

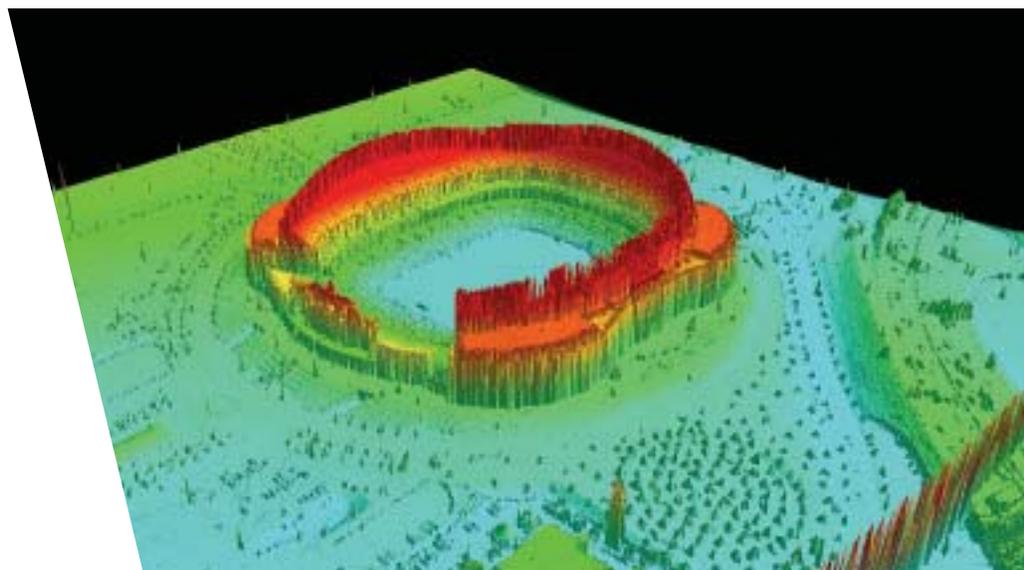


The International
LIDAR 08
Mapping Forum

Adam's Mark, Denver, USA
February 21-22 2008

ILMF 08 CONFERENCE & EXHIBITION

This 8th annual summit is the focal gathering of industry leaders, pioneers, experts from government, academia and professionals from industries looking to invest in, and benefit from, LiDAR technology and services. New for 2008 is the addition of a workshop series, which introduces those who are new to LiDAR with an understanding of the basic principles and fundamental benefits associated with the technology.



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Register now at www.lidarmap.org

Image courtesy of Merrick & Company



Leading manufacturers, operators and service companies are exhibiting from the USA, Canada, Germany, Sweden, India, Israel and China - many that have never exhibited before at ILMF!
A limited number of booths are still available, for information contact versha.carter@lidarmap.org

3001 USA

Provider of geospatial data production and analysis, including airborne imaging, surveying, mapping, and Geographic Information Systems (GIS).

Airborne 1 USA

Provider of outsourced LiDAR services and equipment rentals.

Airborne Hydrography (AHAB) Sweden

Develops and supplies airborne laser survey systems for hydrographic and topographic surveys.

Airborne Imaging Canada

Combines LiDAR acquisition experience from five continents with Optech technology to create an extremely effective LiDAR acquisition company.

Applanix Canada

An industry leader in the development and manufacture of integrated Inertial/GPS technology.

ASPRS USA

Imaging and Geospatial Society serving over 7,000 international professional members.

CompassData USA

Worldwide ground control for satellite and aerial imagery.

Definiens Germany

An Enterprise Image Intelligence™ company that enables organizations to quickly extract accurate and reliable geo-information - from remote sensing imagery.

Dynamic Aviation USA

Provides aircraft and aviation infrastructure for aerial cameras and remote sensors to acquire data of all types.

GeoCue Corporation USA

Produce GeoCue, a standard framework for geospatial process management.

Groupe SCE India India

Provide geographical information system (GIS) services in the fields of town and country planning, municipal development and urban asset mapping.

