysis of the image's spectral dynamics.

· Classify a multi-band remote sensing image in a supervised manner using OTB and estimate its quality without bias using a confusion matrix and derived indices.

Improve the topological or statistical quality of a classification using post-processing.

Description

This course covers the physical basics of remote sensing, the format of data used in remote sensing, and how to use it in a GIS. All tutorials will be conducted using QGIS software and the OTB library, both of which are free and can be used on personal computers. The sessions are organised as lectures and tutorials, with theoretical sequences alternating regularly with guided practice. Independent study sessions allow students to consolidate what they have learned through new case studies. Depending on each student's progress, flexible components may be added to the teaching sequence.

Pre-requisites

None