



European  
**LIDAR**  
Mapping Forum

# Europe's Leading Lidar Forum

A major two-day technical conference with supporting exhibition focussing on the use of LIDAR to support transport, urban modelling, coastal zone mapping, asset management and GIS applications.

[www.lidarmap.org](http://www.lidarmap.org)

Salzburg Congress  
**AUSTRIA**  
29-30 Nov 2011

Organised by:

In partnership with:



## Innovative Conference

Providing a platform where the latest concepts, developments and issues surrounding the use of Lidar are discussed, communicated and debated

## International Exhibition

Meet with over 50 exhibiting companies and witness their technology first hand. Affordable rates make visiting for the day worthwhile.

## Industry Workshops

Aimed at providing novice operators, their managers and potential purchasers of equipment with an understanding of the basic principles and fundamental benefits of Lidar.

## Mobile Mapping Vehicles onsite

Take a drive and learn first-hand about this revolutionary, cost effective and ultra efficient technology



Gold Sponsors:



# Last year's inaugural event attracted **613 professionals** from the mapping, surveying and GIS industries representing **46 countries**.

## Conference & Workshops

Speakers from nearly 20 countries in the international Lidar community will be reporting on latest technology advances and recent projects, highlighting actual experiences and lessons learned. For delegates new to the Lidar community, there is a full series of learning Workshops and demonstrations.

## International Exhibition

Supporting the acclaimed conference, is the international exhibition held alongside. Exhibiting companies involved in airborne, bathymetric and terrestrial Lidar and mobile mapping systems, including system and component manufacturers, operators and service companies will be in attendance.

## Mobile Mapping Vehicles

As 3D laser scanning vehicles become a frequent sight on our streets following the adoption of mobile mapping by local governments, environmental agencies, surveyors and consumer websites - interest in the vehicles' capability has surged. Full access to this technology will be available with vehicles onsite.



*"ELMF 2010 was a complete success and we are looking forward to attending again."*  
 Pedro Llorens, Business Development Manager, **Stereocarto**, Spain

*"The conference far exceeded all of our expectations."*  
 Paul Seaton, Business Development, **Fugro Survey (Middle East) Ltd**, Abu Dhabi

*"Many compliments for the organised conference, it was really interesting and useful."*  
 Fabio Remondino, Senior Researcher **FBK Trento**, Italy

## Take advantage of the early booking discount Book online at [www.lidarmap.org/elmf](http://www.lidarmap.org/elmf)

	Early-bird Rate before 3 Oct €	Normal Rate after 3 Oct €
Full Delegate	429	529
Day Delegate	239	325
Student Full Delegate	209	319
Student Day Delegate	109	189
Exhibition Only Visitor - One Day	65	65
Exhibition Only Visitor - Two Days	130	130

VAT will be charged at the Austrian rate of 20% unless you provide your company VAT number and in this case no VAT will be added to the invoice.



## Travelling to Salzburg

We recommend you book your travel to Salzburg early as it is a popular destination especially at this time of year.

### By Air

Salzburg's WA Mozart Airport is located only four kilometers from the city center, a 15 minute journey by taxi or bus. Salzburg is also connected to Munich Airport by shuttle bus and has excellent train links

### By Train

Salzburg Train Station is a five minutes' walk from Salzburg Congress. Being close to the German border means Salzburg has outstanding Eurocity, Intercity and ICE connections to cities across Europe.

See [www.lidarmap.org/ELMF/salzburg/travel.aspx](http://www.lidarmap.org/ELMF/salzburg/travel.aspx) for further information

# DAY 1 Tuesday 29 November 2011

08.30 Exhibition opens

## OPENING SESSION

9.00 **Welcome**

*Alastair MacDonald, Conference Chairman, TMS International, UK*

9.10 **Opening Key Note Address**

*Alexander Wiechert – Business Director, Microsoft Vexcel Imaging, Austria*

## PLENARY PANEL SESSION

The panel will discuss key industry issues with participation of delegates:

9.40 **1 Open sourced Lidar data – friend or foe**  
Will this trend devalue Lidar data, make everyone a technical expert and kill the data acquisition business?

**2 Point cloud services**  
Is this a step change in improved services to customers or the inevitable result of evolving technology?