Guangxi G-Energy Information Engineering Co China

Provide topographical and 3D information through the use of leading-edge mapping technologies.

IAGT USA

A non-profit corporation which focuses on putting LiDAR and other geospatial technologies to practical use.

IGI Germany

Design and develop guidance, precise positioning, attitude determination and sensor management systems.

INPHO Germany

Provide solutions for digital photogrammetry and terrain modeling, including filtering and editing of LiDAR data.

John Chance Land Surveys USA

Design, build and operate the proprietary FLI-MAP airborne laser mapping system that is a cost-effective alternative to traditional surveying and mapping.

Leica Geosystems USA

A world's leading vendor of 3D laser scanning solutions.

Merrick and Company USA

A full-service engineering firm that provides comprehensive, client-focused land information services and products.

Optech Canada

A market leader in the development, manufacture and support of advanced, laser-based survey systems.

Overwatch Geospatial USA

The VLS division of Overwatch Systems offers software and service solutions for creating and maintaining geospatial image data.

PCI Geomatics USA

An innovative developer of image-centric software for the geospatial industry.

ProLogic USA

Developer of GIS software solutions for high-performance management, visualization and analysis of massive datasets.

Qcoherent USA

An innovative provider of high-capacity, integrated LiDAR software tools (Limitless LiDAR™).

RIEGL USA

Research, develop and produce laser radar measurement devices and systems.

Tiltan Systems Engineering Israel

Provider of 3D geographic visualization, image generation solutions and command and control applications on COTS hardware.

TopoSys North America USA

Manufacturing and world-wide marketing of turnkey LiDAR systems.

USGS Click USA

USGS center for LiDAR information coordination and knowledge

Velodyne USA

Promoting a 64-element LIDAR sensor that is used for autonomous vehicle navigation and obstacle detection, and mapping/surveying applications.

W.I.R.E. Services Canada

Provides Thermal Rating and Re-rating solutions to the electrical utility industry by using the accurate airborne LiDAR Survey technology.

Industry Sponsors:



Media Sponsors:



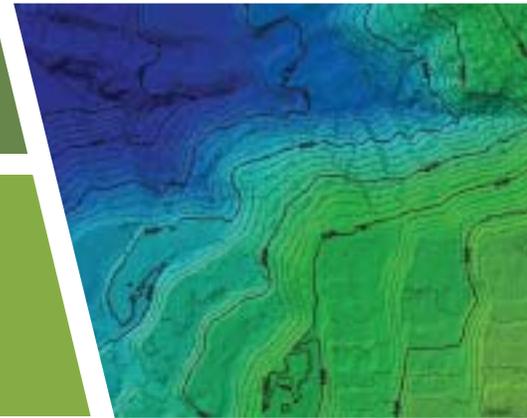
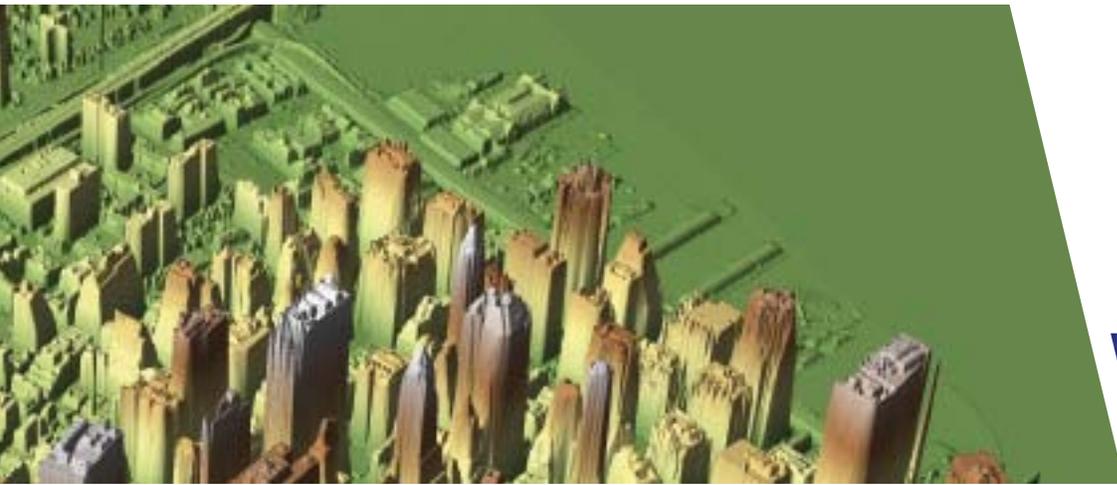


