



Geological Remote Sensing Group

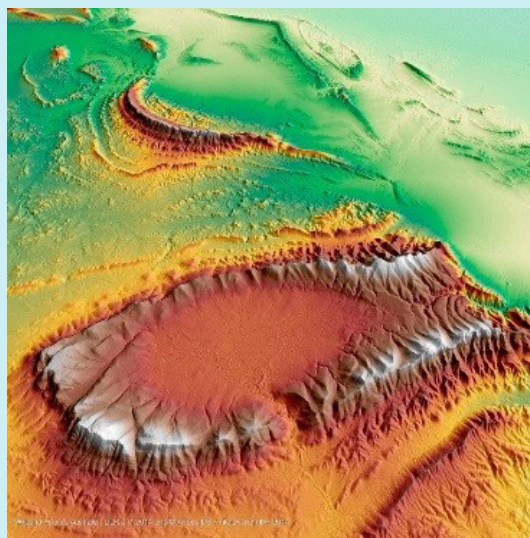
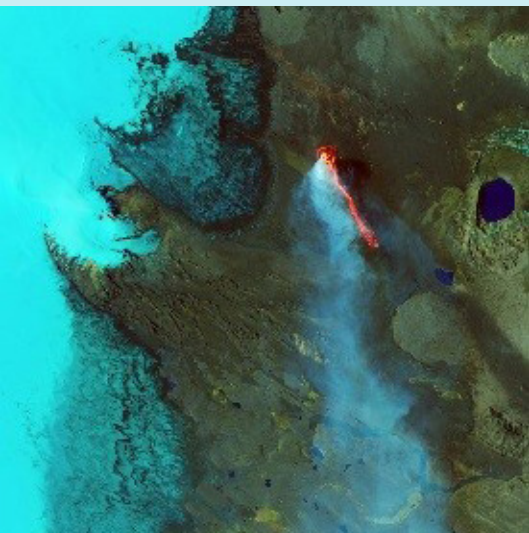
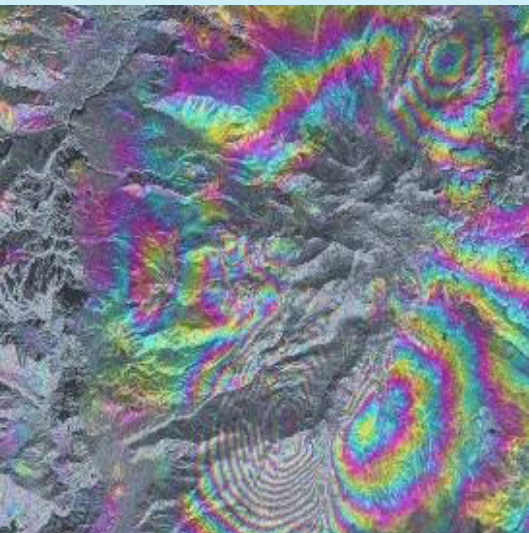
GRSG AGM 2016

