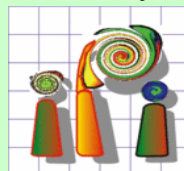




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ISPRS Hannover Workshop 2011

June 14 - 17, 2011, Königsworther Platz 1, 30167 Hannover, Germany

Lecture Hall VII 201

PRELIMINARY PROGRAMME

Tuesday, 14 June 2011

- 9:00 - 11:00 Registration
- 11:30 - 13:00 **Opening Session (Chair: C. Heipke)**
Welcome Address: **K. Mooney**, Dublin Institute of Technology - EuroSDR Secretary-General
Keynote: M. Madden, University of Georgia, Athens: *Multi-temporal Imagery Supporting Earth Studies and Sustainability*
- 13:00 - 14:00 Lunch
- 14:00 - 15:30 **Vegetation (Chair: S. Hinz)**
O. Buck, A. Donning, A. Völker, B. Peter, EFTAS Remote Sensing GmbH: *Object based image analysis to support environmental monitoring under the European Habitat Directive: a case study from DeCOVER*
J.A. Recio, P. Helmholz, S. Müller, Universidad Politécnica de Valencia: *Potential Evaluation of Different Types of Images and their Combination for the Classification of GIS Objects Cropland and Grassland*
M. Bindel, S. Hese, C. Berger, C. Schmullius, Friedrich-Schiller-University Jena: *Feature Selection from High Resolution Remote Sensing Data for Biotope Mapping*
J.A. Recio, L.A. Ruiz, T. Hermosilla, V. Herrera-Cruz, A. Fernández-Sarria, Universidad Politécnica de Valencia: *Combination of TerraSar-X and Optical Imagery for LU/LC Mapping Using an Object-Based Approach*
- 15:30 - 16:00 Coffee Break

- 16:00 - 17:30 **Image Analysis (Chair: K. Schindler)**
T. Hoberg, S. Müller, Leibniz University Hannover: *Multitemporal Crop Type Classification Using Conditional Random Fields and Rapideye Data*
B. Sirmacek, P. Reinartz, German Aerospace Center (DLR), Wessling: *Kalman Filter Based Feature Analysis for Tracking People from Airborne Images*
B. Seppke, L. Dreschler-Fischer, M. Brauer, University of Hamburg: *The Use of Active Contours for the Detection of Coastlines in SAR images: A Modular Knowledge-based Framework*
B. Jutzi, S. Hinz, Karlsruhe Institute of Technology (KIT): *Potentials of Image Based Active Ranging to Capture Dynamic Scenes*

18:30 **Icebreaker**

Wednesday, 15 June 2011

- 9:00 - 9:45 **Invited Paper (Chair: F. Rottensteiner)**
K. Schindler, ETH Zurich: *Fusion of Heterogeneous Digital Elevation Models using Sparse Representations*
- 9:45 - 11:15 **Buildings (Chair: M. Cramer)**
A.O. Ok, J.D. Wegner, C. Heipke, F. Rottensteiner, U. Sörgel, V. Toprak, Middle East Technical University, Ankara: *Accurate Matching and Reconstruction of Line Features from Ultra High Resolution Stereo Aerial Images*
U.S. Panday, M. Gerke, University of Twente (ITC), Enschede: *Fitting of Parametric Building Models to Oblique Aerial Images*
R. Hänsch, O. Hellwich, Technische Universität Berlin: *Color Textons for Building Detection*
K. Pakzad, A. Klink, A. Mütterthies, G. Gröger, V. Stroh, L. Plümer, EFTAS Fernerkundung Technologietransfer GmbH, Münster: *Hybrid Automatic Building Interpretation System*
- 11:15 - 11:30 Coffee Break
- 11:30 - 13:00 **SAR-DTM (Chair: P. Boccoardo)**
K. Watanabe, U. Sefercik, A. Schunert, U. Sörgel, Leibniz Universität Hannover: *Evaluation of INSAR DEM from High-Resolution Spaceborne SAR Data*
U.G. Sefercik, I. Dana, Zonguldak Karaelmas University: *Crucial Points of Interferometric Processing for DEM Generation using High Resolution SAR Data*
T. Toutin, I. Zakharov, K. Omari, Natural Resources Canada: *DEM Generation with Radarsat-2 Data without GCP*
M. Crespi, P. Capaldo, F. Fratarcangeli, A. Nascetti, F. Pieralice, University of Rome La Spaienza: *DSM Generation from High Resolution SAR Sensors with Radargrammetric Model. Application with COSMO-SkyMed and TerraSAR-X*
- 13:00 - 14:00 Lunch

