

ISPRS Hannover Workshop 2013 – High-Resolution Earth Imaging for Geospatial Information Programme

Tuesday, 21 May 2013

11:30-14:00:
Registration

Oral Programme

Lecture Hall

14:00-15:30: Opening Session
Chairperson: Uwe Soergel

Greetings:
International Academy of Astronautics (Rainer Sandau)
International Society for Photogrammetry and Remote Sensing (Christian Heipke)

Opening Keynote:
Ranganath R. Navalgund, ISRO - Indian Space Research Organisation, Bangalore
Earth Observation in Early Warning Systems

15:30 Coffee Break

16:00–16:30: Invited Paper 1:
Chairperson: Christian Heipke

H-WS2013-22

R. Sandau

Global Space Cooperation - New Activities for Disaster Management and Climate Change

16:30–18:00: Session 1 - Image analysis

Chairperson: Franz Rottensteiner

H-WS2013-8

A. O. Ok, C. Senaras, and B. Yuksel

Exploiting Shadow Evidence and Iterative Graph-Cuts for Efficient Detection of Buildings in Complex Environments

H-WS2013-90

J.M. Macay Moreira, F. Nex, G. Agugiaro, **F. Remondino**, and N.J. Lim
From DSM to 3D building models: A quantitative evaluation

H-WS2013-19

Z. Zhang, M.Y. Yang, and M. Zhou

Multi-Source Hierarchical Conditional Random Field Model for Feature Fusion of Remote Sensing Images and LiDAR Data

H-WS2013-54

X. Sun, A. Thiele, S. Hinz, and K. Fun

Automatic detection and recognition of man-made objects in high resolution remote sensing images using hierarchical semantic graph mode

18:00 End of Oral Programme

19:00 Get together Messdach

Wednesday, 22 May 2013

Oral Programme

Lecture Hall

09:00–09:45: Invited Paper 2:
Chairperson: Uwe Soergel

L. Bruzzone

Current scenario and challenges in the analysis of multitemporal remote sensing images

09:45–11:15: Session 2 - Space geometry

Chairperson: Karsten Jacobsen

H-WS2013-20

P. d'Angelo

Evaluation of ZY-3 for DSM and ortho image generation

H-WS2013-26

T. Krauss, P. d'Angelo, M. Schneider, and V. Gstaiger

The fully automatic optical processing system CATENA at DLR

H-WS2013-56

D. Poli, F. Remondino, and G. Aguiaro

Evaluation Of Pleiades-1A Triplet On Trento Testfield

H-WS2013-41

D.I. Vassilaki, A.A. Stamos, and Ch. Ioannidis

Rapid geometric correction of SSC TerraSAR-X images with direct georeferencing, global DEMs and global geoid models

11:15 Coffee Break

11:30–13:00: Session 3 – DTM

Chairperson: Peter Reinartz

H-WS2013-3

K. Jacobsen

Characteristics and accuracy of large area covering height models

H-WS2013-63

U. Steinbrecher, M. Zink, A. Moreira, J. Böer, D. Schulze, and G. Krieger

TanDEM-X Mission: Overview, Status and Outlook

H-WS2013-59

G. Kusch, **P. d'Angelo**, and P. Reinartz

Evaluating DSM Accuracy Using the ISPRS Remote Sensing Benchmark for Optical Stereo Matching

H-WS2013-79

T. Toutin, P. Capaldo, **M. Crespi**, F. Fratarcangeli, A. Nascetti, F. Pieralice, and M. Porfiri
DSMs generation from COSMO-SkyMed, Radarsat-2 and TerraSAR-X imagery on Beauport (Canada) test site: evaluation and comparison of different radargrammetric approaches

13:00 Lunch Break

14:00–16:00: Session 4 - Analysis of urban areas by SAR

Chairperson: Uwe Soergel

H-WS2013-16

C. Dubois, A. Thiele, and S. Hinz

Towards change detection in urban area by SAR interferometry and radargrammetry

H-WS2013-62

O. Maksymiuk and U. Stilla

Data Fusion for Building Reconstruction from Multi-Aspect InSAR Data

H-WS2013-53

S. Auer, **S. Gernhardt**, and K. Eder

Evaluation of Persistent Scatterer Patterns at Building Facades by Simulation Techniques