10.20 Coffee break in exhibit area

### TRACK ONE Europe Hall

### TRACK TWO Mozart Hall

#### 1.1 Data Acquisition Airborne Lidar

#### 1.2 Coastal Zone, Flood Plain & Bathymetric Lidar

*Chair: Alastair MacDonald, TMS International, UK*

*Chair: Edwin Danson, Swan Consultants, UK*

11.00 **1.1.1 Lidar scanning the Equatorial Jungle of Central Africa**  
*Robert Pack, Associate Professor, Utah State University, USA*

**1.2.1 Flood risk analysis using massive Lidar terrain data**  
*Lars Arge, Professor, MADALGO, Aarhus University, Denmark*

11.30 **1.1.2 A novel technique for resolving 'multiple time around' echo ambiguities for long-range and high repetition airborne laser scanning**  
*Peter Rieger, Product Manager, Airborne Laser Scanning, Riegl Laser Measurement Systems, Austria*

**1.2.2 Comparative look at Lidar and bathymetric technologies for nearshore surveys**  
*Dr Todd Mitchell, Remote Sensing Manager, Fugro Consultants, USA*

12.00 **1.1.3 Simultaneous ALTM and large format photography capture**  
*Dr Ir Hamish Grierson, Lidar Manager, BLOM, UK*

**1.2.3 Combining terrestrial and airborne Lidar data for urban flood risk modelling and visualisation**  
*Alastair Duncan, Geomatics Technical Specialist, Environment Agency, UK*

12.30 Lunch in the exhibit area

#### 2.1 Data Fusion & Data Processing

#### 2.2 Coastal Zone, Flood Plain & Bathymetric Lidar

*Chair: Alastair MacDonald, TMS International, UK*

*Chair: Edwin Danson, Swan Consultants, UK*

2.00 **2.1.1 Extraction of railroad infrastructure objects from extremely high resolution aerial imagery and Lidar**  
*Claudia Gedrange, Research Assistant, Leibniz Institute of Ecological and Urban Development, Germany*

**2.2.1 Technology advances in data capture, processing and operations in airborne Lidar bathymetry**  
*Dr Paul Seaton, Business Development Manager – Lidar, Fugro, UAE*

2.30 **2.1.2 LASzip: Lossless compression of Lidar data**  
*Prof Martin Isenburg, Scientist, LAStools, Austria*

**2.2.2 Influence of environmental factors and quality control of Lidar bathymetry data**  
*Carmen Sanchez, EMEA Technical Director, Stereocarto, Spain*

3.00 **2.1.3 Lidar data application for road safety; geometric characterisation and parameters acquisition**  
*Jose Manuel Campoy Ungria, Associate Professor, Universitat Politècnica de València, Spain*

**2.2.3 Using ALS measurements for automatic coastline extraction**  
*Dr Patrice Bretel, Research Engineer, UMR 6143 M2C, France*

3.30 Coffee break in exhibit area

#### 3.1 Data Fusion & Data Processing

#### 3.2 Systems Integration, GIS & Data Modelling

*Chair: Alastair MacDonald, TMS International, UK*

*Chair: Paul Seaton, Fugro Survey, UAE*

4.00 **3.1.1 Urban Object Extraction from Integrated Aerial, Terrestrial Lidar, Multi-spectral Photogrammetry**  
*Gyorgy Sabo, Associate Professor, Budapest University of Technology and Economics, Budapest*

**3.2.1 ALS in ISOK Project**  
*Peter Wozniak, Project Manager, GUGIK, Poland*

4.30 **3.1.2 Forest stand delineation and structure assessment based on airborne laser scanning data**  
*Markus Hollaus, University assistant, TU Wien Vienna University of Technology Institute of Photogrammetry and Remote Sensing (I.P.F.), Austria*

**3.2.2 Opportunities and benefits for LiDAR data online**  
*Jose Carlos Garcia, Managing Director, Dielmo3D, Spain*

5.00 **3.1.3 Combining imagery and Lidar in aerial and mobile applications**  
*Aldo Facchin, Vice President and Chief Technology Officer, Geosoft, Italy*

**3.2.3 Synergistic use of laser and infrared scanners for mobile thermal mapping of buildings**  
*Dr Jean-Baptiste Henry, Geoinformatics Project Manager, Laboratoire National de Metrologie et d'Essais, France*

5.30 **OPENING NIGHT COCKTAIL RECEPTION** in the exhibit hall until 7.00pm

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## DAY 2 Wednesday 30 November 2011