14:00 - 14:45

Invited Paper (Chair: K. Jacobsen)

N. Ackroyd, Ordnance Survey, Southampton: *A new way of working; Integrating photogrammetric capture and ground base field survey*

14:45 - 15:45

Poster Session I - Geometry, Radiometry

F.A. Mkrtychyan, V.I. Kovalev, V.V. Klimov, Russian Academy of Sciences, Moscow: *An Adaptive Multi-Channel Spectroellipsometer for Ecological Monitoring*

N. Kolecka, Jagiellonian University, Krakow: *Photo-based 3D Scanning vs. Laser Scanning - Competitive Data Acquisition Methods for Digital Terrain Modelling of Steep Mountain Slopes*

A.S. Gneeniss, J.P. Mills, P.E. Miller, Newcastle University: *Assessment of UltraCamD Performance in an Arid Environment - A Case Study in Libya*

A. Marsetic, Z. Kokalj, K. Ostir, SPACE-SI, Ljubljana: *The Effect of Lossy Image Compression on Object Based Image Classification - WorldView-2 Case Study*

P. Deltsidis, C. Ioannidis, National Technical University of Athens: *Orthorectification of WorldView-2 Stereopair images using a new Rigorous Orientation Model*

D. Vassilaki, C. Ioannidis, A. Stamos, National Technical University of Athens: *Georeference of TerraSAR-X Images using Networks of Ground Control Linear Features*

H. Xu, S. Deng, W. Shi, Z. Miao, Capital Normal University, Beijing: *An Endmember Extraction Algorithm for Hyperspectral Images using Watershed and Normalized Cuts*

U. Sefercik, C. Bayik, S. Karakis, K. Jacobsen, Zonguldak Karaelmas University: *Morphologic Quality of DSMs Based on Optical and Radar Space Imagery*

S. Karakis, U.G. Sefercik, C. Bayik, Zonguldak Karaelmas University: *Data Acquisition through the Model Aircraft for Mapping Purposes*

P. Redweik, C. Catita, M.C. Brito, Universidade de Lisboa: *3D Local Scale Solar Radiation Model Based on Urban LiDAR Data*

T. Kim, S. Rhee, Inha University, Namgu: *DEM Generation from High Resolution Satellite Images through a New 3D Least Squares Matching Algorithm*

D. Cerra, J. Bieniarz, J. Avbelj, P. Reinartz, R. Müller, German Aerospace Center (DLR), Wessling: *Spectral Matching through Data Compression*

J. Bieniarz, D. Cerra, J. Avbelj, P. Reinartz, R. Müller, German Aerospace Center (DLR), Wessling: *Hyperspectral Image Resolution Enhancement Based on Spectral Unmixing and Information Fusion*

15:45 - 17:15

DTM I (Chair: D. Poli)

P. Boccoardo, G. Gentili, ITHACA/Politecnico di Torino: *High Resolution DSM and Classified Volumetric Generation: an Operational Approach to the Improvement of Geospatial Intelligence*

P.d'Angelo, P. Reinartz, German Aerospace Centre (DLR), Wessling: *Semiglobal Matching Results on the ISPRS Stereo Matching Benchmark*

N. Yastikli, F. Esirtgen, U.G. Seferic, Yildiz Technical University, Istanbul: *Quantitative Assessment of Digital Topographic Data from Different Sources*

