

# ISPRS Technical Commission VII Symposium

PLEASE NOTE

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Contributions in this colour indicate changes since the publication of the first issue of the Programme Booklet (=printed version)

V 20100705

## MONDAY, 5 July 2010

|               |                  |  |   |   |
|---------------|------------------|--|---|---|
| 08:00 - 18:00 | EI Aula          | Registration   |   |   |
| 09:00 - 10:30 | EI 7             | OPENING SESSION  |   |   |
| 09:30 - 10:00 |                  | Welcome Address by the Symposium Chairman ( <i>Wolfgang Wagner</i> )   |   |   |
| 10:00 - 10:30 |                  | Welcome Address by the President of ISPRS ( <i>Orhan Altan</i> )   |   |   |
|               |                  | Presentation of the ISPRS Student Consortium ( <i>Cemal Özgül Kivilcim</i> )   |   |   |
|               |                  | Recent Advances in Local and Global Environmental Remote Sensing ( <i>Menzel et al. (W. Paul Menzel)</i> )   |   |   |
|               |                  | Assimilation of satellite data into land surface models ( <i>Shaun Quegan</i> )  |   |   |
| 10:30 - 11:00 | EI Aula          | Coffee Break   |   |   |
| 11:00 - 12:45 | EI 7, EI 8, EI 9 | ORAL SESSION 1.1 - 1.3   |   |   |
|               |                  | EI 7<br>Remote Sensing Applications 1<br>Chair: Klaus Steinnocher, Co-Chair: Christoph Aubrecht  | EI 8<br>Data Fusion and Data Assimilation<br>Chair: Jixian Zhang, Co-Chair: John van Genderen   | EI 9<br>Lidar and Laser Scanning 1<br>Chair: Juha Hyypä, Co-Chair: Bernhard Höfle   |
| 11:00 - 11:15 |                  | Observing stress of artificial night lighting on marine ecosystems - A remote sensing application study ( <i>Aubrecht &amp; al.; Christoph Aubrecht</i> )                                    | Fusion of optical and radar remote sensing data: Munich city example ( <i>Palubinskas &amp; Reinartz; Gintautas Palubinskas</i> )             | Automatic detection of buried channel deposits from dense laser altimetry data ( <i>Possel &amp; al.; Roderik C. Lindenbergh</i> )  |
| 11:15 - 11:30 |                  | Retrieval of biophysical vegetation products from rapideye imagery ( <i>Vuolo &amp; al.; Katja Richter</i> )   | Fusion of ALS Point Cloud Data with High Precision Surveying ( <i>Data Wehr &amp; al.; Aloysius Wehr</i> )                                    | Comparison of terrestrial laser scanner and synthetic aperture radar data in the study of forest defoliation ( <i>Kaasalainen &amp; al.; Sanna Kaasalainen</i> )                        |
| 11:30 - 11:45 |                  | Built-up areas density mapping from satellite images by morphological granulometries ( <i>Kemmouche &amp; al.; Akila Kemmouche</i> )   | Fusion of ascending and descending polarimetric SAR data for color orthophoto generation ( <i>Zhang &amp; al.; Jixian Zhang</i> )             | Terrain echo probability assignment based on full-waveform airborne laser scanning observables ( <i>Mücke &amp; al.; Werner Mücke</i> )   |
| 11:45 - 12:00 |                  | Remote Sensing, Geographic Information Systems and Shannon's Entropy: Measuring Urban Sprawl in a Mountainous Environment ( <i>Verzosa &amp; Gonzalez; Loureal Camille Verzosa</i> )         | Pansharping -- Relating Quantitative Quality Measures to Impact on Results of Subsequent Processing Steps ( <i>Uwe Weidner</i> )              | A Wavelet-base method in filtering of airborne Laser scanning data ( <i>Grzegorz Jozkow</i> )   |
| 12:00 - 12:15 |                  | Estimating sub-pixel to regional winter crop areas using neural nets ( <i>Atzberger &amp; Rembold; Clement Atzberger</i> )   | The registration of 3-D model and 2-D image using point and line features ( <i>Teo &amp; Chen; Tee-Ann Teo</i> )                              | The Light Fantastic: Using airborne lidar, in archaeological survey ( <i>Simon Crutchley</i> )  |
| 12:15 - 12:30 |                  | Fusing Earth Observation with Local-level Health Data in a Virtual Globe Platform for Strengthening Public Health Capacity in Kisumu, Kenya ( <i>Seaquist &amp; al.; Jonathan Seaquist</i> ) | Spatio-Temporal Characterization of Aerosols through Active Use of Data from Multiple Sensors ( <i>Obradovic &amp; al.; Zoran Obradovic</i> ) | Comparison of grid-based and segment-based estimation of forest attributes using airborne laser scanning and digital aerial imagery ( <i>Tuominen &amp; Haapanen; Sakari Tuominen</i> ) |
| 12:30 - 12:45 |                  | Discussion   | Discussion  | Discussion  |
| 12:45 - 14:00 |                  | Lunch Break  |   |   |

