

EUFAR TRAINING COURSE

RS4forestEBV

Airborne remote sensing for monitoring
essential biodiversity variables in forest ecosystems

Bavarian Forest National Park and German Aerospace Center
Oberpfaffenhofen, Germany
From 3 to 14 July 2017



TRAINER PHOTOBOOK



CLEMENT ATZBERGER

CLEMENT.ATZBERGER@BOKU.AC.AT

NATIONALITY: German

INSTITUTE, CITY/TOWN, COUNTRY: BOKU Vienna, Austria

EDUCATION: Physical geography and remote sensing

RESEARCH EXPERIENCE:

Since 20+ years active in optical remote sensing with special focus on forests, natural vegetation and crop land. Expert in time series analysis, radiative transfer modeling and machine learning



MARTIN BACHMANN

MARTIN.BACHMANN@DLR.DE

NATIONALITY: German

INSTITUTE, CITY/TOWN, COUNTRY: German Aerospace Center (DLR), Earth Observation Center (EOC), Weßling, Germany

EDUCATION:

> Diploma in Physical Geography

> PhD in Remote Sensing

RESEARCH EXPERIENCE:

> More than 15 years of experience in the fields of hyperspectral data analysis and data pre-processing.

> Expertise in Data Quality Control for imaging spectrometer data (HyMap, HySpex, EnMAP, DE-SIS, EUFAR).

> Coordination and participation in multiple ground campaigns for validation / calibration of airborne hyperspectral data (inc. CEOS CalVal activities)



ANDREAS BAUMGARTNER

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NATIONALITY: German

INSTITUTE, CITY/TOWN, COUNTRY: Remote Sensing Technology Institute (IMF), German Aerospace Center (DLR), Wessling, Germany

EDUCATION:

> Master of Electrical Engineering and Information Technology, University of Applied Sciences Deggendorf

> Bachelor of Mechatronics Engineering, University of Applied Sciences Deggendorf

RESEARCH EXPERIENCE:

> Technical head of Calibration Home Base for imaging spectrometers

> Lead scientist of DLR's support for the laboratory calibration of the German imaging spectrometer satellite mission EnMAP

> Laboratory calibration of numerous imaging spectrometers

> Development of enhanced calibration methods and equipment



NICHOLAS COOPS

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NATIONALITY: Canada / Australia

INSTITUTE, CITY/TOWN, COUNTRY: University of British Columbia, Vancouver Canada

EDUCATION: B App Sci Cartography and PHD Remote Sensing

RESEARCH EXPERIENCE:

Interested in the application of remote sensing technology to forestry issues both for conservation and forest production issues, Research includes both development of models and tools to observe changes on foliage pigment concentrations, LIDAR for forest structure assessment and data from a range of platforms including long time series Landsat imagery, MODIS and drones



ROSHANAK, DARVISHZADEH

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NATIONALITY: Dutch

INSTITUTE, CITY/TOWN, COUNTRY: University of Twente, Faculty ITC, Enschede, The Netherlands

EDUCATION: Roshanak Darvishzadeh is an Assistant Professor in the Department of Natural Resources, Faculty of Geo-information Science and Earth Observation at the University of Twente. She has obtained her PhD in hyperspectral remote sensing of vegetation from Wageningen University and ITC in 2008.

RESEARCH EXPERIENCE:

Her research interests lie in quantitative remote sensing for mapping and modeling biochemical and biophysical properties of vegetation at different level using various statistical and radiative transfer models. Her research activities include analysis and exploration of hyperspectral, new generation of multispectral, thermal hyperspectral and LIDAR data with applications in biodiversity, forestry, ecology, agriculture and conservation.



JONAS HAGGE

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NATIONALITY: German

INSTITUTE, CITY/TOWN, COUNTRY: Technical University of Munich, Department of Zoology-Entomology, Germany

EDUCATION:

> B.Sc. Biology

> M.Sc. Biodiversity and Conservation

> Environmental Geography: Systems, Processes & Interactions

RESEARCH EXPERIENCE:

Biodiversity, Ecology and Evolution, Community Ecology, Phylogenetics, Biodiversity Patterns, Macroecology, Distribution, Evolutionary Biology, Phylogeography and Phylogenetic Biogeography, Entomology



UTA HEIDEN

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NATIONALITY: German

INSTITUTE, CITY/TOWN, COUNTRY: German Aerospace Center (DLR), Earth Observation Center (EOC), Weßling, Germany

EDUCATION: PhD on Urban Imaging Spectroscopy

RESEARCH EXPERIENCE:

Dr. Uta Heiden is head of the team "Spectroscopy and Land Degradation" at the German Remote Sensing Data Center (DFD) of DLR. She received her Diploma degree in Geoecology from the University of Potsdam, Germany, in 1999, and the Ph.D. degree in Remote Sensing from the Technical University Berlin, Germany, in 2003. She has a long-term experience in imaging spectroscopic methods and applications for urban systems. Her further interest are on EO methods for soils and land degradation, biodiversity and forest applications. Uta Heiden is responsible for the application support of the German spaceborne imaging spectroscopy mission EnMAP and she is Co-Chair of the Geoscience Spaceborne Imaging Spectroscopy Technical Committee of the GRSS



MARCO HEURICH

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NATIONALITY: German

INSTITUTE, CITY/TOWN, COUNTRY: Bavarian Forest National Park, Germany

EDUCATION:

> 2015-2016: Habilitation University of Freiburg; thesis

> 2002-2006: Doctorate in Forestry, TU München; thesis

> 1999-2003: Master of Science in Geographical Information Science and Systems University of Salzburg

> 1990-1994: Bachelor in Forestry at the University for Applied Science Weihenstephan-Triesdorf

> 1989: Abitur (German university entrance qualification), Winfriedschule Fulda

RESEARCH EXPERIENCE:

> Interactions between different trophic levels with a focus on predator-prey and large herbivore-forest biodiversity dynamics

> Application of remote sensing in conservation ecology

> Conservation of large mammals

> Protected area management

> Human Dimensions in Wildlife



STEFANIE HOLZWARTH

STEFANIE.HOLZWARTH@DLR.DE

NATIONALITY: German

INSTITUTE, CITY/TOWN, COUNTRY: German Aerospace Center (DLR), Earth Observation Center (EOC), Weßling, Germany

EDUCATION: Diploma in Geodesy

RESEARCH EXPERIENCE:

Since 2002 researcher at the German Aerospace Center (DLR) in Weßling, Germany

> Airborne hyperspectral remote sensing

> Standards and protocols for imaging spectroscopy

> Quality management

> Tree species classification



LUCIE HOMOLOVÁ

HOMOLOVA.L@CZECHGLOBE.CZ

NATIONALITY: Czech

INSTITUTE, CITY/TOWN, COUNTRY: Global Change Research Institute, Czech Academy of Sciences, Brno, Czech Republic

EDUCATION:

- > PhD in remote sensing (Wageningen University, NL)
- > MSc in Geo-information and remote sensing (Wageningen University, NL) and in Landscape engineering (Czech University of Life Sciences in Prague, Czech Republic)

RESEARCH EXPERIENCE:

Airborne hyperspectral remote sensing for studying vegetation, mainly coniferous forests, measurements of leaf optical properties, mapping of plant traits from hyperspectral data



HOOMAN LATIFI

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NATIONALITY: Iranian-German

INSTITUTE, CITY/TOWN, COUNTRY: Dept. Of Remote Sensing, University of Wuerzburg, Germany

EDUCATION:

- > Ph.D in Remote sensing and Forestry, Albert-Ludwigs University of Freiburg
- > M.Sc. in Forestry, University of Mazandaran-Iran
- > B. Sc. in Forestry, University of Guilan-Iran

RESEARCH EXPERIENCE:

- > Spokesman of the "Ecology and Environment" working group of the German region of the International Biometric Society
- > Habilitation (Assistant professorship) at the University of Würzburg (2012-2017)
- > More than 40 peer-reviewed publications
- > Supervision of 10 M.Sc and 3 PhD thesis
- > 6 years of continuous university level teaching on LiDAR, spatial statistics and remote sensing applications for forest monitoring



GARY LLEWELLYN

GAEW@NERC.AC.UK

NATIONALITY: British

INSTITUTE, CITY/TOWN, COUNTRY: NERC, Southampton, UK

EDUCATION: Doctor of Philosophy (PhD)

AREAS OF RESPONSABILITY:

- > Coordinate the efficient collection of scientific data by the scheduling of that season's list of commitments against different scientific requirements and operational restrictions
- > Communicate requirement of the science community to the operations team and operational restrictions to the science community
- > Publicise the NERC ARSF, and its capabilities, among the science community
- > Approve and oversee the planning, coordination of the flight schedule for each project and science campaign
- > Approve the scientific and logistical viability of any research grant application



ANDREAS MUELLER

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NATIONALITY: German

INSTITUTE, CITY/TOWN, COUNTRY: DLR, Oberpfaffenhofen, Germany

EDUCATION: Diploma at the Working-Group for Geo-Scientific Remote Sensing at Munich in geology and remote sensing in May 1990

RESEARCH EXPERIENCE:

- > Radiometric and spectral simulation of imaging spectrometers
- > Spectral characterisation of natural surfaces
- > Application development focusing on
- > Land Degradation
- > Mining Environments



