



Aim

Content

2nd announcement



26-30 September 2005
VITO, Mol
K.U.Leuven
RMCA, Tervuren

The 'HyperTeach' Training course is funded by



'HyperTeach', a joint project of the Flemish Institute for Technological Research (VITO), the Management Unit of the North Sea Mathematical Models (MUMM), the Royal Museum for Central Africa (RMCA) and the Katholieke Universiteit Leuven (K.U.Leuven) funded by the Belgian Science Policy Office, aims at developing course material to theoretically and practically introduce researchers and policy makers to the emerging field of Imaging Spectroscopy. The project includes the organization of a Training course in Imaging Spectroscopy.

All policy-makers, researchers and potential users of airborne and spaceborne data who want to become acquainted with Imaging Spectroscopy are invited to participate in the 'HyperTeach' Training course in Imaging Spectroscopy to be held from 26-30 September 2005 at the premises of VITO, K.U.Leuven and RMCA and instructed by teachers from MUMM, RMCA and VITO. There will be an equal focus on theory and practical hands-on exercises. After 2 days of theoretical introduction and 1 day of self-study, the participants can decide which of the 3 applications (water, geology or biodiversity) they prefer to follow during a 2-day parallel session with hands-on exercises. Remote sensing experience is not required.

For the practical course ENVI® software will be used. We would like to acknowledge Research Systems Inc. (RSI) for providing ENVI licenses during the 'HyperTeach' Training course.

During the **2-day theoretical course** the following topics will be covered:

- physical basics of spectroscopy
- imaging spectroradiometers
- airborne campaign planning
- spaceborne data availability
- field equipment
- sensor calibration
- pre-processing
- geometric and atmospheric corrections
- data analysis and validation
- 3 applications (water, geology and biodiversity)

During the **2-day practical course**

the **'water'** students will learn how

- water colour is affected by its constituents and hence how remote sensing can estimate chlorophyll-a concentrations and total suspended matter
- to choose the most appropriate source of optical remote sensing data for a specific application
- to perform the basic steps of satellite image processing, including identification of bad data

the **'geology'** students will learn how

- to measure the reflectance spectra of minerals and rocks, to interpret the reflectance spectra, to build spectral libraries and to identify the mineral composition using spectral similarity measures
- to pre-process radiance data, to calibrate to reflectance data, to interactively analyse spectral signatures, to mask vegetation and to extract mineral information
- to process reflectance data for a mineral application

the **'biodiversity'** students will learn how

- to perform an atmospheric and geometric correction of airborne hyperspectral images (including field measurements) and how to prepare airborne hyperspectral images for later classification
- to measure leaf reflectance spectra, to distinguish different vegetation species by their leaf reflectance spectra and to use different indices to characterize these differences
- to classify vegetation species using spectral similarity measures and statistical techniques

Programme

General information

Time schedule

26-27 September 2005

Theory

Teacher: VITO, MUMM, RMCA
Venue: VITO
Clubhouse, Auditorium
Boeretang 200, 2400 Mol

28 September 2005

Break

29-30 September 2005

Parallel session: Hands-on exercises

Water

Teacher: MUMM
Venue: K.U.Leuven
PC Room 00.27
Vital Decosterstraat 102, 3000 Leuven

Geology

Teacher: RMCA
Venue: RMCA - Colonial Palace
Training Room 3rd floor
Leuvensesteenweg, 13, 3080 Tervuren

Biodiversity

Teacher: VITO
Venue: VITO – INF
Demo Room
Boeretang 200, 2400 Mol

To reach VITO:

<http://www.vito.be/english/contact/route.htm>

To reach K.U.Leuven:

http://www.sadl.kuleuven.ac.be/sadl/locatie_en.htm

To reach RMCA:

<http://www.africamuseum.be/visitor/roadmap/routeEN.swf>

Date

26-30 September 2005.

Registration

The registration form can be downloaded at <http://hyperteach.vgt.vito.be>. Please register before **30 June 2005**. The fee includes course material and welcome reception on Monday evening 26 September. Coffee and lunch will be offered on 26-27 and 29-30 September.

Confirmation will be sent.

The number of participants is limited. Participants will be selected on basis of motivation, profile, time of registration and course capacity.

Accommodation & Transport

Participants should arrange own accommodation and transport.

Hotels

Mol: Clubhouse - Boeretang 201 - B-2400 MOL - BELGIUM
Tel: +32 14 33 20 60
Fax: +32 14 31 27 71
E-mail: clubhouse@sckcen.be

Brussels: <http://www.hotels-belgium.com/brussel-center/hotels.htm>

Tervuren: <http://www.lavignette.be/indexE.html>

Leuven: <http://www.bookings.be/city/be/leuven.en.html>

Secretariat

June Cools
VITO - Boeretang 200 - BE-2400 MOL - BELGIUM
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Please visit <http://telsat.belspo.be/>
or <http://www.vito.be> and the 'HyperTeach' website
<http://hyperteach.vgt.vito.be> for recent information
about the 'HyperTeach' Training course.

Time schedule for the 'HyperTeach' Training course

1 April 2005:

Second announcement and opening registration.

30 June 2005:

Deadline registration.

15 July 2005:

Notification of acceptance of participants.

1 September 2005:

Ultimate date of payment.

26-30 September 2005:

'HyperTeach' Training course.