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| 14:00 - 15:45 | EI 7, EI 8, EI 9 | ORAL SESSION 2.1 - 2.3   |  |  |
|               |                  | EI 7<br>Remote Sensing Applications 2<br>Chair: Clement Atzberger, Co-Chair: Balázs Székely  | EI 8<br>Change Detection and Process Modelling<br>Chair: Qiming Zhou, Co-Chair: Manos Baltasvias   | EI 9<br>Lidar and Laser Scanning 2<br>Chair: Sanna Kaasalainen, Co-Chair: Uwe Stilla   |
| 14:00 - 14:15 |                  | Remote Sensing and GIS in Inflow Estimation: The Magat Reservoir, Philippines Experience (Sarmiento & al.; <b>Rhodora M. Gonzalez</b> )  | Assessment system of GIS-objects using multi-temporal imagery for near-realtime disaster management (Frey & Butenuth; <b>Daniel Frey</b> )                                 | ALTM ORION: Bridging conventional LIDAR and full waveform digitizer technology (Ussyshkin & Theriault; <b>Valerie Ussyshkin</b> )  |
| 14:15 - 14:30 |                  | Efficiency of texture measurement from two optical sensors for improved biomass estimation (Nichol & Sarker; <b>Janet Nichol</b> )   | Mapping the deformation of man-made linear features using dinsar technique (Wu & al.; <b>Hongan Wu</b> )   | Radiometric calibration of Full-Waveform Airborne Laser Scanning Data based on natural surfaces (Lehner & Briese; <b>Hubert Lehner</b> )   |
| 14:30 - 14:45 |                  | Land Border Monitoring with remote sensing technologies (Malinowski & Bielinska; <b>Radoslaw Malinowski</b> )  | Automatic 3D Change Detection based on optical satellite stereo imagery Tian & al. ( <b>Jiaojiao Tian</b> )  | Urban vegetation detection using high density full-waveform airborne LiDAR data - Combination of object-based image and point cloud analysis (Höfle & Hollaus; <b>Bernhard Höfle</b> ) |
| 14:45 - 15:00 |                  | Mapping stream bank condition from airborne LiDAR and high spatial resolution image data in a temperate rural-urban environment, Australia (Johansen & al.; <b>Kasper Johansen</b> ) | <b>Sub-pixel precision image matching for displacement measurement of mass movement using normalised cross-correlation (Debella-Gilo &amp; Käab; Misganu Debella-Gilo)</b> | Evaluation of a laser Mobile Mapping System for monitoring sandy coasts (Bitenc & al.; <b>Maja Bitenc</b> )  |
| 15:00 - 15:15 |                  | Quantitative Prognosis of Oil and Natural Gas Fields (Vostokov & al.; <b>Anatoliy Vostokov</b> )   | Characterisation of long-term Vegetation Dynamics for a semi-arid wetland using NDVI time series from NOAA-AVHRR ( <b>Ralf Seiler</b> )                                    | Data driven alignment of 3D building models and digital aerial images (Jung & al.; <b>Costas Armenakis</b> )   |
| 15:15 - 15:30 |                  | <b>Mountains' Peaks Parameterisation and Determination (Tomaž Podobnikar)</b>  | Targeted Change Detection: A Novel Sensor-Independent Partially-Supervised Approach (Fernández-Prieto & Marconcini; <b>Mattia Marconcini</b> )                             | Tree Species Detection using full waveform LIDAR data in a complex forest (Gupta & al.; <b>Sandeep Gupta</b> )   |
| 15:30 - 15:45 |                  | Discussion   | Discussion   | Discussion   |
| 15:45 - 16:15 | EI Aula          | Coffee Break   |  |  |
| 16:15 - 17:45 | Prechtsaal       | <b>POSTER SESSION</b> (Main Building, Karlsplatz 13)<br>Please refer to the floor plan in Prechtsaal to find the respective board for a poster number                                |  |  |
|               |                  | <b>Poster #</b>  | <b>Title</b>   | <b>Authors</b>   |
|               |                  |  | <b>Change detection and process modelling</b>  |  |
|               |                  | CHGD-004   | Research of 2D-Fisher rule function in change detection of remote sensing images   | Zhang (Baoming Zhang)  |
|               |                  | CHGD-006   | Change visualization through a texture-based analysis approach for disaster applications   | Tomowski & al. (Daniel Tomowski)   |
|               |                  | CHGD-101   | Deriving water fraction and flood map with the EOS/MODIS data using decision tree approach   | Sun & Yu (Donglian (Lillian) Sun)  |
|               |                  | CHGD-104   | Detection of forest management operations using bi-temporal aerial photographs   | Hyvönen & al. (Pekka Hyvönen)  |
|               |                  | CHGD-105   | Analysing spatio-temporal pattern of land cover change using multi-temporal satellite images   | Zhou & Sun (Qiming Zhou)   |
|               |                  | CHGD-107   | Mangrove change analysis using remote sensing and GIS technology (Case study: Can Gio district, Ho Chi Minh city, Viet Nam)  | Hoa Binh (Truong Thi Hoa Binh)   |
|               |                  | CHGD-108   | Analysis and Modeling of Urban Land Cover Change in Setúbal and Sesimbra, Portugal   | Araya (Yikalo Araya)   |
|               |                  | CHGD-146   | Automatic Registration of Airborne and Space-borne Images by Topology Map-Matching with SURF Processor Algorithm   | Brook & Ben-Dor (Anna Brook)   |
|               |                  | CHGD-158   | Landsat Image Time Series for Monitoring Change in Vegetation Phenology and Disturbance in Queensland, Australia   | Bhandari & al. (Santosh P. Bhandari)   |
|               |                  | CHGD-159   | <b>Sub-pixel precision algorithms for normalised cross-correlation based image matching of mass movements</b>  | <b>Debella-Gilo &amp; Käab (Misganu Debella-Gilo)</b>  |
|               |                  | CHGD-183   | Change detection for building models from aerial images and LIDAR data   | Chen & al. (Liang-Chien Chen)  |
|               |                  | CHGD-194   | Measuring fluctuations of the aquifer in a Brazilian savanna region using a temporal sequence of 50 Landsat images   | Pires-Luiz & Maillard (Philippe Maillard)  |

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|---------------------------------|---|---|
| CHGD-249                        | TerraSAR-X based Map to Image Change Detection  | von Poncet & al. (Felicitas von Poncet)                             |
| CHGD-262                        | The aerial photos to detect changes in the landscape affected by black coal deep mining   | Mulkova & Popelkova (Monika Mulkova)                                |
| CHGD-333                        | VHR Imagery Change Detection using Land Use Data and Histogram Analysis   | van der Sande & al. (Corne van der Sande)                           |
| CHGD-339                        | Monitoring of beaches and sand dunes using digital aerial photography with direct georeferencing  | Gonçalves & al. (Jose Gonçalves)                                    |
| CHGD-393                        | A spatial statistics approach to land use cover change modeling   | Simões Penello Meirelles & al. (Margareth Simões Penello Meirelles) |
| <b>Lidar and laser scanning</b> |   |   |
| LIDR-041                        | True Orthophoto Creation Through Fusion of LiDAR Derived Digital Surface Model and Aerial Photos  | Kato & al. (Akira Kato)   |
| LIDR-042                        | The effect of biomass and scanning angle on the laser pulse transmittance to the ground   | Ahokas & al. (Eero Ahokas)  |
| LIDR-125                        | Development of Vegetation Structure Inputs From ICESat, SRTM and MODIS Satellite Data for a Mixed Canopy Dynamic Global Terrestrial Ecosystem Model | Ni-Meister (Wenge Ni-Meister)                                       |
| LIDR-170                        | DEM generation from airborne LiDAR data by an adaptive dual-directional slope filter  | Wang & Tseng (Cheng-Kai Wang)                                       |
| LIDR-180                        | Laser Spot-Scanning to construct "Ground Control Area" in very heterogeneous Photo Block  | Mustafa & Amhar (Adi Junjunan Mustafa)                              |
| LIDR-190                        | Terrain roughness parameters from full-waveform airborne LiDAR data   | Hollaus & Höfle (Markus Hollaus)                                    |
| LIDR-193                        | Estimating canopy height with small footprint Lidar and field measurements: a tropical challenge  | Lobo & Soto (Elena Lobo)  |
| LIDR-213                        | Self-calibration and evaluation of the Trimble GX terrestrial Laser scanner   | Chow & al. (Jacky Chow)   |
| LIDR-214                        | Indoor targetless terrestrial Laser scanning  | Chow & al. (Jacky Chow)   |
| LIDR-230                        | Detailed Digital Surface Model (DSM) Generation, Automatic Object Detection and Surface Characterization to Model Urban Flooding.                   | Aktaruzzaman al. (MD Aktaruzzaman)                                  |
| LIDR-232                        | Fusion of Full Waveform LiDAR Data and Hyperspectral Data for tree species classification.  | Krzystek & al. (Josef Reitberger)                                   |
| LIDR-251                        | Vertical roughness mapping - ALS based classification of the vertical vegetation structure in forested areas  | Aubrecht & al. (Christoph Aubrecht)                                 |
| LIDR-280                        | Correction of the inconstancies of measured points by Laser scanning on the physical surface  | Temba (Plinio Temba)  |
| LIDR-305                        | A method of building planes extraction from Lidar point clouds  | Li & al. (Jingmei Li)   |
| LIDR-310                        | Building model reconstruction with LiDAR data and topographic map by registration of building outlines  | Lin & al. (Man-Chia Hsu)  |
| LIDR-319                        | Which are the nearest neighbors in k-nn-based ALS inventories   | Haapanen & Tuominen (Reija Haapanen)                                |
| LIDR-390                        | Change detection of building footprints from airborne laser scanning acquired in short time intervals   | Rutzinger & al. (Michael Vetter)                                    |
| <b>Microwave remote sensing</b> |   |   |
| MWAV-046                        | Airborne Doppler navigation system application for measurement of the water surface backscattering signature  | Nekrasov (Alexey Nekrasov)  |
| MWAV-049                        | Spaceborne altimeter potential possibilities on sea surface significant wave height measurements  | Grishechkin & Baskakov (Boris Y. Grishechkin)                       |
| MWAV-052                        | Advances on Repeated Space-borne SAR Interferometry and its application to ground deformation monitoring  | Liu (Winmay Liu)  |
| MWAV-089                        | Land cover identification using polarimetric SAR images   | Kourgli & al. (Assia Kourgli)                                       |
| MWAV-090                        | SAR stereo-mapping based on DEM   | Yang (Shucheng Yang)  |
| MWAV-091                        | A framework of polarimetric SAR filter based on intensity and polarimetric information  | Li & al. (Pingxiang Li)   |
| MWAV-196                        | The value of active microwave satellite data for monitoring high latitude environment   | Bartsch & al. (Sang Eun Park)                                       |
| MWAV-217                        | TEST 02: Testing with access restricted   | Nothegger & Dorninger (Peter Dorninger)                             |
| MWAV-224                        | Assessment of the impact of uncertainty on modelled soil surface roughness on SAR-retrieved soil moisture uncertainty                               | De Keyser & al. (Eva De Keyser)                                     |
| MWAV-247                        | Preliminary quantitative analysis of interferometric coherence degree and number of residues in interferogram                                       | Chang & al. (Zhanqiang Chang)                                       |
| MWAV-302                        | Simulation and analysis of the atmospheric effects on SAR interferograms  | Abdelfattah (Riadh Aabdelfattah)                                    |
| MWAV-326                        | The study of ground subsidence and uplift in Orumieh Lake, northwest Iran, using SAR Interferometry   | Hosseini & Abdolmaleki (Siavash Hosseini)                           |
| MWAV-350                        | A Brief History of the German Commercial Spaceborne Radar Activities  | Weber (Marco Weber)   |
| MWAV-359                        | Scattering matrix decomposition and color spaces performance for synthetic aperture RADAR imagery   | Arriagada & al. (Manuel Arriagada)                                  |
| MWAV-400                        | Synthetic aperture radar image resolution effect on target discrimination   | McGowan & al. (John McGowan)  |
| MWAV-412                        | Microwave radiometry for analysis of climate change by monitoring sea ice, snow cover and oceans  | Venkataraman (Archana Venkataraman)                                 |