H-WS2013-14

L. Schack and U. Soergel

Using Lattice topology information to investigate Persistent Scatterers at facades in urban areas

H-WS2013-65

O. D'hondt, S. Guillaso, and O. Hellwich

Complementarity of SAR Polarimetry and Tomography for Building Detection and Characterization

16:00–17:00 Poster Session I & Coffee

17:00–18:30: Session 5 - Laser scanning

Chairperson: Boris Jutzi

H-WS2013-4

C. Mallet, J. Smeets, and N. David

Classification of water surfaces using airborne topographic lidar data

H-WS2013-35

A. Schmidt, F. Rottensteiner, and U. Soergel

Monitoring Concepts for Coastal Areas Using Lidar Data

H-WS2013-46

A. Hovi and I. Korpela

Real and simulated waveform recording LiDAR data in boreal juvenile forest vegetation

18:30 End of Oral Programme

19:30 Workshop Dinner

Poster Programme

Poster Session I – Geometry and radiometry

Entrance Hall

Attendance Time: Wednesday, 22 May 2013 16:00–17:00

- P1 H-WS2013-24
B.S. Yang and C. Chen
A low cost UAV platform for dynamic 3D mapping
- P2 H-WS2013-29
P. Litkey, K. Nurminen, and E. Honkavaara
Automatic detection of storm damages using high-altitude photogrammetric imaging
- P3 H-WS2013-30
M. Zhou, M.H. Liu, Z. Zhang, and J.H. Wang
Enhanced Component Detection Algorithm of Full-Waveform LiDAR Data
- P4 H-WS2013-31
M. Wang, J. Hu, M. Zhou, and J.M. Li
Geometric Correction of Airborne Linear Array Image
- P5 H-WS2013-34
Y. Li
Filtering airborne LIDAR data by an improved morphological method based on multi-gradient analysis
- P6 H-WS2013-45
I. Boukerch, M. Hadeid, R. Mahmoudi, B. Takarli, and K. Hasni
Rigorous georeferencing of ALSAT-2A panchromatic and multispectral imagery
- P7 H-WS2013-51
A. Yilmaz, A. Kayi, and H.M. Yilmaz
The Effect of Different GPS Solutions
- P8 H-WS2013-52
D. Iwaszczuk, **P. Helmholtz**, D. Belton, and U. Stilla
Model-to-Image Registration and Automatic Texture Mapping Using a Video Sequence Taken by a Mini UAV
- P9 H-WS2013-68
A. Djuricic and B. Jutzi
Supporting UAVs in low visibility conditions by multiple-pulse laser scanning devices
- P10 H-WS2013-70
J. Avbelj, D. Iwaszczuk, R. Müller, P. Reinartz, and U. Stilla
Automatic Line-Based Registration of DSM and Hyperspectral Images
- P11 H-WS2013-71
L. Biagi, **L. Carcano**, A. Lucchese, and M. Negretti
DTM Fusion: a SVD Solution for Interpolation Problems
- P12 H-WS2013-75
H. C. Oliveira and M. Galo
Occlusion detection by height gradient for true orthophoto generation, using lidar data
- P13 H-WS2013-80
S. Palm, A. Maresch, and U. Stilla
Investigation on circular mapping by FMCW-SAR on small airplanes

- P14 H-WS2013-84
I. Lee, J. Kang, and G. Seo
Applicability Analysis of Ultral-Light UAV for Flooding Site Survey in South Korea
- P15 H-WS2013-87
D. Vassilaki, Ch. Ioannidis and A. A. Stamos
Evaluation of SAR Data as Source of Ground Control Information: First Results
- P16 H-WS2013-88
G. Qiao, W. Ye, S. Liu, T. Feng, S. Zhang, Y. Tian, M. Scaioni, H. Xie, H. Wu, X. Tong, and R. Li
Geometric Modelling of 1960s Disp Images and Preliminary Application in Antarctica coastline mapping
- P17 H-WS2013-94
M. Kubiak
Relation between the land surface temperature (LST) and the selected elements of geographical environment (Wolin island - Poland)