ELNAZ NEINAVAZ

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NATIONALITY: Iranian

INSTITUTE, CITY/TOWN, COUNTRY: ITC- University of Twente, Enschede, the Netherlands

EDUCATION: Ph.D

RESEARCH EXPERIENCE:

Remote sensing, Hyperspectral, Thermal infrared, Vegetation



NICOLE PINNEL

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NATIONALITY: German

INSTITUTE, CITY/TOWN, COUNTRY: German Aerospace Center (DLR), Earth Observation Center (EOC), Weßling, Germany

EDUCATION:

- > Diploma in Physical Geography (2002)
- > PhD in remote sensing (2007)

RESEARCH EXPERIENCE:

Hyperspectral remote sensing, shallow water habitats, vegetation, species classification



ILS REUSEN

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NATIONALITY: Belgian

INSTITUTE, CITY/TOWN, COUNTRY: Flemish Institute for Technological Research (VITO), Mol, Belgium

EDUCATION:

> MSc in Physics (astronomy), KULeuven, 1993

> PhD in Physics (nuclear physics-spectroscopy), KULeuven, 1999

RESEARCH EXPERIENCE:

> 2000: Post-doc in image processing at KULeuven

> 2000-now: Researcher/project manager in airborne hyperspectral remote sensing at VITO



ANDREW SKIDMORE

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NATIONALITY: Dutch

INSTITUTE, CITY/TOWN, COUNTRY: University Twente, Enschede, Netherlands

EDUCATION: BSc (Forestry) PhD

RESEARCH EXPERIENCE:

Spatial Ecology



MARTIN STARY

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TOBIAS STORCH

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NATIONALITY: German

INSTITUTE, CITY/TOWN, COUNTRY: German Aerospace Center (DLR), Earth Observation Center (EOC) Weßling, Germany

EDUCATION:

- > Diploma in Computer Science (2003)
- > Doctorate degree in Computer Science (2007)

RESEARCH EXPERIENCE:

- > Research assistant in computer science at the University of Dortmund, Germany (2003 to 2007)
- > Researcher and Project Manager at the German Aerospace Center (DLR) in Weßling, Germany
 - Ground Segment Project Manager for EnMAP (since 2009)
 - System Engineer in EnMAP (2007 to 2009)
 - Project Manager or System Engineer in some ESA projects for processors for optical data of ALOS and Sentinel-2



RUBEN VAN DE KERCHOVE

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NATIONALITY: Belgian

INSTITUTE, CITY/TOWN, COUNTRY: VITO, Mol, Belgium

EDUCATION: PhD in Geography

RESEARCH EXPERIENCE:

Ruben Van De Kerchove is an environmental scientist skilled in the spatio-temporal analysis of ecosystems. He has a specific interest in the complex interplay between plants, their ecology and diversity, and the regional climate. After completing his Master and PhD in Geography at Ghent University (Belgium) in 2007 and 2012, respectively, Ruben worked between 2012 and 2014 as a project scientist at the Université Libre de Bruxelles.

Since 2014, Ruben is part of VITO Remote Sensing's Land Use team responsible for several projects dealing with applications in biodiversity. He uses a combination of field surveys with numerical modelling and diverse earth observation data (High and Medium Resolution optical time series, airborne imaging spectroscopy, airborne LiDAR and C/L-Band SAR time series) for analysis on local to regional scales



JOCHEM VERRELST

JOCHEM.VERRELST@UV.ES

NATIONALITY: Belgian

INSTITUTE, CITY/TOWN, COUNTRY: University of Valencia, Valencia, Spain

EDUCATION: PhD in remote sensing

RESEARCH EXPERIENCE:

Retrieval of vegetation properties, radiative transfer modelling, hyperspectral remote sensing, fluorescence



TIEJUN WANG

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NATIONALITY: China

INSTITUTE, CITY/TOWN, COUNTRY: Faculty of Geo-Information Science and Earth Observation (ITC), University of Twente, Enschede, The Netherlands

EDUCATION:

> 2001 – 2003: MSc, International Institute for Geo-information Science and Earth Observation, The Netherlands

> 2004 – 2008: PhD, Wageningen University and ITC, The Netherlands

RESEARCH EXPERIENCE:

25 years research experience in GIS, remote sensing, ecology, biodiversity, and conservation



XI ZHU

X.ZHU@UTWENTE.NL

NATIONALITY: Chinese

INSTITUTE, CITY/TOWN, COUNTRY: Faculty of Geo-Information Science and Earth Observation of the University of Twente

EDUCATION: PhD student

RESEARCH EXPERIENCE:

LiDAR and hyperspectral remote sensing in vegetation