| Remote sensing applications |   |  |
|-----------------------------|---|--|
| RSAP-065                    | Detection of highways in high resolution images using Mathematical Morphology techniques  | <i>Silva (Erivaldo Silva)</i>                            |
| RSAP-068                    | Remotely sensed data & GIS in land resources management for regional planning over semi-arid parts of NE Brazil   | <i>Teotia (Harendra Teotia)</i>                          |
| <del>RSAP-069</del>         | <del>Detection of 25-year land-cover change in a critical watershed in southern philippines using LANDSAT MSS- and ETM+ images: importance in watershed rehabilitation-</del> | <del><i>Santillan &amp; al. (Jojene Santillan)</i></del> |
| RSAP-072                    | Estimation of timber assortments using low-pulse ALS data   | <i>Holopainen &amp; al. (Markus Holopainen)</i>          |
| RSAP-074                    | Maps of hydrological variables from remote sensing and a distributed water balance model  | <i>Sanchez &amp; al. (Nilda Sanchez)</i>                 |
| <del>RSAP-075</del>         | <del>Proposition routine morphological standard for detection of reservoirs in hydroeletrics-</del>   | <del><i>Grando-Stroppa (Raquel Grando-Stroppa)</i></del> |
| RSAP-076                    | Analysis of spatiotemporal variation of NDVI derived from TM and MODIS images   | <i>Lei &amp; Bian (Shaogang Lei)</i>                     |
| RSAP-077                    | PM MAPPER - an optical multispectral data processing application for aerosol and air quality fields estimation  | <i>Nguyen &amp; al. (Thi Nhat Thanh Nguyen)</i>          |
| <br>                        |   |  |
| RSAP-079                    | A method for robust extraction of control points on high-resolution satellite images  | <i>González &amp; al. (Vicente Arévalo)</i>              |
| RSAP-080                    | Modeling of chlorophyll concentration for Novosibirsk reservoir (South of the West Siberia)   | <i>Kovalevskaya &amp; al. (Nelley Kovalevskaya )</i>     |
| RSAP-081                    | Using remote sensing products for environmental analysis in South America   | <i>Shimabukuro &amp; al. (Yosio Edemir Shimabukuro)</i>  |
| RSAP-082                    | Impacts of underground coal mining on land eco-environment under the context of desert by means of remote sensing and GIS   | <i>Bian (Zhengfu Bian)</i>                               |
| RSAP-093                    | Monitoring impervious surface sprawl in shanghai using tasseled cap transformation of LANDSAT data  | <i>Zhang &amp; Ban (Qian Zhang)</i>                      |
| RSAP-134                    | The role of remote sensing in fighting against terrorism- A case of Pakistan  | <i>Asmat (Ali Asmat)</i>                                 |
| RSAP-135                    | NDVI (MODIS sensor) response to interannual variability of rainfall and evapotranspiration in a soybean producing region, southern Brazil                                     | <i>Giarolla &amp; al. (Angelica Giarolla)</i>            |
| RSAP-136                    | Flooding of Cities: A RS and Approach   | <i>Vyas (Anjana Vyas)</i>                                |
| RSAP-137                    | Integrated Land Resources Planning Using Remote Sensing and GIS: Case studies from Haryana State, India   | <i>Chaudhary (Bhagwan Singh Chaudhary)</i>               |
| RSAP-142                    | The use of aerospace photographs and remote sensing data in cartography   | <i>Gojamanov (Magsad Gojamanov)</i>                      |
| RSAP-143                    | 15 years of urban and regional applications of VHR imagery in Poland  | <i>Lach (Robert Lach)</i>                                |
| <del>RSAP-144</del>         | <del>Evaluation of urban sprawl using remote sensing and GIS</del>  | <del><i>Omolere (Sesan Omolere)</i></del>                |
| RSAP-172                    | Identification of beach features/patterns through artificial neural networks techniques using IKONOS data   | <i>Teodoro &amp; al. (Ana Teodoro)</i>                   |
| RSAP-175                    | Identification of historical land use by the help of aerial photography   | <i>Zdimal (Vaclav Zdimal)</i>                            |
| <del>RSAP-189</del>         | <del>Identifying the Poor in the Cities – How can Remote Sensing help to profile poverty (slum dwellers) in megacities?</del>   | <del><i>Netzband (Maik Netzband)</i></del>               |
| <del>RSAP-197</del>         | <del>Hydrological Simulation of Mahanadi River Basin and Impact of land use / land cover change on surface runoff using a macro scale hydrological model</del>                | <del><i>Dadhwal &amp; al. (VK Dadhwal)</i></del>         |
| RSAP-200                    | Time series satellite imagery analysis for drought hazard assessment and environmental challenges of Hamoun Desert Lake in Sistan region -Iran                                | <i>Sharifikia (Mohammad Sharifikia)</i>                  |
| RSAP-208                    | Recognition of winding displacements for steel coils via laser light section technique  | <i>Hözl &amp; al. (Patrick Hözl)</i>                     |
| <del>RSAP-234</del>         | <del>Earth observation for monitoring conflict resources in the Democratic Republic of the Congo</del>  | <del><i>Kranz &amp; Schoepfer (Olaf Kranz)</i></del>     |
| RSAP-253                    | Disaster Monitoring and Management by the Unmanned Aerial Vehicle Technology  | <i>Chou &amp; al. (Ying Chih Chen)</i>                   |
| RSAP-272                    | An insight of using remote sensing technique on water resources management  | <i>Farid &amp; al. (Alireza Farid)</i>                   |