Future of Geological Remote Sensing

Innovation and Challenges

7th - 9th December 2016

Arup, 8 Fitzroy Street, London



Non Members: £140

Members: £100

Members Students/
Retired: £25

Non Members
Students/Retired: £35

WED 7 DEC

DAY 1

CONFERENCE PROGRAMME

08.30 - 09.30	Registration and Coffee	
09:30	Welcome	Welcome + Introduction to the GRSG by Chairman, Luke Bateson
09.40	Innovation and Challenges: The Use of Remote Sensing in Geohazard and Risk Management	Matthew Free, Arup
AM1	Engineering Applications 1	Chair: Jason Manning, Arup
10:10	Crossrail's InSAR case study and potential future applications in the construction industry	Javier González Martí, Crossrail, UK
10:30	Ten Years of Monitoring the LUSI Mud Volcano: Combining innovation remote sensing techniques to meet a unique engineering challenge	Andrew Hart, Atkins, UK
10:50-11:20	Coffee Break 1 (+ Poster Session + Exhibition)	
AM2	Ground Based / UAV	Chair: Marc Goossens, Geosense
11:20	Boat based mapping of geological features using 3D-Photogrammetry and hyperspectral imaging system (Case study: Greenland)	Sara Salehi, GEUS, Denmark
11:40	LIME: Interpretation, visualisation and communication of 3D models in geoscience	Simon Buckley, Uni Research CIPR, Norway
12:00	Developing UAV systems for landscape and atmosphere monitoring at the British Geological Survey	Colm Jordan, BGS, UK
12:20	Quantitative 3D remote digital compositional and structural characterisation of outcrops using hyperspectral emission spectroscopy	Graham Ferrier, University of Hull, UK
12:40	Introduction to GBDX	Alex Gow, DigitalGlobe, UK
13:00-14:00	Lunch + DigitalGlobe Workshop: GBDX Platform	
PM1	Engineering Applications 2	Chair: Andrew Hart, Atkins
14:00	Natural hazard risk & mitigation (Tajikistan, Oman, UAE)	Jason Manning, Arup, UK
14:20	Continuous, Remote and Long-Term Tunnelling Monitoring with InSAR	Alessandro Ferretti, Altamira-TRE, Italy
14:40	Photo-based condition monitoring of engineering infrastructure' (applied examples from underground tunnel monitoring incl. CERN)	Yung Loo, Arup, UK
15:00	The influence of ground control on the accuracy of ultra-high resolution aerial photogrammetry from UAVs (Unmanned Aerial Vehicles) and methods for dealing with large data.	Charlton Bland, Atkins, UK
15:20-15:50	Coffee Break 2 + Planet Demonstration	
PM2	Technology Developments and Innovation	Chair: Charlotte Bishop, NPA
15:50	Convolutional Neural Network Approach to Classifying Ground Penetrating Radar Images	Patrick Carson, UCL, UK
16:10	Implementing the change vector analysis technique for assessing spatio-temporal dynamics of land-use and land-cover in the Mu Us Sandy Land, China	Prof. Arnon Karnieli, Ben-Gurion University of the Negev, Israel
16:30	Relationship between gamma radiation and light spectrum using airborne survey and Worldview-2 in South Portuguese zone, Portugal.	Gabriel Barberes, University of Coimbra, Portugal
16:50	A photogrammetry-based method for morphometric analysis of rock breakdown forms near Meteor Crater, Arizona	Ankit Verma, Trinity College, Dublin
17:10	EnVision: The Proposal for Europe's Revolutionary New Mission to Venus	Richard Ghail, Imperial College, UK
17:30	The Geological Remote Sensing Group Annual General Meeting (AGM)	
18:00	Wine Reception at Arup (Free to attend)	

THU 8 DEC

DAY 2

CONFERENCE PROGRAMME

08.30 - 09.30	Registration and Coffee	
09:30	Welcome	
09.40	Keynote: WORLDVIEW-3 and SENTINEL-2 Data for Direct and Indirect Hydrocarbon Detection in Onshore Basin	Carlos Roberto Souza Filho, UNICAMP, Brazil
AM1	Oil and Gas 1	Chair: Carlos Roberto Souza Filho
10:10	The influence of basement structure and drainage networks on prospectivity in the East African Rift System	Rowan Edwards, CGG NPA Satellite Mapping, UK
10:30	Support applications in shallow water and coastal zone: Advances in Satellite Derived bathymetry and seafloor mapping and monitoring	Dr Peter Hausknecht, Earth-i, UK (on behalf of EOMAP)
10:50	Introduction to the EO Broker Energy platform	Anoop Pandey, Satellite Applications Catapult, UK
11:10-11:40	Coffee Break 1 (+ Poster Session + Exhibition)	
AM2	Mineral Exploration 1	Chair: Dan Taranik, Exploration Mapping
11:40	Mineral Mapping of Core Using Combined High-Resolution SWIR and LWIR Sensors	David Browning, Terracore, South Africa
12:00	Characterizing Hydrothermal Alteration Using WorldView-3 and ASTER Data in the High-Sulfidation Epithermal Jagüelito Deposit, San Juan, Argentina	Prof Diego Fernando Ducart, UNICAMP, Brazil
12:20	Remote Sensing of the Copper Creek District, Arizona. Results from Aster, Airborne Hyperspectral and Field Spectroscopy	Marc Goossens, Geosense, Netherlands
12:40	Spectral Geology and Remote Sensing used for Mineral Exploration in the Abu Marawat Concession, Eastern Desert, Egypt	Micky Brown, Mappa Mundi, UK
13:00-14:15	Lunch	
PM1	Geohazards 1	Chair: Dietmar Backes, Uni Luxembourg
14:15	Temporal Monitoring of the 2014-2015 Bárðarbunga eruption, Iceland	Mariel Dirscherl, University College London
14:35	Geomorphometric characteristic of selected fossil landslides in the Vipava Valley, SW Slovenia	Tomislav Popit, University of Ljubljana, Slovenia
14:55	On Safe Ground? Analysis of European Urban Geohazards using satellite radar interferometry	Ren Capes, University of Portsmouth, UK
15:15	Brazilian flooding resilience: evidences from National Geologic Service	Luciana Oranges Cezarino, Politecnico di Milano, Italy
15:35-16.05	Coffee Break 2 (+ Poster Session + Exhibition)	
PM2	Geological Mapping 1	Chair: Luke Bateson, BGS
16:05	Geological mapping using Worldview 3 - comparisons with ASTER and hyperspectral results	Rob Hewson, University of Twente, Netherlands
16:25	Hyperspectral mineralogical and lithological mapping of metasediments and metavolcanics of Gamsberg, Aggeneys, South Africa.	Dr Martin Schodlok, BGR, Germany
16:45	Distribution of hydrothermally altered zones and their relation with fracture patterns at the Domeyko range between 20° 35' S and 21° 17'S, (Región de Tarapacá, Chile): a remote sensing and GIS study	Byron Szadman, Universidad de Chile, Chile
17:05	Hot stones: mapping igneous kimberlites under Kalahari cover using LWIR imagery	Neil Pendock, Consultant, South Africa
17:25	Multisensoral detection of laterites and there water storage capacity in Burkina Faso	Prof. Dr. Cornelia Glaesser, University of Halle, Germany
18:30	Conference Dinner at St. Martin's in the Field (Additional Charge)	

