

# **1st EAGE/GRSG Remote Sensing Workshop 2012**

**Paris, France  
3 – 5 September 2012**

**ISBN: 978-1-62993-783-0**

**Printed from e-media with permission by:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571



**Some format issues inherent in the e-media version may also appear in this print version.**

Copyright© (2012) by the European Association of Geoscientists & Engineers  
All rights reserved.

Printed by Curran Associates, Inc. (2014)

For permission requests, please contact by the European Association of Geoscientists & Engineers  
at the address below.

EAGE  
PO Box 59  
3990 DB Houten  
The Netherlands

Phone: +31 88 995 5055  
Fax: +31 30 634 3524

[eage@eage.org](mailto:eage@eage.org)

**Additional copies of this publication are available from:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: 845-758-0400  
Fax: 845-758-2634  
Email: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

# TABLE OF CONTENTS

<b>BoS1 Use of Geophysics Methods to Characterize the Hydrology of Assateague Island National Seashore, Worcester County, Maryland</b> .....	N/A
<i>C. Johnson , J. Masterson , E. White , E. Voytek , P. Joeston , B. Fleming , J. Lane</i>	
<b>BoS2 ALIS - GPR 3-D Imaging for Humanitarian Demining</b> .....	N/A
<i>M. Sato , K. Takahashi , Y. Yokota</i>	
<b>BoS3 Gravity-measured Water Storage Change and Subsurface Hydraulic Properties at a Managed Recharge Facility in Tuscon, AZ, USA</b> .....	N/A
<i>J. Kennedy , B. Creutzfeldt , T. Ferre , A. Gunter</i>	
<b>BoS4 A Novel Surface NMR Pulse Sequence for Improved Estimation of Longitudinal T1 Relaxation Times</b> .....	N/A
<i>E. Grunewald , D. Walsh</i>	
<b>O02 Geophysical Methods in Geohazard Assessment</b> .....	N/A
<i>G. Grandjean</i>	
<b>RS04 Highly Accurate Stereo Satellite Elevation Mapping For Geomorphology, Bedrock Structures and Surficial Geology</b> .....	1
<i>G. Mitchell</i>	
<b>RS05 Analysis of UAV-based DTMs Generated by Multi-View-Stereo Approaches</b> .....	6
<i>U. Niethammer , M. Joswig</i>	
<b>RS06 Satellite InSAR Data: Towards an Effective Integration with Conventional Data</b> .....	11
<i>A. Ferretti , A. Mosconi , A. Bagliani , D. Marzorati , A. Cremonesi , D. Colombo , M. Minini , A. Tamburini , S. Del Conte , F. Bellotti</i>	
<b>RS07 Quality Assessment of Digital Elevation Model Derived from ALOISI PALSAR Interferometry</b> .....	16
<i>M. Ali, H. Hmada, T. Onuma</i>	
<b>RS08 Using Multispectral Remote Sensing in the TIR Region for Monitoring the Environment over Mining Area</b> .....	21
<i>A. Karnieli , E. Ben Dor , G. Natesco , S. Adar , V. Kopacková , C. Fischer , C. Ehrler</i>	
<b>RS09 PanGeo: Enabling Access to Geological Information in Support of GMES</b> .....	25
<i>R. Capes , N. Kellerman</i>	
<b>RS10 Mapping Minerals, Vegetation Health and Change Detection over the Sokolov Lignite Mine Using Multidate Hyperspectral Airborne Imagery</b> .....	27
<i>S. Chevrel , V. Kopackova , C. Fischer , E. Ben Dor , S. Adar , Y. Shkolnisky , J. Misurec</i>	
<b>RS11 Mapping of the Regolith of New Caledonia with Airborne Hyperspectral Remote Sensing</b> .....	32
<i>S. Chevrel , F. De Boissieu , B. Sevin , M. Despinoy , T. Cudahy , A. Rodger , C. Laukamp</i>	
<b>RS12 Ground-truthing Airborne Geophysical Data for Carbon Stock Monitoring</b> .....	36
<i>A. Keane , J. M. McKinley , A. Ruffell , M. Robinson , C. Graham , J. Hodgson , M. Desissa</i>	
<b>RS13 Improvement of AEM Derived Results for Hydrogeological Application Applying Stratigraphic Apriori Info to the Inversion</b> .....	40
<i>A. Menghini , A. Viezzoli</i>	
<b>RS14 First Data from MAiSIE, a Multi-sensor, Airborne Sea Ice Explorer</b> .....	45
<i>A. A. Pfaffhuber , S. Hendricks</i>	
<b>RS15 Mini-SkyTEM: A New Airborne Transient EM System for Near-surface Aquifer Mapping</b> .....	50
<i>C. Schamper , E. Auken</i>	
<b>RS16 From Point to Pixel: Systematic Variation of Spectral Information in Lab and Field Measurements</b> .....	55
<i>C. Gläßer</i>	
<b>RS17 Airborne and Ground Geophysics for Modelling a Karstic Conduit System: New Results from the 2007-2011 Campaigns in Tulum</b> .....	59
<i>A. Schiller , R. Supper , C. Vuilleumier , D. Ottowitz , A. Ahl , K. Motschka</i>	
<b>RS18 Fast 2D Inversion of Airborne Transient Electromagnetic Data: a Synthetic Case</b> .....	64
<i>J. Guillemoteau , P. Sailhac , M. Behaegel</i>	
<b>RS19 Towards Fuzzy Hyperspectral Edges – Radiometric Strip Adjustments of AIS Data</b> .....	69
<i>M. Pregesbauer , C. Briese , G. Verhoeven , M. Doneus</i>	
<b>O03 Geosciences and Environment: Where Do We Meet?</b> .....	N/A
<i>G. Fries</i>	
<b>RS20 Prediction and Significance of Entropy &amp; Anisotropy in Lithological and Reservoir Characterization of a Sedimentary Form</b> .....	74
<i>M. Kumar , M. R. Varun Chaudhary , M. R. Rajat Kumar</i>	