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| 18:00 - 23:00                                       | Courtyard and Prechtsaal   | RSAP-277                         | <del>Environmental impact assessment using Neural Network Model: A case study of the Jahani ,konarsiah and Kohe Gach salt plugs, SE Shiraz, Iran</del> | <del>Tayebi &amp; al. (Mohammad Hasan Tayebi)</del> |
|   |  | RSAP-279                         | Passive microwave soil moisture evaluations by ground based measurements in Korea  | Choi & al. (Minha Choi)                             |
|   |  | RSAP-303                         | Fusion of Multi-modal and Multi-temporal Satellite Data for Forest Management  | Thiele & al. (Antje Thiele)                         |
|   |  | RSAP-307                         | Application of multi-spectral remotely sensed imagery in agriculture   | Kokhan (Svitlana Kokhan)                            |
|   |  | RSAP-349                         | Condition of quasi natural area and its environment in long term changes - remote sensing and GIS assessment in Great plain, Hungary                   | Kovács (Ferenc Kovács)                              |
|   |  | RSAP-356                         | Estimating scaled cloud optical thickness from SEVIRI, for air quality research, by implementing a semi-analytical cloud retrieval algorithm           | Pandey & al. (Praveen Pandey)                       |
|   |  | RSAP-368                         | 3D city wide mapping of New Delhi- End of an era of Mapping Restrictions   | Upadhyaya (Alok Upadhyaya)                          |
|   |  | RSAP-384                         | Studying Bio-Environmental Potentials of Kusalan Area, Based on IUCN criterions, using RS and GIS technologies   | Oladi & Ahsani (Jafar Oladi)                        |
|   |  | RSAP-387                         | <del>When remote sensing went alpine – the 10 international HMRSC symposia 1990-2008</del>   | <del>Buchroithner (Manfred Buchroithner)</del>      |
| RSAP-388  | Comparison of the interpolation methods for creating the water surface model (WSM) and underwater digital terrain model (UDTM) using airborne Lidar hydrography (ALH) data | Najibi & Abedini (Abbas Abedini) |  |   |
| RSAP-398  | More than 150 years of remote sensing the forest in Hungary  | Király (Géza Király)             |  |   |
| Ice Breaker Party<br>(Main Building, Karlsplatz 13) |  |                                  |  |   |

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## TUESDAY , 6 July 2010

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|-----------------------|------------------|---|---|
| 08:00 - 18:00         | EI Aula          | Registration  |   |
| 08:30 - 10:15         | EI 7, EI 8, EI 9 | ORAL SESSION 3.1 - 3.3  |   |
|                       |                  | EI 7<br>Multi-spectral and Hyperspectral Remote Sensing 1<br>Chair: Werner Schneider, Co-Chair: Wouter Dorigo   | EI 8<br>Land Cover Classification 1<br>Chair: Yun Zhang, Co-Chair: Peijun Li  |
|                       |                  |   | EI 9<br>Microwave Remote Sensing 1<br>Chair: Michele Crosetto, Co-Chair: Annett Bartsch   |
| 08:30 - 08:45         |                  | Validation of the radiometric processing chain of the Leica ADS40 airborne photogrammetric sensor ( <i>Markelin &amp; al.; Lauri Markelin</i> )   | Texture analysis to improve supervised classification in IKONOS imagery ( <i>Tassetti &amp; al.; Anna Nora Tassetti</i> )   |
| 08:45 - 09:00         |                  | Four reduced-reference metrics for measuring hyperspectral images after spatial resolution enhancement ( <i>Qian &amp; Chen; Shen-En Qian</i> )   | Automated Extraction of Plantations from Orthophotos Using a Level Set Based Segmentation Method ( <i>Vogt &amp; al.; Karsten Vogt</i> )  |
| 09:00 - 09:15         |                  | True Orthophoto Creation Through Fusion of LiDAR Derived Digital Surface Model and Aerial Photos ( <i>Kato &amp; al.; Akira Kato</i> )  | Classification of settlement areas in remote sensing imagery using conditional random fields ( <i>Hoberg &amp; Rottensteiner; Thorsten Hoberg</i> )   |
| 09:15 - 09:30         |                  | Retrieval of Vegetation Biochemicals Using a Radiative Transfer Model and Hyperspectral data ( <i>Darvishzadeh &amp; al.; Roshanak Darvishzadeh</i> )   | Development of a supervised software tool for automated determination of optimal segmentation parameters for eCognition ( <i>Zhang &amp; al.; Yun Zhang</i> )   |
| 09:30 - 09:45         |                  | Use spectral derivatives for estimating canopy water content ( <i>Jan Clevers</i> )   | Land Cover and Land Use classification assessment for a creation of a National Mapping Agency framework ( <i>Sanchez Hernandez &amp; Hart; Carolina Sanchez Hernandez</i> )   |
| 09:45 - 10:00         |                  | An Investigation on the Use of the Independent Component Analysis (ICA) Techniques for Elimination of the Changes of the Unwanted Lighting Conditions of Images ( <i>Dogan &amp; Altan; Sedat Dogan</i> ) | Semiautomatic classification of tree species by means of multi-temporal airborne digital sensor data ADS40 ( <i>Waser &amp; al.; Lars Waser</i> )   |
| 10:00 - 10:15         |                  | Discussion  | Discussion  |
| 10:15 - 10:45         | EI Aula          | Coffee Break  |   |
| 10:45 - 12:30         | EI 7, EI 8, EI 9 | ORAL SESSION 4.1 - 4.3  |   |
|                       |                  | EI 7<br>Multi-spectral and Hyperspectral Remote Sensing 2<br>Chair: Eyal Ben-Dor, Co-Chair: Nicolas Paparoditis   | EI 8<br>Land Cover Classification 2<br>Chair: Paul Aplin, Co-Chair: Josef Jansa   |
|                       |                  |   | EI 9<br>Microwave Remote Sensing 2<br>Chair: Uwe Sörgel, Co-Chair: Sang-Eun Park  |
| 10:45 - 11:00         |                  | Radiometric calibration for Digital Aerial Mapping Cameras ( <i>Klaus Neumann</i> )   | Automatic Quality Control of Cropland and grassland GIS objects using IKONOS Satellite Imagery ( <i>Helmholz &amp; al.; Petra Helmholz</i> )  |
| 11:00 - 11:15         |                  | Development of quality layers for airborne hyperspectral imagery and end-to-end water and soil products (HYQUAPRO) ( <i>Reusen &amp; al.; IIs Reusen</i> )  | Investigating super-resolution analysis and scale and time of observation for characterising bracken ( <i>Pteridium aquilinum</i> ) distributions ( <i>Aplin &amp; Holland; Paul Aplin</i> )                        |
|                       |                  |   | TerraSAR-X Stereo Digital elevation models for complex terrain conditions in alpine regions and its suitability for orthorectification purposes of optical and SAR imagery ( <i>Kiefl &amp; al.; Nadine Kiefl</i> ) |
|                       |                  |   | Stereo radargrammetry in South-East Asia using TerraSAR-X stripmap data ( <i>He &amp; al.; Timo Balz</i> )  |