J. Bostelmann, C. Heipke, Leibniz University Hannover: *Modeling spacecraft oscillations in HRSC images of Mars Express*

17:15 - 17:30 Coffee Break

17:30 - 18:30 **SAR (Chair: T. Toutin)**

M.S. Majd, E. Simonetto, L. Polidori, ESGT Le Mans: *Maximum Likelihood Classification of High-Resolution Polarimetric SAR Images in Urban Area*

S. Hese, M. Lindner, M. Voltersen, C. Berger, Friedrich-Schiller-University Jena: *TerraSAR-X and Rapideye Data for the Parameterisation of Relational Characteristics of Urban ATKIS DLM Objects*

B. Tian, Z. Li, Y. Zhu, Chinese Academy of Sciences, Beijing: *Terrain Correction of Polarimetric SAR Data and its Application to Mapping Mountain Glacier facies with Radarsat-2 SAR*

19:00 Social Evening, Wilhelm-Busch Museum, Hannover

Thursday, 16 June 2011

9:00 - 9:45 **Invited Paper (Chair: U. Sörgel)**

C. Brenner, Google Inc., Mountain View: *Geospatial Imaging and Processing at Google*

9:45 - 11:15 **Laser Scanning (Chair: C. Brenner)**

L. Bannehr, T. Luhmann, J. Piechel, T. Roelfs, A. Schmidt, Hochschule Anhalt, Dessau-Rosslau: *Extracting Roof Parameters and Heat Bridges over the City of Oldenburg from Hyperspectral-, Thermal-, and Airborne Laser Scanning Data*

A. Ch. Braun, U. Weidner, B. Jutzi, S. Hinz, Karlsruhe Institute of Technology (KIT): *Integrating External Knowledge into SVM Classification - Fusing Hyperspectral and Laserscanning Data by Kernel Composition*

J. Niemeyer, C. Mallet, F. Rottensteiner, U. Sörgel, Leibniz University Hannover: *Conditional Random Fields for the Classification of LiDAR Point Clouds*

I. Korpela, A. Hovi, University of Helsinki: *Mapping Understory Trees using Airborne Discrete-return LiDAR Data*

11:15 - 11:30 Coffee Break

11:30 - 13:00 **Sensor Development (Chair: A. Barsi)**

K. Jacobsen, Leibniz Universität Hannover: *Characteristics of Very High Resolution Optical Satellites for Topographic Mapping*

R. Sandau, German Aerospace Center (DLR): *Small satellites for Earth observation - Status quo and summary of recent IAA Symposium in Berlin*

E. Honkavaara, R. Arbiol, L. Markelin, L. Martinez, S. Bovet, M. Bredif, L. Chandelier, V. Heikkinen, I. Korpela, L. Lelegard, F. Pérez, D. Schläpfer, T. Tokola, Finnish Geodetic Institute, Masala: *EuroSDR project "Radiometric Aspects of Digital Photogrammetric Images" - Results of Empirical Phase*

E.-M. Bernhard, E. Stein, A. Twele, M. Gähler, German Aerospace Center (DLR), Wessling: *Synergistic Use of Optical and Radar Data for Rapid Mapping of Forest Fires in the European Mediterranean*

13:00 - 14:00

Lunch

14:00 - 15:00

Poster Session II - Objects, Semantics

O. Melnikova, F. Prandi, Czech Technical University, Prague: *3D Buildings Extraction from Aerial Images*

A. Makarau, G. Palubinskas, P. Reinartz, German Aerospace Center (DLR), Wessling: *Classification Accuracy Increase using Multisensor Data Fusion*

A. O. Ok, Z. Akyurek, N. Clinton, Middle East Technical University, Ankara: *Automatic Training Site Selection of Agricultural Crop Classification: A Case Study on Karacabey Plain, Turkey*