08.00	Exhibition opens	
	<b>TRACK ONE</b> Europe Hall	<b>TRACK TWO</b> Mozart Hall
	<b>4.1 Recent Projects</b>	<b>4.2 Systems Integration, GIS &amp; Data Modelling</b>
	Chair: Alastair MacDonald, TMS International, UK	Chair: Laurence McKinley, virtualcitySYSTEMS, Germany
8.30	<b>4.1.1 Russian experience in aerial Lidar surveys of power transmission lines around Moscow</b> <i>Konstantin Konakov, CEO, OPTEN ZAO, Russia</i>	<b>4.2.1 Mobile mapping in GPS denied areas</b> <i>Elliot Duff, Principal Research Scientist, CSIRO, Australia</i>
9.00	<b>4.1.2 Quality control in large Lidar projects</b> <i>Dr Bas Alberts, Specialist Geodesy &amp; Remote Sensing, Terralmaging, Netherlands</i>	<b>4.2.2 Comparative study of airborne, mobile and static Lidar in a coastal environment</b> <i>Dr Toon Petermans, GIS Expert, AGIV, Flemish Geographical Agency, Belgium</i>
9.30	<b>4.1.3 Eisriesenwelt: Terrestrial laser scanning and 3D visualisation of the largest ice cave on Earth</b> <i>Dr Christin Petters and Jeannette Milius, Students, Dresden University of Technology, Germany</i>	<b>4.2.3 Cloud Viewer: Towards web-based exploration for massive point clouds</b> <i>Dr Gerwin de Haan, Researcher, Delft University of Technology, Netherlands</i>
10.00	<b>4.1.4 Application of dual output Lidar scanning system for power transmission line data capture</b> <i>Pedro Llorens, Business Development Manager, Stereocarto, Spain</i>	<b>4.2.4 Point clouds in the context of infrastructure projects</b> <i>Benoit Fredericque, Product Manager, Bentley Systems, France</i>
10.30	Coffee break in exhibit area	
	<b>5.1 Recent Projects</b>	<b>5.2 Mobile Mapping</b>
	Chair: Alastair MacDonald, TMS International, UK	Chair: Laurence McKinley, virtualcitySYSTEMS, Germany
11.00	<b>5.1.1 Monaco 3D city model enhancement using mobile mapping survey</b> <i>Kilian Ulm, Business Development Manager, COWI, Denmark</i>	<b>5.2.1 Mobile laser scanning in railway projects – matching and georeferencing approaches</b> <i>Arkadiusz Szadkowski, Production Manager Lidar MMS, Terratec, Norway</i>
11.30	<b>5.1.2 3D scene rendering for urban areas of disaster: Case study for Haiti</b> <i>Beau Legeer, Vice President of Product Marketing, ITT Visual Information Solutions, USA</i>	<b>5.2.2 Mapping grade vs Survey grade: managing expectations of mobile mapping systems</b> <i>Dr Chris Cox, Data Processing Manager, 3D Laser Mapping, UK</i>
12.00	<b>5.1.3 Integrated Lidar surveys for the railway industry</b> <i>William Waggeveld, Sales Manager, Fugro Aerial Mapping, Netherlands</i>	<b>5.2.3 Emerging technology trends in mobile mapping</b> <i>Daina Morgan, Product Manager – Lynx Mobile Mapper, Optech, Canada</i>
12.30	<b>5.1.4 Monitoring the outmost islands of Indonesia using Airborne Lidar Bathymetry</b> <i>Tri Patmasari, Head of Center for Boundary Mapping, National Coordinating Agency for Surveys &amp; Mapping, Indonesia</i>	<b>5.2.4 Mobile Laser Scanning – railway data collection and automated feature extraction</b> <i>Dr Gerald Zach, Product Manager – Mobile Laser Scanning, Riegl Laser Measurement Systems, Austria</i>
1.00	Lunch in the exhibit area	
	<b>6 Technology Developments and Trends</b>	
	Chair: Alastair MacDonald, TMS International, UK	
2.30	<b>6.1.1 MAGELAAN: Automatic segmentation of terrestrial Lidar point clouds</b> <i>Smadja Laurent, Research Engineer, VIAMETRIS, France</i>	
3.00	<b>6.1.2 Full waveform analysis for investigation of vegetations post disturbance restoration dynamics</b> <i>Francesco Pirotti, Research Associate, CIRGEO - Interdepartmental Research Center of Geomatics University of Padova, Italy</i>	
3.30	<b>6.1.3 Lidar and photogrammetric solutions for 3D urban heritage modelling</b> <i>Sean William Morrish, GIS LiDAR Researcher, University College Dublin, Ireland</i>	
4.00	<b>Conference Closing Remarks</b> <i>Alastair MacDonald, Conference Chairman, TMS International, UK</i>	
4.10	<b>CONFERENCE AND EXHIBITION CLOSSES</b>	