

2nd Workshop of EARSeL Special Interest Group on Forestry Remote Sensing for forestry applications – the new challenges, approaches and achievements

Tue, 17 Jun 2014 **2nd Workshop SIG on Forestry - 1**

09:00 **Opening session and LiDAR - ALS**

Opening session & ALS in forestry applications

Presentation of Chairmen

09:00 - 09:10

Remote Sensing of Forests at ESA

Frank Martin Seifert

09:10 - 09:25

A comprehensive lidar data analysis system for describing forest structure to improve forest ecosystem management

Benoit St-Onge, Bruce Persaud, Daniel Kneeshaw, Udaya Vepakomma

09:25 - 09:40

Measuring and monitoring of forest ecosystem services with LiDAR

L. Monika Moskal

09:40 - 09:55

Individual tree and crown identification in the Danube floodplain forests based on airborne laser scanning data

Ivan Sačkov, Tomáš Bucha, Géza Király, Gábor Brolly, Rastislav Raši

09:55 - 10:10

Attenuation correction of full-waveform airborne laser scanner data for improving the quality of volumetric forest reconstructions based on a simplified waveform history analysis

Katja Richter, Nadine Stelling, Hans-Gerd Maas

10:10 - 10:25

Comparison of methodologies for forest biomass estimation by LiDAR data: the “LESTO” GIS-based toolbox

Valentino Floreancig, Andrea Antonello, Silvia Franceschi, Alessandro Andriolo, Francesco Comiti, Giustino Tonon

10:25 - 10:40

Land cover change detection analysis in a forestry environment on a basis of 3D ALS points

Karolina Korzeniowska, Markus Hollaus, Norbert Pfeifer

10:40 - 10:55

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11:00 Coffee break

11:30 Remote Sensing

Hyperspectral RS and vegetation indices

Early Recognition of Changes in the Health Status of Norway Spruce with Hyperspectral Data

Lea Henning, Nicole Pinnel, Markus Immitzer, Uta Heiden

11:30 - 11:45

Spectral properties and condition of dominant forest tree species

Bogdan Zagajewski, Martyna Wietecha, Adrian Ochtyra, Marlena Kycko, Karolina Orłowska, Zbigniew Bochenek, Dariusz Ziółkowski, Maciej Bartold, Hans Tømmervik, Jarle Werner Bjerke, Andrzej Kłos, Zbigniew Ziembik, Dagrún Vikhamar Schuler, Anna Maria Jarocińska, Elżbieta Romanowska, Adriana Marcinkowska, Anita Sabat, Anna Robak, Martyna Golenia

11:45 - 12:00

Modelling forest habitat of zoological communities

Benjamin F Leutner, Martin Wegmann, Jörg Müller, Martin Bachmann, Stefan Dech

12:00 - 12:15

Dominant forest species classification of Polish Karkonoski National Park using hyperspectral APEX data and Stuttgart Neural Network Simulator

Edwin Raczko, Zagajewski Bogdan, Adrian Ochtyra, Anna Jarocińska, Marek Dobrowolski, Adriana Marcinkowska

12:15 - 12:30

Forest ecosystem health assessment by exergy approach

Olga Brovkina, V. Gorny, I. Latypov, F. Zemek

12:30 - 12:45

The course of ecological disaster in Karkonosze and Izerskie Mountains based on Landsat data

Anna M. Jarocinska, Adrian Ochtyra, Bogdan Zagajewski, Adriana Marcinkowska, Marlena Kycko

12:45 - 13:00

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13:00 Lunch

14:00 GEOBIA

Object Based Image Analysis

Assessing robustness of fuzzy rule-sets used for semi-automatic object-based classification of forest types on BlackBridge satellite imagery – the case study in South Poland

Paweł Hawryło, Piotr Weżyk, Marcin Pierzchalski

14:00 - 14:15

Monitoring forest cover change in boreal forests: a methodological approach

Ouns Kissiyar, Svyatoslav S. Bartalev, Frédéric Achard

14:15 - 14:30

14:30 Free workshops -1

Own notebooks needed !!!

Workshop on ALS applications in forestry - part 1

Monika Moskal - USA

<http://faculty.washington.edu/lmmoskal/>

14:30 - 15:30

Geographic Object-Based Image Analysis (GEOBIA) of RS and ALS data with eCognition (TRIMBLE) - part 1

Marcin Pierzchalski, Pawel Hawrylo - ProGea Consulting

<http://www.progea.pl>

14:30 - 15:30

LAStools - rapidlasso - part 1

Martin Isenburg

<http://rapidlasso.com/>

14:30 - 15:30

15:30 Coffee break

15 min

15:45 Poster session WS Forestry

SIG Forestry

Leaf Area Index mapping using LiDAR, Landsat and ground measurements of plant communities in foothills and forest zone of Magura National Park