Thursday, 23 May 2013**Oral Programme****Lecture Hall**

09:00–09:45: Invited Paper 3:
Chairperson: Stefan Hinz

C. Toth

Remote Sensing Sensors and Platforms: The Trends

09:45–11:15: Session 6 - New Sensors

Chairperson: Clive Fraser

H-WS2013-47

E. Honkavaara, T. Hakala, J. Kirjasniemi, A. Lindfors, J. Mäkynen, K. Nurminen, P. Ruokokoski, H. Saari and L. Markelin

New light-weight stereoscopic spectrometric airborne imaging technology for high-resolution environmental remote sensing - Case studies in water quality mapping

H-WS2013-49

R. Müller, D. Cerra, and P. Reinartz

Synergetics Framework for Hyperspectral Image Classification

H-WS2013-82

B. Delauré, B. Michiels, J. Biesemans, S. Livens, and T. Van Achteren

The geospectral camera: a compact and geometrically precise hyperspectral and high spatial resolution imager

H-WS2013-77

N. Yastikli and E. Guler

Performance Evaluation of Thermographic Cameras for Photogrammetric Measurements

11:15 Coffee Break**11:30–13:00: Session 7 - Operational remote sensing**

Chairperson: Daniela Poli

H-WS2013-7

T. Maurer

How To Pan-Sharpen Images Using The Gram-Schmidt Pan-Sharpen Method - A Recipe

H-WS2013-12

T. Bahr and X. Jin

Registration of optical data with high-resolution SAR data: a new image registration solution

H-WS2013-32

M. Hirschmugl, R. Wack, **K. Granica**, H. Gallaun, M. Schardt, and A. Wimmer

European Forest Downstream Services - Improved Information on Forest Structure and Damage

H-WS2013-93

S. Müller and O. Büscher

Estimation of Biomass Potential Based on Classification and Height Information

13:00 Lunch Break

14:00–16:00 Masterclass - Hexagon Photogrammetry

Hartmut Rosengarten

Introduction

Gerhard Lauenroth

Plug & Fly - Hexagon airborne sensors for any application

Rüdiger Wagner

3-D data production utilizing Hexagon's airborne sensor solutions

16:00–17:00 Poster Session II & Coffee

17:00–18:30 Session 8 – Orientation

Chairperson: Eija Honkavaara

H-WS2013-38

A. Greeniss

Enhanced aerial triangulation and camera calibration via the integration of photogrammetric and reference Lidar surfaces

H-WS2013-50

E. Rupnik, F. Nex, and F. Remondino

Automatic orientation of large blocks of oblique-images

H-WS2013-57

J. Hollick, **P. Helmholtz**, D. Belton, S. Moncrieff, and A. Woods

Creation of 3D models from large unstructured image and video datasets

18:30 End of Oral Programme

Poster Programme

Poster Session II – Objects and semantics

Entrance Hall

Attendance Time: Thursday, 23 May 2013 16:00–17:00

- P1 H-WS2013-6
A. P. Dal Poz and T. S. G. Mendes
Road region detection in urban areas combining high-resolution RGB image and laser scanning data in a classification framework
- P2 H-WS2013-9
G. Mattyus
Near real-time automatic marine vessel detection on optical satellite images
- P3 H-WS2013-10
D. Singh
Labeling of clusters in SAR images based on critical analysis of texture measures
- P4 H-WS2013-11
F. Karanja and S. Matara
The Transformation from green to concrete Cities; A Remote Sensing Perspective
- P5 H-WS2013-25
P. Mishra and D. Singh
Transmission line theory based two layer model for determining soil moisture
- P6 H-WS2013-33
A. Meroni and **T. Bahr**
Operational SAR data processing in GIS environments for rapid disaster mapping
- P7 H-WS2013-37
R. G. Lotte, S. J. S. Sant'Anna, and C. M. Almeida
Roads centre-axis extraction in airborne SAR images: An approach based on active contour model with the use of semi-automatic seeding
- P8 H-WS2013-43
M. Gojamanov and M. Ismayilov
Using satellite images for wireless network planning in Baku city
- P9 H-WS2013-44
K. Djerrir and M. Malki
Data mining for knowledge discovery from object-based segmentation of VHR remotely sensed imagery
- P10 H-WS2013-48
M. Boldt, K. Schulz, A. Thiele, and S. Hinz
Using Morphological Differential Attribute Profiles for Change Categorization in High Resolution SAR Images
- P11 H-WS2013-55
A. H. Syed, E. Saber, and D. Messinger
Discrete Topology Based Hierarchical Segmentation for Efficient Object-Based Image Analysis: Application to Object Detection in High Resolution Satellite Images
- P12 H-WS2013-58
P. Upadhyay
High Resolution Temporal Normalized Difference Vegetation Indices for Specific Crop Identification