Image courtesy of QCoherent Software

The International LiDAR Mapping Forum is the **ONE** event that provides a focused opportunity to meet with LiDAR professionals from around the world.

4 - 5

CONFERENCE
Focussing on the technical and commercial issues facing the industry

Whether you are a seasoned operator or new to the business, the ILMF conference provides an intensive two day program that will ensure you are fully up-to-date with the latest advances, technical issues facing the industry and commercial applications for LiDAR. The full conference program can be found overleaf.

2

EXHIBITION
World's leading manufacturers, operators and service companies

Leading manufacturers, operators and service companies are exhibiting, providing you with an opportunity for one-on-one discussions with companies from the USA, Canada, Germany, Sweden, India, Israel and China.

6 - 7

WORKSHOPS
Introductory workshops on the basics of LiDAR

Attend the 'Basics to LiDAR Workshop Series' and find out what LiDAR is, how it works, what the applications are, the cost benefits and how it compares with other mapping technologies. Attend the workshops, follow up with exhibiting companies and within two short days you should have a thorough knowledge of the basic principles and fundamental benefits associated with LiDAR technology.

7

SOCIAL EVENTS
An opportunity to network with colleagues from around the world

Continue those discussions into the evening by attending a range of social events, planned specifically to encourage those informal meetings with LiDAR professionals from all over the world.

Don't miss out – book your place today!



