

Software and data used in the practical sessions

The participants are asked to bring their own laptops and install software as follows.

YSD - 01: Optical Remote Sensing & SAR, Mo 20 June, 1.30-3 p.m. (Francesco Sarti, ESA)

No software required

YSD - 02: Optical Remote Sensing, Mo 20 June, 3.30-5 p.m. (Thomas Bahr, Harris)

Required software: ENVI/IDL

In order to provide you with the ENVI/IDL software used in this hands-on course please register at <http://www.harrisgeospatial.com/MyAccount.aspx> until Friday 12 o'clock (CEST) and download and install ENVI 5.3.1. Send an email with subject "ENVI Workshop at EARSEL" to supportEU@harris.com and indicate your operating system. You will receive an email with the license file you have to install. The data for the ENVI workshop can be downloaded here: <https://uni-bonn.sciebo.de/index.php/s/Kjh8NragohCaent>

The installation file for the ENVI photogrammetry modul can be downloaded here: <https://uni-bonn.sciebo.de/index.php/s/s2oK1YgreCjsORp>. It has to be installed for the second part of the workshop.

YSD - 03: Optical Remote Sensing, Tue 21 June, 11 a.m. -12.30 p.m. (Samantha Lavender, Pixalytics Ltd)

Required software: QGIS (<http://www.qgis.org/en/site/forusers/download.html>) & SNAP (<http://step.esa.int/main/download/>)

The software can be downloaded without restrictions. The course will follow the "practical handbook of remote sensing" (<https://www.crcpress.com/Practical-Handbook-of-Remote-Sensing/Lavender-Lavender/p/book/9781498704335>) that can also be purchased during the conference.

YSD - 04: Big Data with MATLAB, Tue 21 June, 2-3.30 p.m. (Dmitrij Martynenko, MathWorks)

No software is required for this interactive course during the conference.

If participants like to prepare, these resources might be a good point to start:

- Free Introduction Course to MATLAB (Free Onramp Course): <https://matlabacademy.mathworks.com/>
- Discover MATLAB and BigData: <http://www.mathworks.com/discovery/big-data-matlab.html>
- Landsat satellite measurements - Big image analysis with MATLAB
 - Blog: <http://blogs.mathworks.com/steve/2015/03/19/matlab-landsat-8-aws/>
 - Video: <http://www.mathworks.com/videos/an-interactive-tool-for-using-landsat-8-data-in-matlab-100232.html>
 - MATLAB Central File Exchange: <http://www.mathworks.com/matlabcentral/fileexchange/49907-landsat8-data-explorer>

At the conference a wide range of topics will be covered and participants can get a trial either now or afterwards on [here](#). If you have any questions, feel free to contact [Stephan Sieben](#) at MathWorks.

YSD - 05: SAR, Wed 22 June, 11 a.m. -12.30 p.m. &

YSD - 06: Optical Remote Sensing & SAR, Wed 22 June, 4-5.30 p.m. (Chris Stewart, ESA)

Required software: SNAP

Participants will need to have SNAP installed on their computers. This can be freely downloaded from <http://step.esa.int/main/download/> selecting the "All Toolboxes" option, and the link corresponding to the operating system of the participant. During software installation participants should select the options to install all toolboxes (for Sentinels 1, 2 and 3).

Exercise sheets can be downloaded here:

[SAR exercise](#)

[Optical exercise](#)

Data needed for the exercises can be downloaded here:

[SAR exercise \(Sentinel-1\) part I, part II](#)

[Optical exercise \(Sentinel-2\)](#)

YSD - 07: UAV & Spectral Measurement Road Show, Thu 23 June

For this event a bus will leave directly after the keynote session (approx. 10.35 a.m.) to the university campus in Klein-Altendorf about 20 km West of Bonn.

If weather allows, UAV flights and field measurements with state of the art instruments will be demonstrated. Alternatively, the instruments will be presented in the campus forum.

Schedule

10.35 Bus transfer from GSI

11.00-12.00 Coffee break & Introduction to the campus

12.00-17.00 UAV & instrument demonstration

17.00 Bus transfer back to GSI

Presenters

HySpex

OceanOptics

PANalytical/ASD

SpectralEvolution

SphereOptics

and more

Participants are asked to register for lunch packages at the registration desk on Monday.