|               |  |  |  |
|---------------|--|--|--|
| 11:15 - 11:30 | Wireless sensor networks for in-situ image validation for water and nutrient management in broad acre wheat ( <i>Devadas &amp; al.; Rakhesh Devadas</i> )  | Deriving water fraction and flood map with the EOS/MODIS data using regression tree approach ( <i>Sun &amp; Yu; Donglian Lillian Sun</i> )                                 | Measurement of Long Term Deformation in the Metro Manila, the Philippines ( <i>Tomonori Deguchi</i> )  |
| 11:30 - 11:45 | Variation and anisotropy of forest tress in radiometrically calibrated images of an airborne line sensor - implications to species classification ( <i>Korpela &amp; Rohrbach; Ilkka Korpela</i> ) | Multitemporal RADARSAT-2 polarimetric SAR data for urban land-cover mapping ( <i>Niu &amp; Ban; Yifang Ban</i> )   | Active and passive microwave remote sensing of springtime near-surface soil thaw events at middle latitudes ( <i>Han &amp; al.; Lijian Han</i> ) |
| 11:45 - 12:00 | A Combined Destriping Algorithm for Imaging Spectrometer Data ( <i>Rezaei &amp; al.; Yousef Rezaei</i> )   | Weakly Supervised Polarimetric SAR Image Classification with Multi-modal Markov Aspect Model ( <i>Yang &amp; al.; Wen Yang</i> )   | Simulation assisted high-resolution PS-InSAR analysis ( <i>Schunert &amp; al.; Alexander Schunert</i> )  |
| 12:00 - 12:15 | Using remote sensing products for environmental analysis in South America ( <i>Shimabukuro &amp; al.; Yosio Edemir Shimabukuro</i> )   | Urban impervious surface extraction from very high resolution imagery by One-Class Support Vector Machine ( <i>Li &amp; al.; Peijun Li</i> )                               | Topographic estimation by TERRASAR-X ( <i>Sefercik &amp; Sörgel; Uwe Sörgel</i> )  |
| 12:15 - 12:30 | Discussion and Announcements   | Discussion and Announcements   | Discussion and Announcements   |
| 12:30 - 14:00 | Lunch Break  |  |  |
| 14:00 - 15:30 | <b>POSTER SESSION</b> (Main Building, Karlsplatz 13)<br>Please refer to the floor plan in Prechtsaal to find the respective board for a poster number  |  |  |
|               | <b>Poster #</b>  | <b>Title</b>   | <b>Authors</b>   |
|               |  | <b>Data fusion and data assimilation</b>   |  |
|               | DFUS-013   | Pixel level fusion methods for remote sensing images: A current review   | <i>Yang (Jinghui Yang)</i>   |
|               | DFUS-017   | A comparative case of study of image sharpening  | <i>Rodríguez Galiano &amp; al. (Victor F Rodríguez Galiano)</i>  |
|               | DFUS-018   | Integration of contextual information for the transfer of the beliefs in an information sources fusion system- application to detection and classification of trees crowns | <i>Ben Dhiab &amp; al. (Zouhour Ben Dhiab)</i>   |
|               | DFUS-109   | Super resolved remote sensing by fusion of multi spectral and spatial data   | <i>Gur &amp; al. (Eran Gur)</i>  |
|               | DFUS-266   | Fusion of Pan and Multispectral Images based on Nonsubsampled Contourlet Transform   | <i>Jia &amp; Xiao (Yonghong Jia)</i>   |
|               | DFUS-269   | Evaluation criteria for image fusion performance in different applications   | <i>Zeng &amp; Zhang (Yu Zeng)</i>  |
|               | DFUS-298   | An invented approach in image registration "new era in photogrammetry"   | <i>Homainejad (Amir Saeed Homainejad)</i>  |
|               | DFUS-299   | A Comparative Analyses of image fusion techniques for SPOT5 data: An Example from Istanbul   | <i>Bektas Balcik &amp; Goksel (Cigdem Goksel)</i>  |
|               | DFUS-335   | <u>3D Building Reconstruction using Digital Map and Airborne LiDAR Data</u>  | <u><i>Cho &amp; Park (Woosug Cho)</i></u>  |
|               | DFUS-345   | Quality Assessment Of Image fusion Techniques For Multisensor High Resolution Satellite Images (case study: IRS-P5 and IRS-P6 satellite images)                            | <i>Fallah Yakhdani &amp; Azizi (Mohammad Fallah Yakhdani)</i>  |
|               | DFUS-351   | 3D Building Reconstruction using Digital Map and Airborne Digital Camera Imagery   | <i>Choi (Myung-Jin Choi)</i>   |
|               | DFUS-395   | A Comparative Study of Global and Local Transformation Functions For High Resolution Satellite Image Registration  | <i>Fallah Yakhdani &amp; Azizi (Mohammad Fallah Yakhdani)</i>  |
|               | DFUS-407   | Assessment of very high resolution satellite data fusion techniques for landslide recognition  | <i>Santurri &amp; al. (Leonardo Santurri)</i>  |
|               | DFUS-408   | Co-calibration of the visual and near-infrared data and a common GN vegetation index for the AVHRR/3, MODIS and Meteosat MSG images  | <i>Pásztor &amp; Bognár (Szilárd Pásztor)</i>  |

