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 Raší
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
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 Klos, Zbigniew Ziembik, Dagrun 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
Sylwia 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 HYPERSPECTRAL 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
08:45 3D Photogrammetry / TLS / Radar applications in forestry
   Georeferenced aerial photography and tropical forest parameters collected from a low cost RC quadrocopter in the Democratic Republic of Congo
   Jörg Haarpaintner, Fabian Enssle, Stian A. Solbø

Growing stock change detection based on 3D point clouds from ALS and stereo images
   Markus Hollaus, Camillo Ressl, 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

Accessing 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)