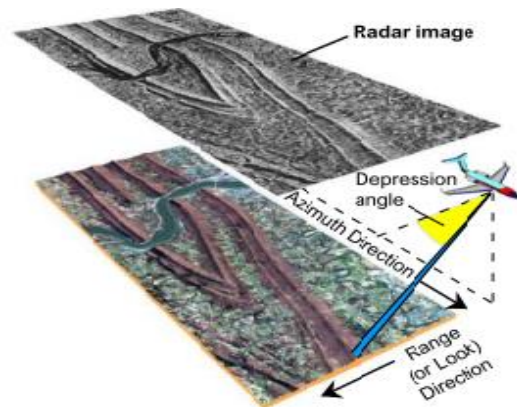
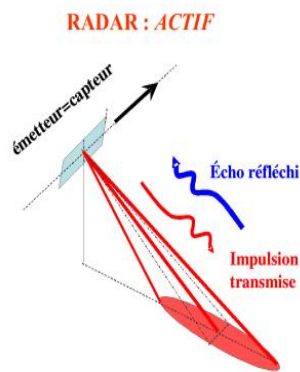
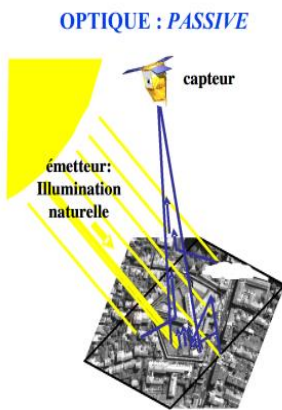




Certified Winter School in

Optical and Radar Remote sensing : Image processing with free Software (5th edition)



Free Software: QGIS, Monteverdi / OTB et SNAP

Monteverdi



The ORFEO TOOLBOX

SNAP / Sentinels Toolbox



From 27/11/2023 to 01/12/2023 at the Faculty of Sciences and Techniques, Tangier

Organizer: CBM-VR Laboratory, FST, Tangier , University Abdelmalek Essaadi, Morocco

AS PART OF THE PROJECTS - PPR2/2016/79, OGI-Env : OUTIL DE GESTION INTÉGRÉE DE L'ENVIRONNEMENT FUNDED BY MESRS AND CNRST, MOROCCO;

- AL KHAWARIZMI : OUTIL DE GESTION INTELLIGENTE DES EAUX D'IRRIGATION ET DU PATRIMOINE FORESTIER : FUNDED BY MESRS, CNRST AND ADD, MOROCCO;

This activity is co-funded in the MENAWAT Project (no. 57682821) that is sponsored by the German Academec Exchange Service (DAAD) with funds from the German Federal Foreign Office withing the programme Ta'ziz Sciences Cooperation.

DESCRIPTION AND OBJECTIVES OF THE TRAINING

Beyond the general aspects affecting Geomatics and Remote Sensing, the objective of this training is to explore the latest technical developments in the field of remote sensing based on free access to satellite images and their processing by a set free software. Although very rich in theoretical knowledge, this training is based on examples and practical demonstrations, from data acquisition to processing. This training will focus in particular on putting into practice, via non-commercial software, the fundamental principles and conditions of application of each method or approach

At the end of the training the learner will be able to:

- ✓ To handle free software (Monteverdi / OTB, SNAP and QGIS) for the exploitation and manipulation of optical and radar images;
- ✓ To carry out the entire processing process, from the initial image to the statistical and cartographic results;
- ✓ To extract useful information from different types of satellite images;
- ✓ Evaluate the results obtained.

TRAINING SUPPORT



A digital support will be given to each participant containing:

- ✓ The course in electronic version and corrected exercises in satellite image processing;
- ✓ Freely accessible courses (*);
- ✓ Practical work in electronic version;
- ✓ Correction of practical work in electronic version;
- ✓ Optical and radar satellite data and images over Morocco (landsat8 image, Sentinel2, Sentinel1, PolSar, MNT, etc.) used in the training session.

TEACHING METHODS:

- ✓ Clear, concise, practical and up-to-date documentation provided to each participant;
- ✓ The courses are followed by practical work implementing the theoretical concepts taught. Processing and analysis of optical and radar remote sensing images through different applications;
- ✓ Speakers using remote sensing in their professional activities in order to present practical applications in different sectors of activity;
- ✓ The training will be supervised by Experts in optical and radar satellite image processing

ANIMATORS

- ✓ Pr. Mina AMHARREF, FSTT, University Abdelmalek Essadi, Morocco
- ✓ Pr. Abdes Samed BERNOUSSI, FSTT, University Abdelmalek Essadi, Morocco
- ✓ Pr. Hinde CHERKAOUI DEKKAKI, FSTH, University Abdelmalek Essadi, Morocco
- ✓ Pr. Hind ESSAOUINI, FSTT, University Abdelmalek Essadi, Morocco
- ✓ Pr. Pierre Louis FRISON, University Gustave Eiffel, Paris et IRD, Marrakech.
- ✓ Pr. B. FRUNEAU, University Gustave Eiffel, Paris
- ✓ Pr. Jean Paul RUDANT, University Gustave Eiffel, Paris, France.
- ✓ Pr. Edyta WOZNIAK, CBK, Poland