| Geometric modeling                       |   |   |
|--|---|---|
| GEOM-020                                 | <a href="#">Precise Processing of SPOT-5 HRS and IRS-P5 Stereo Imagery-- For the Project of West China Topographic Mapping at 1:50,000 Scale</a>            | <a href="#">Zhang &amp; Zhang (Li Zhang)</a>  |
| GEOM-111                                 | Accurate Pose Estimation of Uncalibrated Camera for Building Geometric Modeling   | <a href="#">Xie &amp; al. (Wenhan Xie)</a>  |
| GEOM-112                                 | Lunar Geomorphy 3D Visualization Method   | <a href="#">Yang &amp; al. (Zhou Yang)</a>  |
| GEOM-176                                 | Automatic simulation of Images and Auxiliary data for programming and receiving loop Validation of the VENUS Image Ground Segment                           | <a href="#">Poncet &amp; Vadon (Maurice Poncet)</a>                                 |
| GEOM-182                                 | Collocation-aided adjustment of heterogeneous models for satellite images   | <a href="#">Chang &amp; al. (Wen-Chi Chang)</a>                                     |
| GEOM-221                                 | A New Rigorous Imaging Equation for Radar Imagery Base on External Orientation Elements   | <a href="#">Cheng &amp; al. (Chunquan Cheng)</a>                                    |
| GEOM-347                                 | <a href="#">Surface Structure Algorithm of 3D Building Model</a>  | <a href="#">Song &amp; Wei (Yanfeng Wei)</a>  |
| GEOM-362                                 | A DBMS-based 3D Topology Model for Laser Radar Simulation   | <a href="#">Jun (Chulmin Jun)</a>   |
| GEOM-370                                 | Modeling of a single shrub from TLS data using stratified convex hull algorithm   | <a href="#">Tymkow &amp; Borkowski (Przemyslaw Tymkow)</a>                          |
| GEOM-378                                 | Self calibration of small and medium format digital cameras   | <a href="#">Moe &amp; al. (Mike Benson)</a>   |
| Image processing and pattern recognition |   |   |
| IMGP-021                                 | Multistage algorithm for multispectral remote sensing images lossless compression   | <a href="#">Zamyatin (Alexander Zamyatin)</a>                                       |
| IMGP-023                                 | Road extraction from ALOS images using mathematical morphology  | <a href="#">Pires de Castro &amp; Silva Centeno (Fabiana Silva Pires de Castro)</a> |
| IMGP-031                                 | An adaboost-based iterated MRF model with linear target prior for synthetic aperture radar image classification   | <a href="#">Su &amp; al. (Xin Su)</a>   |
| IMGP-032                                 | Empirical comparison of machine learning techniques for object-based image classification with application to vegetation management in power line corridors | <a href="#">Li &amp; al. (Yuee Liu)</a>   |
| IMGP-085                                 | Analysis of spatial and temporal evolution of the NDVI on vegetated and degraded areas in the central Spanish Pyrenees                                      | <a href="#">Alatorre &amp; Beguería (Luis Carlos Alatorre)</a>                      |
| IMGP-113                                 | Efficient smoothing of NDVI time series using the Whittaker smoother  | <a href="#">Atzberger &amp; Eilers (Paul H.C. Eilers)</a>                           |
| IMGP-114                                 | Analysing the facial morphology with a three-dimensional geometrical features approach  | <a href="#">Vezzetti &amp; al. (Enrico Vezzetti)</a>                                |
| IMGP-116                                 | <a href="#">Effect of Ground Control points Location and Distribution on Geometric Correction Accuracy of Remote Sensing Satellite Images</a>               | <a href="#">Fawzy ELtohamy &amp; Hamza (Esam Hassan Hamza)</a>                      |
| IMGP-117                                 | Classification of clouds with object oriented technique   | <a href="#">Azari &amp; al. (Alireza Shakiba)</a>                                   |
| IMGP-118                                 | Analyzing the Directional Relationships between Two Objects with Complex Shapes by Geo-info Graph Spectrum  | <a href="#">Duan &amp; al. (Minyan Duan)</a>  |
| IMGP-164                                 | Accuracy of 3D face recognition frameworks  | <a href="#">Caprioli &amp; al. (Mauro Caprioli)</a>                                 |
| IMGP-187                                 | Assessment of biophysical structure of riparian zones based on segmentation method, spatial knowledge and texture analysis                                  | <a href="#">Alencar-Silva &amp; Maillard (Thiago Alencar-Silva)</a>                 |
| IMGP-256                                 | Automatic Mosaicing Method for Large Block of Orthoimages   | <a href="#">Ai &amp; al. (Haibin Ai)</a>  |
| IMGP-273                                 | Automatic Building Extraction from High Resolution Images Using Active Contours and Shape Prior Knowledge   | <a href="#">Yari &amp; al. (Salman Ahmadi)</a>                                      |
| IMGP-300                                 | Swarm like autonomous agents for seed regions growing segmentation of digital image   | <a href="#">Samadzadegan &amp; al. (Nima Zarrinpanjeh)</a>                          |
| IMGP-313                                 | The use of similarity images on multi-sensor automatic image registration   | <a href="#">Gonçalves &amp; al. (Hernâni Gonçalves)</a>                             |
| IMGP-316                                 | A Global Precedent Approach for Road Extraction from High Resolution Imagery  | <a href="#">Ma &amp; Chen (Jun Chen)</a>  |
| IMGP-317                                 | Object-oriented methods for landslides detection using high resolution imagery, morphometric properties and meteorological data                             | <a href="#">Sandric &amp; al. (Ionut Sandric)</a>                                   |
| IMGP-337                                 | Free to Geo Stereo Mosaic Image Generation Using Video Imagery  | <a href="#">Noh (Myung Jong Noh)</a>  |
| IMGP-389                                 | The theory of computer geography  | <a href="#">Nabiyev (Alpasha Alibek Nabiyev)</a>                                    |
| IMGP-404                                 | Production of true orthophotos in practice and various application possibilities  | <a href="#">Novak &amp; al. (Jens Schickor)</a>                                     |

| Land cover classification |  |   |
|---------------------------|--|---|
| LCOV-037                  | High Resolution Imagery Retrieval on the Basis of Sketch-Modelling   | <i>Kovalevskaya &amp; Boenko (Nelley M. Kovalevskaya)</i>         |
| LCOV-039                  | Farmland parcels extraction based on high resolution remote sensing images   | <i>Hu (Tangao Hu)</i>   |
| LCOV-086                  | A supervised spectral substratum classifier to classify images with fuzzy memberships  | <i>Sha &amp; Xie (Yichun Xie)</i>                                 |
| LCOV-088                  | Land cover classification in Albania   | <i>Nikolli (Pal Nikolli)</i>                                      |
| LCOV-120                  | An assessment of the efficiency of LANDSAT, NIGERIASAT-1 and SPOT images for landuse/landcover analyses in Ekiti west area of Nigeria                      | <i>Ojo &amp; Adesina (Adebayo Gbenga Ojo)</i>                     |
| LCOV-156                  | Land use classification with high resolution satellite radar for estimating the impacts of land use change on the quality of ecosystem services            | <i>Bargiel &amp; al. (Damian Bargiel)</i>                         |
| LCOV-169                  | Land Cover Remote Sensing Imagery Web Retrieval in Chinese Second Round of National Land Use Inventory Program   | <i>Ning &amp; Zhang (Xiaogang Ning)</i>                           |
| LCOV-192                  | Targeted Classification of Remote-Sensing Images   | <i>Fernández-Prieto &amp; Marconcini (Diego Fernández-Prieto)</i> |
| LCOV-205                  | Agricultural land use mapping using very high resolution satellite images in Canary Islands  | <i>Labrador Garcia &amp; al. (Mauricio Labrador Garcia)</i>       |
| LCOV-207                  | Mapping wetland environments in the Brazilian savannah from high resolution Ikonos image data  | <i>Barbosa &amp; Maillard (Ivan Barbosa)</i>                      |
| LCOV-212                  | Comparing information derived from Global land cover datasets with Landsat imagery for the Huambo province and Guinea-Bissau                               | <i>Cabral &amp; al. (Ana Cabral)</i>                              |
| LCOV-225                  | <del>Land use classification with high resolution satellite radar for estimating the impacts of land use change on the quality of ecosystem services</del> | <del><i>Bargiel &amp; al. (Damian Bargiel)</i></del>              |
| LCOV-233                  | <del>WinGIS – GIS software for ICT developers</del>  | <del><i>Aigner &amp; Mayer (Walter Mayer)</i></del>               |
| LCOV-244                  | Accuracy assessment of GlobCover, global land cover and CORINE in the Iberian peninsula  | <i>Pérez-Hoyos &amp; García (Javier García)</i>                   |
| LCOV-288                  | Radar Remote Sensing for Tropical Rainforest Assessment  | <i>Becek (Kazimierz Becek)</i>                                    |
| LCOV-329                  | GPS satellite monitoring of spatial and seasonal landscape use by black bears in New Jersey Bearfort mountains   | <i>Skirta &amp; al. (Eugenia Skirta)</i>                          |
| LCOV-332                  | Monitoring Rice Crop Varieties through Remote Sensing techniques   | <i>Abkar &amp; al. (Ali Abkar)</i>                                |
| LCOV-342                  | Evaluation of time series of MODIS data for transitional land mapping in support of bioenergy policy development   | <i>Zhou &amp; al. (Fuqun Zhou)</i>                                |
| LCOV-353                  | Logic based object oriented land cover classification- A case study of central Nepal   | <i>Gilani &amp; al. (Hammad Gilani)</i>                           |
| LCOV-363                  | Comparative Study of Entropy Measures for Accuracy Assessment of Sup-pixel Classification of Satellite Data  | <i>GHOSH &amp; Mukherjee (JAYANTA KUMAR GHOSH)</i>                |
| LCOV-379                  | Application of KOMPSAT II imagery for carbon emission  | <i>Chang &amp; al. (Eunmi Chang)</i>                              |
| LCOV-382                  | <del>Enhancing urban digital elevation models using automated computer vision techniques</del>   | <del><i>Sirmacek &amp; al. (Beril Sirmacek)</i></del>             |