- P13 H-WS2013-60
N. Yastikli and M. Uzar
Building Extraction Using Multi Sensor Systems
- P14 H-WS2013-64
M. Debella-Gilo, K. Bjørkelo, J. Breidenbach, and J. Rahlf
Analysis of aerial photogrammetric point cloud and spectral data using OBIA for land cover mapping
- P15 H-WS2013-66
M. Schlund, F. von Poncet, S. Kuntz, and D.H. Hoekman
TanDEM-X coherence in a tropical peat swamp forest
- P16 H-WS2013-69
P. Helmholtz, D. Belton, and S. Moncrieff
Methodology and Infrastructure to Automatically Support the Update of 3D building models
- P17 H-WS2013-74
G.R. Dini, K. Jacobsen, C. Heipke
Detection of Building Footprints Using 3D Edge Matching on High Resolution Stereo Imagery and a GIS Database
- P18 H-WS2013-78
N. Nagabhatla, P. Kühle, and M. Padmanabhan
High Resolution (GEOEYE) Data Based Approach For Classification of a Tropical Agroecosystem
- P19 H-WS2013-81
A. Manno-Kovacs and T. Sziranyi
Multidirectional building detection in aerial images without shape templates
- P20 H-WS2013-85
G. A. Longhitano and J. A. Quintanilha
Rapid acquisition of environmental information after accidents with hazardous cargo through remote sensing by UAV
- P21 H-WS2013-91
P. Africani, G. Bitelli, **A. Lambertini**, A. Minghetti, and E. Paselli
Integration of LIDAR Data into a Municipal GIS to study Solar Radiation

Friday, 24 May 2013

Oral Programme

Lecture Hall

09:00–09:45: Invited Paper 4:
Chairperson: Christian Heipke

H-WS2013-23

M. J. McCullagh and M. J. Jackson
Crowd-Sourced Mapping - Letting Amateurs into the Temple?

09:45–11:15: Session 9 - High resolution space borne SAR

Chairperson: Franz Meyer

H-WS2013-15

U. Balss, C. Gisinger, X. Y. Cong, M. Eineder, and R. Brcic
Precise 2-D and 3-D Ground Target Localization with TerraSAR-X

H-WS2013-36

L. Fang, O. Maksymiuk, M Schmitt, and U. Stilla
Determination of glacier surface area using spaceborne sar imagery

H-WS2013-73

A. Thiele, M.M. Wurth, M. Even, and S. Hinz
Extraction of building shape from TanDEM-X data

H-WS2013-42

M. Crosetto, O. Monserrat, M. Cuevas, N. Deventh ry, and B. Crippa
Analysis of X-band very high resolution persistent scatterer interferometry data over urban areas

11:15 Coffee Break

11:30–13:00 Session 10 - Remote sensing applications

Chairperson: Petra Helmholz

H-WS2013-28

M. Weinmann, A. Dittrich, S. Hinz, and B. Jutzi
Automatic feature-based point cloud registration for a moving sensor platform

H-WS2013-67

R. Schmidt, J. Bostelmann, Y. Cornet, C. Heipke, C. Philippe, N. Poncelet, D. De Rosa and Y. Vandeloise
LandSAfe: Landing site risk analysis software framework

H-WS2013-83

F. Meyer, D.B. McAlpin, W. Gong, S. Arko, P.W. Webley, and J. Dehn
Data Processing Concepts for the Integration of SAR into Operational Volcano Monitoring Systems

H-WS2013-27

I. Korpela, A. Hovi, and L. Korhonen
Backscattering of individual LiDAR pulses from forest canopies explained by photogrammetrically derived vegetation structure

13:00–14:00 Closing

Chairperson: Christian Heipke