FRI 9 DEC

DAY 3

CONFERENCE PROGRAMME

08.30 - 09.00	Registration and Coffee	
09:00	Welcome	
09.10	Keynote: Australia's Version 2 ASTER mineral maps unmixed of the effects of green and dry vegetation	Tom Cudahy, CSIRO, Australia
AM1	Geological Mapping 2	
09.40	ASTER Value-Added product	Koki Iwao, AIST, Japan
10:00	Spatial hyper-depth spectral analysis using the VNIR-SWIR region for innovative soil classification.	Yaron Ogen, Tel-Aviv University, Israel
10:20	The copper mining cycle in Chile - application of EO data and digital mapping techniques	Tom Jones, Satellite Applications Catapult, UK
10:40-11.10	Coffee Break 1 (poster session + exhibition)	
AM2	Oil & Gas 2	
11:10	Airbus DS Data Portal – Meeting the changing requirements of the Remote Sensing community	Alasdair Kyle, Airbus Defense and Space, UK
11:30	High spatial resolution satellite Earth Observation – a reliable tool for site monitoring across Mining, Oil and Gas and Engineering	Peter Hausknecht, Earth-i, UK
11:50	Operational ice charting in mid-latitudes using Near Real Time SAR imagery	Carles Debart, KSAT, Norway
12:10	Characterization of tight shales from spectral imagery of drill core.	Benoit Rivard, University of Alberta, Canada
12:30-13:30	Lunch	
PM1	Oil & Gas and Mining 2	
13:30	Intermittent SBAS (ISBAS) to characterize surface deformation over rural areas: implications for onshore oil and gas regulators and operators	Alessandro Novellino, Geomatic Ventures Limited, UK
13:50	GEO: Earth Observations for managing Minerals and Non-renewable Energy Resources	Stephane Chevrel, BRGM, France
14.10	Comparison between linear and non linear spectral unmixing methods for hyperspectral data	Asmau Muktar Ahmed, University of Kingston, UK
14.30	Conference Closing Remarks	
14.45	Afterglow - Location TBC	



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ARUP





SOCIAL & NETWORKING

Ice Breaker

**TUE 6 DEC
6PM**

The Glassblower

40-42 Glasshouse street

London W1B 5JY

Nearest Tubes: Piccadilly Circus (Piccadilly line / Bakerloo line)

Cash bar, buffet finger food provided

*Wine
Reception*

**WED 7 DEC
6PM**

ARUP, Conference Venue

Arup, 8 Fitzroy Street, London

Nearest Tubes: Warren Street or Goodge Street (Northern Line),

Euston Square (Hammersmith and City/Circle and Metropolitan lines)

Wine reception commences after the AGM close at the conference venue. Free to attend

*Conference
Dinner*

**THU 6 DEC
7.30PM**

St. Martin's in the Fields

Trafalgar Square, London WC2N 4JJ

Nearest Tubes: Charing Cross (Bakerloo line / Northern line), Leicester

Square (Northern line / Piccadilly line). Walkable from conference

venue (~20 mins) with a number of pubs on the way. Access via glass

entrance to the Crypt. Additional charge.



CONFERENCE MAP