|               |   |   |
|---------------|---|---|
|               | <b>Multi-spectral and hyperspectral remote sensing</b>  |   |
| MSHY-126      | Spectral unmixing of hyperspectral and multispectral remote sensing images for predictive mapping of surface soil organic matter                        | <i>Kefale Alemie (Berhanu Kefale Alemie)</i>                      |
| MSHY-128      | Extracting olivine-rich portions of ultramafic rocks using ASTER TIR data   | <i>Gürcay (O. Bora Gürcay)</i>                                    |
| MSHY-129      | Validation of a semi-automatic classification approach for urban green structure  | <i>Trier &amp; Lieng (Øivind Due Trier)</i>                       |
| MSHY-147      | The advantages of boresight effects on the hyperspectral data analysis  | <i>Brook &amp; Ben-Dor (Anna Brook)</i>                           |
| MSHY-153      | Spectral reflectance of rice canopy and red edge position (REP) as indicator of high-yielding variety   | <i>Abbasi &amp; al. (Mozhgan Abbasi)</i>                          |
| MSHY-162      | Study of nature, origin, movement and extension of sand dunes by using sedimentological aspects and remote sensing techniques in Baiji area, North Iraq | <i>Kadim &amp; al. (Amera I. Hussain)</i>                         |
| MSHY-177      | Hyperspectral evaluation of the pear trees on the basis of the genetic collection of the different species  | <i>Tamas &amp; Szabó (Janos Tamas)</i>                            |
| MSHY-184      | Multiresolution image fusion: Phase congruency for spatial consistency assessment   | <i>Makarau &amp; al. (Aliaksei Makarau)</i>                       |
| MSHY-260      | Application of high resolution satellite imagery to assess storm tide-related flooding  | <i>Chaouch &amp; al. (Naira Chaouch)</i>                          |
| MSHY-265      | Rangeland ecological site classification from Hyperion and Landsat imagery using tuned matched filtering and neural networks                            | <i>Blanco &amp; al. (Paula Daniela Blanco)</i>                    |
| MSHY-281      | Lithological mapping of the Sarduiyeh Area, SE Iranian Copper Belt, using thermal bands of the ASTER  | <i>Hosseinjani &amp; Hashemi Tangestani (Mahdieh Hosseinjani)</i> |
| MSHY-282      | The Multi-sensor Land Classification System LCS: automatic multitemporal land use classification system for multi-resolution data                       | <i>Beccati &amp; al. (Alan Beccati)</i>                           |
| MSHY-286      | <a href="#">Classification of Hyperspectral Images using Adaptive Wavelet Neural Networks</a>   | <i>Hsu (Pai-Hui Hsu)</i>  |
| MSHY-296      | Tropical Biodiversity Mapping from Hyperion Image in Bogor Indonesia  | <i>Wijanarto &amp; Amhar (Antonius Wijanarto)</i>                 |
| MSHY-312      | A comparison of total shortwave surface albedo retrievals from MODIS and TM data  | <i>Pape &amp; Vohland (Michael Vohland)</i>                       |
| MSHY-320      | Remote Sensing for Drought Assessment in Arid Regions (A Case Study of Central Part of Iran, Shirkooh-Yazd) "   | <i>Ebrahimi &amp; al. (Ali Akbar Matkan)</i>                      |
| MSHY-341      | Airborne Hyperspectral Image Geo-referencing aided by High-Resolution Satellite Images  | <i>Grejner-Brzezinska &amp; al. (Dorota Grejner-Brzezinska)</i>   |
| MSHY-354      | Multiple scattering simulations for remote sensing of aerosol events  | <i>Mukai &amp; al. (Sonoyo Mukai)</i>                             |
| MSHY-369      | Enhancing Urban Digital Elevation Models Using Automated Computer Vision Techniques   | <i>Sirmacek &amp; al. (Beril Sirmacek)</i>                        |
| MSHY-381      | Water column characterization on base of HyMap airborne and RAMSES underwater spectroradiometer data of an artificial surface in Lake Starnberg         | <i>Schneider &amp; al. (Thomas Schneider)</i>                     |
| MSHY-383      | Intercalibration of infrared window channels of polar-orbiting FY-3A instrument with AIRS/Aqua data   | <i>Jiang (Geng-Ming Jiang)</i>                                    |
| MSHY-391      | Detecting Human-induced Scene Changes Using Coherent Change Detection in SAR Images   | <i>Milisavljevic &amp; al. (Damien Closson)</i>                   |
| MSHY-401      | Evaluating the Capability of SPOT5 Data TO Monitor Pollarding Forest Areas of Northern Zagros   | <i>Bozorgnia &amp; Oladi (Jafar Oladi)</i>                        |
|               | <b>Operational remote sensing programs</b>  |   |
| OPRS-059      | CANASAT project: monitoring the sugarcane harvest type in the state of São Paulo, Brazil  | <i>Aguiar &amp; al. (Daniel Alves de Aguiar)</i>                  |
| OPRS-060      | <a href="#">Online Monitoring of Corridor-Based Infrastructure</a>  | <i>Ahmadi Foroushani (Mansour Ahmadi Foroushani)</i>              |
| OPRS-061      | Canasat project: monitoring of the sugarcane cultivation area in south central Brazil   | <i>Silva &amp; al. (Wagner Fernando da Silva)</i>                 |
| OPRS-238      | SATChMo - Seasonal and Annual Change Monitoring.  | <i>Aleksandrowicz &amp; al. (Sebastian Aleksandrowicz)</i>        |
| OPRS-365      | Near realtime UAV-based processing to support disaster monitor  | <i>Lu &amp; al. (Lei Lu)</i>                                      |
|               | <b>Physical modeling and signatures</b>   |   |
| PHYS-062      | Surface temperature estimation using artificial neural network  | <i>Veronez (Maurício Roberto Veronez)</i>                         |
| PHYS-179      | A gliding window approach for the regularization of the ill-posed inverse problem   | <i>Atzberger &amp; Richter (Katja Richter)</i>                    |
| PHYS-328      | Mountains' Peaks Parameterisation and Determination   | <i>Podobnikar (Tomaž Podobnikar)</i>                              |
| 15:30 - 16:00 | El Aula   | Coffee Break  |