<b>RS21 Examination of Spaceborne Imaging Spectroscopy Data Utility for Stratigraphic and Lithologic Mapping</b> .....	79
<i>A. Dadon , A. Karnieli , E. Ben-Dor , M. Beyth</i>	
<b>RS22 A Technique Utilising a Combination of Supervised and Unsupervised Classifications in Solving Geological Tasks</b> .....	92
<i>A. N. Dubovskoy , K. E. Byrne</i>	
<b>RS23 Impact of Changing Weather Conditions on Mobile Gamma-ray Measurements for Soil Mapping</b> .....	96
<i>C. Dierke , U. Werban , P. Dietrich</i>	
<b>RS24 Dielectric Measurements of Saline Ices: Implication for Jovian Satellites Radar Exploration</b> .....	101
<i>B. Cosciotti , M. De Santis , S. Lauro , E. Mattei , E. Pettinelli , G. Vannaroni</i>	
<b>RS25 First Airborne Transient EM Survey in Antarctica: Mapping of Saline Ground Water System</b> .....	107
<i>E. Auken , J. Mikucki , K. Sorensen , C. Schamper , G. A. Sab , S. Tulaczyk</i>	
<b>RS26 Noise Effect Attenuation in the Wavelet Analysis of GPR Data</b> .....	112
<i>S. Ouadfeul , L. Aliouane</i>	
<b>RS27 Geological Geophysics - The Bedrock Conductivity Structure of the UK from AEM Data</b> .....	117
<i>D. Beamish</i>	
<b>RS28 Application of Satellite Images to Research on Geomorphological Change of Abu Dhabi Coastline</b> .....	122
<i>S. Lokier , H. Hamada , T. Onuma</i>	
<b>RS29 Advance InSAR Techniques for Landslide Assessment at Regional and Local Scale</b> .....	126
<i>A. Tamburini , S. Del Conte , L. Lopardo , C. Malaguti , G. Larini , M. Broccolato , D. C. G. Martelli , P. Vescovi</i>	
<b>RS30 Combination of Airborne Geophysical Surveys at the Estuaries of the Weser and Elbe Rivers in Northern Germany</b> .....	131
<i>B. Siemon , A. Steuer , M. Ibs-Von Seht , W. Voß , U. Meyer , H. Wiederhold</i>	
<b>RS31 Study of Road Deformations in the Area of Dabrowski Basin using Satellite Radar Interferometry</b> .....	136
<i>A. L. Lesniak , S. Porzycka</i>	
<b>RS32 Environmental Monitoring of Mining Areas Using Field Spectra, UAV and Satellite Imagery</b> .....	141
<i>M. A. Goossens , C. Tote , C. Baciú , B. J. Williamson , V. Udachin , P. Gyuris</i>	
<b>RS33 Ground-based Remote Sensing Using OP-FTIR Spectroscopy – A Feasibility Study for Application in Greenhouse Gas Control</b> .....	146
<i>C. Schuetze , S. Lau , N. Reiche , H. Borsdorf , U. Sauer , P. Dietrich</i>	
<b>RS34 Temporal Analysis of Small, Long-period Ground Deformations within Selected Mining Areas in South Poland</b> .....	149
<i>A. L. Lesniak , S. Porzycka</i>	
<b>RS35 proved near-surface imaging with 3D inversion of AEM data</b> .....	N/A
<i>L. H. Cox , G. A. Wilson , M. S. Zhdanov</i>	
<b>Author Index</b>	