S. Tuermer, J. Leitloff, P. Reinartz, U. Stilla, German Aerospace Center (DLR), Wessling: *Evaluation of Selected Features for Car Detection in Aerial Images*

A. Schmidt, F. Rottensteiner, U. Sörgel, Leibniz Universität Hannover: *Detection of Water Surfaces in Full-Waveform Laser Scanning Data*

A. Huck, S. Hese, E. Banzhaf, Friedrich-Schiller-University Jena: *Delineating Parameters for Object-based Urban Structure Mapping in Santiago de Chile using Quickbird Data*

A. Ali, C.A.J.M. de Bie, A.K. Skidmore, E.M.A. Smaling, University of Twente, ITC, Enschede: *Mapping Land Cover Boundaries using Hypertemporal NDVI Imagery*

S. Canale, A. De Santis, D. Iacoviello, F. Pirri, S. Sagratella, University of Rome La Sapienza: *High-Resolution SAR Images for Fire Susceptibility Estimation in Urban Forestry*

J. Tao, G. Palubinskas, P. Reinartz, German Aerospace Center (DLR), Wessling: *Automatic Interpretation of High Resolution SAR Images: First Results of SAR Image Simulation for Single Buildings*

J. Tian, J. Leitloff, T. Krauß, P. Reinartz, German Aerospace Center (DLR), Wessling: *Region Based Forest Change Detection from CARTOSAT-1 Stereo Imagery*

M. Alkan, D. Arca, C. Bayik, Zonguldak Karaelmas University: *Updating Object for GIS Database Information using High Resolution Satellite Images: A Case Study Zonguldak*

M. Hashemi, M.J. Valadan Joej, M. Mokhtarzadeh, K.N. Toosi University of Technology, Tehran: *Automatic Road Gap Detection using Fuzzy Inference System*

J.E. Wasige, T.A. Groen, E. Smaling, V. Jetten, University of Twente (ITC), Enschede: *Basin-Scale Land Use/Land Cover History as Long-Term Human Disturbance in the Kagera River System of the Upper Catchment of Lake Victoria*

H. Latifi, B. Koch, University of Freiburg, Freiburg: *Generalized Spatial Models of Forest Structure using Airborne Multispectral and Laser Scanner Data*

15:00 - 15:30

Coffee Break

15:30 - 17:30 **Intergraph - Z/I Imaging Masterclass**
(start: 15:30) **K. Neumann**, Z/I & Leica Imaging Sensors:
 ADS 80, RCD 30 and DMC II
(start: 16:30) **H. Rosengarten**, Hexagon Geosystems:
 Sensor Solutions



Friday, 17 June 2011

9:45 - 11:15 **DTM II (Chair: S. Walker)**

A. Alobeid, K. Jacobsen, C. Heipke, M. Al Rajhi, Leibniz Universität Hannover: *Building Monitoring with Differential DSMS*

T. Krauß, P. d'Angelo, German Aerospace Centre (DLR), Wessling: *Morphological Filling of Digital Elevation Models*

M. Rothermel, N. Haala, K. Wenzel, University of Stuttgart: *Potential of Dense Matching for the Generation of High Quality Digital Elevation Models*

D. Poli, P. Soille, European Commission Joint Research Centre, Ispra: *Refinement of Digital Surface Models Through Constrained Connectivity Partitioning of Optical Imagery*

11:15 - 11:30 Coffee Break

11:30 - 13:00 **Urban (Chair: M. Gerke)**

A. Barsi, Budapest University of Technology and Economics: *City Structure on Quickbird Imagery by Multiscale Radon Transformation*

T. Hermosilla, L.A. Ruiz, J.A. Recio, M. Cambra-López, Universidad Politécnica de Valencia: *Efficiency of Context-based Attributes for Land Use Classification of Urban Environments*

B. Zhang, W. Smith, S. Walker, BAE Systems Geospatial eXploitation Products, San Diego: *3-D Object Recognition from Point Cloud Data*

13:00 **Closing Session (Chair: C. Heipke)**