| 16:00 - 17:45 |                  | ORAL SESSION 5.1 - 5.3   |  |  |
|---------------|------------------|--|--|--|
|               | EI 7, EI 8, EI 9 | EI 7   | EI 8   | EI 9   |
|               |                  | Operational Remote Sensing Applications<br>Chair: Johannes Schmetz, Co-Chair: Michael Franzen  | Image Processing and Pattern Recognition 1<br>Chair: Jixian Zhang, Co-Chair: Qiming Zhou   | Physical Modeling and Signatures<br>Chair: Michael Schaepman, Co-Chair: Shunling Liang   |
| 16:00 - 16:15 |                  | Geoland2 - Towards an operational GMES Land Monitoring Core Service; First Results of the Biogeophysical Parameter Core Mapping Service ( <i>Lacaze &amp; al.; Roselyne Lacaze</i> ) | Evaluation of spectral and texture features for object-based vegetation species classification using support vector machines ( <i>Li &amp; al.; Zhengrong Li</i> ) | An overview of two decades of systematic evaluations of canopy radiative transfer models ( <i>Jean-Luc Widlowski</i> )   |
| 16:15 - 16:30 |                  | PROVIDING processing lines and test data for the GMES Land Monitoring Core Service ( <i>Pacholczyk &amp; al.; Philippe Pacholczyk</i> )  | Structural high-resolution satellite image indexing ( <i>Xia &amp; al.; Gui-Song Xia</i> )   | The sensitivity of multifrequency (X, C and L-band) radar backscatter signatures to biological variables over corn and soybean fields ( <i>Jiao &amp; al.; Xianfeng Jiao</i> ) |
| 16:30 - 16:45 |                  | Operational soil moisture from SAR systems: towards SENTINEL-1 ( <i>Doubkova &amp; al.; Marcela Doubkova</i> )   | Theoretical frameworks of remote sensing systems based on compressive sensing ( <i>Liu &amp; al.; Jiyong Liu</i> )   | Application of photon recollision probability based forest reflectance model for boreal forest LAI retrieval ( <i>Heiskanen &amp; al.; Janne Heiskanen</i> )                   |
| 16:45 - 17:00 |                  | Study on user requirements for remote sensing applications in forestry ( <i>Felbermeier &amp; al.; Bernhard Felbermeier</i> )  | Urban Road Tracking by Fusion of SVDD and Region Adjacency Graphs from VHR imagery ( <i>Liu &amp; al.; Zhengjun Liu</i> )  | Analysis of BRDF characteristics of forest stands with a digital aerial frame camera ( <i>Koukal &amp; Schneider; Tatjana Koukal</i> )   |
| 17:00 - 17:15 |                  | Analysis of RapidEye imagery for annual landcover mapping as an aid to European Union (EU) Common Agricultural Policy ( <i>Tapsall &amp; al.; Kadim Tasdemir</i> )                   | Aerial photo building classification by stacking appearance and elevation measurements ( <i>Nguyen &amp; al.; Stefan Kluckner</i> )                                | Small Scale Surface Roughness Effects on Longwave Thermal IR Spectra ( <i>Balick &amp; al.; Lee Balick</i> )   |
| 17:15 - 17:30 |                  | Overview of the Chinese project on "generation and application of global products of essential land variables" ( <i>Liang &amp; al.; Shunlin Liang</i> )                             | A review on image segmentation techniques with remote sensing perspective ( <i>Dey &amp; al.; Vivek Dey</i> )  | Validation of the reflectance calibration of the ADS40 airborne sensor using ground reflectance measurements ( <i>Beisl &amp; Adiguel; Ulrich Beisl</i> )                      |
| 17:30 - 17:45 |                  | Discussion   | Discussion   | Discussion   |
| 18:30 - 21:30 | Prater           | Conference Dinner (Schweizerhaus)  |  |  |
| 21:00 - 23:30 | Prater           | Ferris Wheel (Riesenrad)   |  |  |

PLEASE NOTE XXXX Contributions in this colour indicate changes since the publication of the first issue of the Programme Booklet (=printed version)

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## WEDNESDAY, 7 July 2010

|               |                  |  |   |  |
|---------------|------------------|--|---|--|
| 08:00 - 13:30 | EI Aula          | Registration   |   |  |
| 08:30 - 10:15 | EI 7, EI 8, EI 9 | ORAL SESSION 6.1 - 6.3   |   |  |
|               |                  | EI 7<br>Earth Observation Programmes<br>Chair: Paul Menzel, Co-Chair: Paul Snoeij  | EI 8<br>Image Processing and Pattern Recognition 2<br>Chair: Wolfgang Förstner, Co-Chair: Josef Jansa   | EI 9<br>Geometric Modeling<br>Chair: Norbert Pfeifer, Co-Chair: Franz Leberl   |
| 08:30 - 08:45 |                  | Observing Weather and Climate with the Himawari Series Satellites ( <i>Kurino &amp; Tahara; Toshiyuki Kurino</i> )   | Real-Time Image Processing for Road Traffic Data Extraction from Aerial Images ( <i>Rosenbaum &amp; al.; Dominik Rosenbaum</i> )                                  | Exterior orientation of line-array CCD images based on quaternion spherical linear interpolation ( <i>Jiang &amp; al.; Gangwu Jiang</i> )  |
| 08:45 - 09:00 |                  | The Utilisation of EUMETSAT Meteorological Satellites ( <i>Schmetz &amp; al.; Johannes Schmetz</i> )   | Multistage algorithm for lossless compression of multispectral remote sensing images ( <i>Alexander Zamyatin</i> )  | Comparison of Error Propagation in Block Orientation: An Analytical Approach ( <i>Cothren &amp; Schaffrin; Jackson Cothren</i> )           |
| 09:00 - 09:15 |                  | Prospective Space Missions with L-Band Microwave Radiometric Systems ( <i>Tishchenko &amp; al.; Yuriy Tishchenko</i> )   | A New Strategy for DSM Generation from High Resolution Stereo Satellite Images Based on Control Network Interest Matching ( <i>Xiong &amp; Zhang; Yun Zhang</i> ) | DEM generation with Radarsat-2 ultra-fine mode data using RFM ( <i>Toutin &amp; Omari; Thierry Toutin</i> )                                |
| 09:15 - 09:30 |                  | PLEIADES-HR Inaging system: ground processing and products performances, few months before launch ( <i>Baillarin &amp; al.; Simon Baillarin</i> )                      | Semi-automatic assessment of Norway spruce ( <i>Picea abies</i> ) in modern digital aerial photographs ( <i>Seitz &amp; al.; Rudolf Seitz</i> )                   | Towards Fully Automatic Photogrammetric Reconstruction Using Digital Images Taken From UAVs ( <i>Irschara &amp; al.; Arnold Irschara</i> ) |
| 09:30 - 09:45 |                  | Sentinel-1 Performance ( <i>Snoeij &amp; al.; Paul Snoeij</i> )  | Multitemporal fuzzy Markov chain-based classification of very high resolution images of an urban site ( <i>Costa &amp; al.; Gilson A O P Costa</i> )              | Describing Buildings by 3-Dimensional Details Found in Aerial Photography ( <i>Meixner &amp; Leberl; Philipp Meixner</i> )                 |
| 09:45 - 10:00 |                  | EgyptSat-1; Three Years in Orbit: Experience in Operation and Utilization ( <i>Mohamed Argoun</i> )  | Change analysis with TERRASAR-X data ( <i>Weihing &amp; al.; Diana Weihing</i> )  | A Dimension Independent Geometric Model for City Modeling ( <i>Bulbul &amp; Frank; Andrew Frank</i> )                                      |
| 10:00 - 10:15 |                  | Discussion   | Discussion  | Discussion   |
| 10:15 - 10:45 | EI Aula          | Coffee Break   |   |  |
| 10:45 - 12:30 | EI 7             | CLOSING SESSION  |   |  |
| 10:45 - 11:15 |                  | Generating 1km Land Surface Radiation product suite from MODIS: Algorithms and validation ( <i>Shunlin Liang</i> )   |   |  |
| 11:15 - 11:45 |                  | Persistent Scatterer Interferometry based on TerraSAR-X imagery: the Barcelona test area ( <i>Crosetto &amp; al.; Michele Crosetto</i> )                               |   |  |
| 11:45 - 12:15 |                  | Analysis of full-waveform ALS data by simultaneously acquired TLS data: Towards an advanced DTM generation in wooded areas ( <i>Doneus &amp; al.; Michael Doneus</i> ) |   |  |
| 12:15 - 12:20 |                  | Outlook to ISPRS Congress 2012 ( <i>Cliff Ogleby</i> )   |   |  |
| 12:20 - 12:30 |                  | Closing of Symposium ( <i>Wolfgang Wagner</i> )  |   |  |
| 13:30 - 16:00 | EI 8             | TC VII Board Meeting   |   |  |