THURSDAY FEBRUARY 21

TRACK ONE - Grand Ballroom 1		TRACK TWO - Grand Ballroom 2	
DATA ACQUISITION		DATA PROCESSING	
0900	Performance characterization of an airborne LiDAR system: Instrument specifications and attainable field accuracy R. Valerie Ussyshkin, System Scientist, Troy Lane, Mariusz Boba, Brent Smith, Don HLiang, Optech Incorporated, Canada	Rapid reconstruction of buildings with arbitrary roof topology from airborne LiDAR data Michael C Tarnowski and Donald R Tolley, Applied Research Associates Inc. Julio de la Cruz, US Army, USA	
0930	LiDAR trends and development James Wilder Young, LiDAR Manager Sanborn Map Company, USA	From digital surface model to digital elevation model – Challenges and opportunities Dr Bingcai Zhang, BAE Fellow, BAE Systems Network Systems, USA	
1000	Texas high resolution elevation program Erika Boghici, StratMap GIS Coordinator Texas Natural Resources Information System, USA	Leveraging geographical information systems for breakline creation and enforcement into LiDAR surfaces Kyle 'Andrew' Martin, R&D Manager, Qcoherent Software LLC, USA	
1030	COFFEE BREAK Compliments of Riegl USA Inc		
1100	A high definition 3D laser scanner for autonomous vehicle and mapping applications Bruce Hall, Velodyne, USA and Michael Dunbar, Business Development Manager, LiDAR Systems	Sea floor characterization from airborne LiDAR data Michael Tulldahl and Claes Vahlberg, Swedish Defence Research Agency, FOI. Andreas Axelsson and Henrik Karlsson, Airborne Hydrography AB, Sweden	
1130	Plug-and-Play imaging sensors for airborne LiDAR Ron Roth, Product Manager, Airborne LiDAR Leica Geosystems, USA	Co-registration of pointclouds by 3D Least Squares Matching Devrim Akca and Armin Gruen, Institute of Geodesy and Photogrammetry, ETH Zurich, Switzerland	
1200	Regional land cover classifications using topographic LiDAR and hyperspectral Imagery Christopher Macon and Jennifer M Wozencraft, Joint Airborne LiDAR Bathymetry Technical Center of Expertise, US Army Corps of Engineers, USA	Advances in 3D geospatial feature extraction from LiDAR data Stuart Blundell, Vice President and John Gale, Raj Rao, David W Opitz, Overwatch Geospatial – VLS, USA	
1230	LUNCH		
TECHNOLOGY INTEGRATION		RECENT PROJECTS	
1400	Sensor fusion for the preservation of Eagle habitat Raul Campos-Marquetti, Snr. Hyperspectral Scientist Mark Romano, Director of GSS Technology, Merrick & Company, USA	Florida's Statewide Coastal LiDAR Mapping Initiative Mark Nelson, Contractor and Richard Butgereit, GIS Administrator, Florida Division of Emergency Management, USA	
1430	Simultaneous data acquisition with airborne LiDAR and large format digital camera Stephan Landtwing, Swissphoto AG, Switzerland Jennifer Whitacre, eMap International, USA	Automated airport obstruction detection using LiDAR Jason Mann, Senior LiDAR Analyst, Darrick L Wagg, Manager, LiDAR & Geodesy, Mark Brooks, Director of Operations, Optimal Geomatics, Inc. USA	
1500	Comparing LiDAR and Acoustic Bathymetry using Total Propagated Error (TPE) and the Combined Uncertainty and Bathymetry Estimator (CUBE) algorithm Carol Lockhart, Hydrographic LiDAR Technical Manager Doug Lockhart, Jose Martinez, Fugro Pelagos Inc, USA	Enhanced forest resource inventories: Going operational with LiDAR Dr. Kevin Lim, President, Lim Geomatics Inc. Murray Woods, Senior Analyst - Forested Landscapes, Ontario Ministry of Natural Resources. Dr. Paul Treitz, Associate Professor, Department of Geography, Queen's University. Paul Courville, Project Coordinator, Forestry Research Partnership. Canada	
1530	COFFEE BREAK		
1600	Reconstruction of 3D tree crown structure from LiDAR with color of aerial photos Akira Kato, Monika Moskal and Peter Schiess, Precision Forestry Cooperatives, College of Forest Resources, University of Washington, USA. Donna Calhoun, Commissariat a L'Energie Atomique Centre de Saclay, France	Using bathymetric and bare earth LiDAR in Riparian corridors: Applications and challenges Robert Hilldale, Hydraulic Engineer, Jennifer Bountry, Hydraulic Engineer, Sedimentation and River Hydraulics Group. Lucy Piety, Geologist, Seismotectonics and Geophysics, Bureau of Reclamation, USA	
1630	Important considerations toward the establishment of a successful mobile LiDAR solutions business Albert Iavarone, Product Manager, Optech Incorporated, Canada	Pennsylvania PAMAP Statewide LiDAR – Meeting multiple needs Chris Markel, Implementation Manager PAMAP Program, GeographIT. Dr Jay Parrish, Director, Bureau of Topographic and Geologic Survey, PA Department of Conservation and Natural Resources. Dr Doug Miller, Associate Professor, Geography, Center for Environmental Informatics, Penn State University. USA	

FRIDAY FEBRUARY 22

RECENT PROJECTS - Grand Ballroom

- | | |
|------|--|
| 0830 | Targeting riparian setback restoration areas using LiDAR data
Kevin McMaster, GIS Visualization Specialist, URS Corporation, USA |
| 0900 | Forest vertical structure analysis using Waveform LiDAR data
Yong Pang and Michael Lefsky, Center for Ecological Applications of LiDAR, College of Natural Resources, Colorado State University, USA.
Zengyuan Li, Institute of Forest Resource Information Technique, Chinese Academy of Forestry, China |
| 0930 | How electrical utilities get maximum benefits from 3D Modelling
Luke Chaput, Technical Marketing Engineer, WIRE Services/Manitoba Hydro, Canada |
| 1000 | COFFEE BREAK |