TARGET AUDIENCE

Teacher-researchers, PhD students, Masters students, student engineers, executives and technicians from public and private establishments: executives from municipalities and urban agencies, executives in regional planning, executives at the High Commission for Water and Forests, executives from the ANCFCC, executives of Hydraulic Basin Agencies, executives of Regional Investment Centers, executives of INRA, executives of rural affairs directorates, public works executives, executives of ONEP, executives of Régies (Amendis, Lydec, RAMSA, REDAL, etc.) , executives of the Regional Agricultural Development Offices, executives of the Social Development Agency, executives of the Ministry of Housing, department of development and fight against unsanitary housing... etc.

TRAINING DURATION

4 days de training from November, 27-30, 2023 and a field trip on December 01, 2023.

PLACE OF TRAINING

Faculty of Sciences and Techniques, Tangier

REGISTRATION FEES

2000 DH (Could be supported by the candidate's research structure)

NUMBER OF PLACES DE PLACES

Limited (25 places)

MATERIAL

Each participant must bring their laptop PC on which the free software and data necessary for the training will be installed.

NB : Participants will handle large data and resource-intensive processing, it is desirable to have a laptop PC with RAM greater than or equal to 8 GB.

STEERING COMMITTEE:

- Pr. Mina AMHARREF, FSTT, University Abdelmalek Essadi, Morocco
- Pr. Abdes Samed BERNOUSSI, FSTT, University Abdelmalek Essadi, Morocco
- Pr. Hinde CHERKAOUI DEKKAKI, FSTH, University Abdelmalek Essadi, Morocco
- Pr. Jamal Eddine EL ABDELLAOUI, FSTT, Université Abdelmalek Essadi, Maroc
- Pr. Hind ES SAOUINI, FSTT, Université Abdelmalek Essadi, Maroc
- Pr. Mustapha OUARDOUZ, FSTT, Université Abdelmalek Essadi, Maroc

CONTACT & INFORMATION

Pr. Abdes Samed BERNOUSSI

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Université Abdelmalek Essaadi, Maroc.

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PROGRAMME

	From 9h to 12h 30	From 14h 30 to 18 h 00
Monday 27 November 2023	<p>- 8h45-9h : Opening - 9h-10h30 - Problems of artificial recharge: Issues and challenges, Pr. H. Cherkaoui Dekkaki</p> <p>- 11h-12h30 - Flow modeling by cellular automata (flood vulnerability application)</p> <p style="text-align: center;">Pr. A. Bernoussi</p>	<p>Vulnerability to groundwater pollution: Principles, statistical studies and applications</p> <p>Pr. M. Amharref, Pr. H. Es Saouini Pr. H. Cherkaoui Dekkaki</p>
Tuesday 28 November 2023	<p>Fundamentals of Radar Imaging Pr. J. P. Rudant</p>	<p>Radar Interferometry: Theory and Practice 1</p> <p style="text-align: center;">Pr. B. Fruneau</p>
Wednesday 29 November 2023	<p>Sentinel-1 data processing by QGIS Pr. P. L. Frison</p> <p>Applications Pr. E. Wozniak</p>	<p>Sentinel-1 data processing by QGIS (continuity)</p> <p style="text-align: center;">Pr. P. L. Frison</p>
Thursday 30 Novembre 2023	<p>- Comparison Optic - Radar Pr. J. P. Rudant</p> <p>- CONFERENCE : Radar interferometry: theory and applications 2: Monitoring of subsidence (Paris, Mexico, Sumatra, etc.) and displacements linked to the seismic cycle (Taiwan, Le Haouz, etc.)</p> <p style="text-align: center;">Pr. B. Fruneau</p> <p>- Discussion with PhD students/participants about their own study</p>	
Friday 1 December 2023	Field trip : R'mel Region	

(*)ENSG, Information Géographiques en général, et en particulier : télédétection optique et radar et QGIS.

<http://cours-fad-public.ensg.eu/>.

ESA, rappels Radar et TP SNAP Sentinel1.

<https://earth.esa.int/web/guest/eo-education-and-training/sar-basics-snap-course>.



Deutscher Akademischer Austauschdienst
German Academic Exchange Service



Winter certified training school c

**TOptical and Radar Remote sensing and image Processing with free
Softwaresélétection :
(5ème édition)**

Demande d'inscription

Nom et Prénom :

Sujet de thèse :

Année d'inscription :

Directeur de thèse :

Structure de recherche :

Etablissement et Université :

Signatures

Candidat

Directeur de thèse

Responsable de la structure de recherche