Sylvia Szporak-Wasilewska, Oliwia Krettek, Tomasz Berezowski, Bartłomiej

Ejdys, Łukasz Sławik, Marcin Borowski, Krzysztof Bedkowski

15:45 - 15:48

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Mobile Geographic Information System (GIS) for Forest Conservation and Surveillance

M Rajamanickam, G Victor Rajamanickam

15:48 - 15:51

Development of a remote sensing based fast response system for the handling of calamities in forests

Oliver Bauer, Rudolf Seitz, Adelheid Wallner, Kathrin Einzmann, Markus Immitzer, Andreas Müller

15:51 - 15:54

METHOD ANALYSIS FOR COLLECTING AND PROCESSING HYPERSPETRAL NEEDLE REFLECTANCE DATA FOR MONITORING SPRUCE VITALITY

Kathrin Einzmann, Wai-Tim Ng, Markus Immitzer, Lea Henning, Martin Bachmann, Clement Atzberger

15:54 - 15:57

16:00 Free workshops -2

Please bring your own laptop

Workshop on ALS in forestry - part 2

Monika Moskal - USA

<http://faculty.washington.edu/lmmoskal/>

16:00 - 18:00

Geographic Object-Based Image Analysis (GEOBIA) of RS and ALS data with eCognition (TRIMBLE) - part 2

Marcin Pierzchalski, Pawel Hawrylo - ProGea Consulting

<http://www.progea.pl>

16:00 - 18:00

LAStools - rapidlasso - part 2

Martin Isenburg

<http://rapidlasso.com/>

16:00 - 18:00

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Wed, 18 Jun 2014 2nd Workshop SIG on Forestry - 2

08:45 **3D Photogrammetry / TLS / Radar applications in forestry**
Georeferenced aerial photography and tropical forest parameters collected from a low cost RC quadcopter in the Democratic Republic of Congo

Jörg Haarpaintner, Fabian Enssle, Stian A. Solbø

08:45 - 09:00

Growing stock change detection based on 3D point clouds from ALS and stereo images

Markus Hollaus, Camillo Ressler, Klemens Schadauer, Christoph Bauerhansl

09:00 - 09:15

3D forest canopy gaps analyses based on WorldView-2 stereo imagery

Jiaojiao Tian, Christoph Straub, Adelheid Wallner, Rudolf Seitz, Peter Reinartz

09:15 - 09:30

Assessing the accuracy of different remote sensors for forest cover mapping and its proxy for biomass estimation in the Dem. Rep. of Congo

Fabian Enßle, Pawan S Datta, Jörg Haarpaintner, Miguel Kohling, Barbara Koch

09:30 - 09:45

Tree detection by row recovery on Eucalyptus spp. plantations from TLS data

Anita Schilling, Hans-Gerd Maas, Christel Lingnau

09:45 - 10:00

Timber volume prediction using airborne laser scanning, aerial photogrammetry, TanDEM-X, and TerraSAR-X radargrammetry data

Johannes Rahlf, Johannes Breidenbach, Svein Solberg, Erik Næsset, Rasmus

Astrup

10:00 - 10:15

Potential of SAR data for forest change detection in mountains

Ruben Remelgado, Claudia Notarnicola, Ruth Sonnenschein

10:15 - 10:30

Satellite InSAR: Forest monitoring in three dimensions

Svein Solberg

10:30 - 10:45

10:45 Coffee break
30 min

11:15 Forest monitoring and GIS analyses

Determine the erosion zone using remote sensing in forest areas of Serbia

Mileta M Milojević, Milutin P Stefanović, Zoran S Gavrilović

11:15 - 11:30

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Enhancement of MSG fire product by using regionalized thresholds

ibrahim sonmez, Erdem Erdi, Fatih Demir, Murat Arslan, Ahmet E Tekeli

11:30 - 11:45

Multi-temporal analysis of forestation changes in Tatra National Park using SPOT images

Beata Weintrit, Joanna Pluto-Kossakowska

11:45 - 12:00

Assessment of forest cover change using Landsat images time series: case study from the Polish Carpathians

Katarzyna A. Ostapowicz

12:00 - 12:15

Dynamics of the forest coverage in Northern Romanian Carpathians – a Landsat time series data analysis

BIANCA-ROXANA NAZARIE, IONUT COSMIN SANDRIC, SILVIA ALEXANDRA USTEA, VLAD TEODOR, Florin MIHAI, Florin DUMITRASCU, Camelia SEMEN

12:15 - 12:30

Forest naturalness assessment using remote sensing and GIS methods

Piotr Pabjanek, Anna Chlebicka, Zenon Sedzikowski

12:30 - 12:45

Closing Session of WS Forestry - Panel of Chairmen

12:45 - 13:00

13:00 Lunch

14:00 EARSeL General Assembly

16:00 Coffee break

16:20 Keynote: ESA (Francesco Sarti)

18:30 Gala Dinner (Hotel Bristol)
(65 EUR/person, free of charge for full-payment participants)