DATA MANAGEMENT - Grand Ballroom

- | | |
|------|--|
| 1030 | A new framework for accuracy assessment of LiDAR data and derived elevation models
Lewis Graham, GeoCue Corporation. Brian Bills and Karen Schuckman, The Pennsylvania State University, USA |
| 1100 | Terrain data management
Bill Millinor, GISP, GIS Department Manager and Mark Nelson, Director of GIS, Jones Edmunds & Associates, Inc, USA |
| 1130 | Managing very large LiDAR datasets in Oracle Database
Xavier Lopez, Director, Spatial & Semantic Technologies, Oracle Server Technologies, USA |
| 1200 | LUNCH |

TECHNOLOGY & TRENDS - Grand Ballroom

- | | |
|------|--|
| 1330 | Near real time web-based distributive status tracking and reporting for LiDAR projects
Bob Ryan, Senior Project Manager and Tonda Shelton, URS Corporation, USA |
| 1400 | Improved kinematic GPS accuracies using tropospheric estimation
Dr Gerald L Mader, National Geodetic Survey, NOS/NOAA and Prof Michael Bevis, Ohio State University, USA |
| 1430 | The RIEGL – Diamond DA42-BP560 Airborne Laser Scanning System – New developments, experiences and results
Peter Rieger, Riegl Laser Measurement Systems, USA |
| 1500 | COFFEE BREAK |
| 1530 | Integrating multiple technologies on airborne LiDAR platforms to maximise ROI
Michael Sitar, Product Manager, Optech Incorporated, Canada |
| 1600 | AHAB new developments in coastal survey systems
Anders Ekelund, Managing Director and Andreas Axelsson, Rolf Engstrom, Airborne Hydrography AB, Sweden |
| 1630 | An analog, non-mechanical beam-steerer with an 80° field of regard for LiDAR applications
George Farca, Staff Scientist, Scott D. Rommel, VP of Operations, Michael H. Anderson, President, Scott R. Davis, VP of Technology, Vescent Photonics, USA |



Basics to LiDAR Workshop Series Summary

This Workshop Series is aimed at providing novice operators, their managers and potential purchasers of equipment with an understanding of the basic principles and fundamental benefits and technology associated with LiDAR. Attend these workshops and find out what LiDAR is, how it works, what the applications are, the cost benefits and how it compares with other mapping technologies. Dip in and out of these sessions, follow up with exhibiting companies at their booths and within two short days you should be able to speak intelligently regarding the overall assessment and management process for LiDAR projects.

SPACE IS LIMITED IN EACH SESSION SO ARRIVE EARLY TO SECURE YOUR PLACE

DAY 1: THURSDAY FEBRUARY 21 2008

0930 – 1030	Comprehensive overview of LiDAR operations John Chance Land	A fast-track introduction to what aerial LiDAR can do for you in mapping data acquisition.
1100 – 1200	Large area LiDAR data quality assessment and management Lewis Graham, GeoCue Corporation	Tools and methodologies for managing large quantities of processed LiDAR data.
1400 – 1430	The Applanix / Inpho solution for DSS orthophoto and LiDAR production for corridor mapping Eric Liberty, DSS Product Manager, Applanix Corporation	This workshop will explore how LiDAR digital elevation models are combined with digital orthophotos and orthomosaics for corridor applications and will define the methodology of fusing Applanix DSS imagery and LiDAR using the INPHO suite of photogrammetry and LiDAR tools.
1430 – 1530	Fundamental elements of a LiDAR scanning system Jim van Rens, Riegl USA Inc	This workshop will provide a broad view of the complete system and processing requirements and will cover the fundamental elements of a LiDAR Scanning System.
1600 – 1700	Airborne LiDAR buyer's guide: An overview of current technology Ron Roth, Leica Geosystems, Inc.	An overview of the various LiDAR technologies available for purchase in the market today and will focus on the technical approaches used, the resulting performance characteristics and customer support aspects of various designs.

DAY 2: FRIDAY FEBRUARY 22 2008

0830 – 0930	LiDAR Analyst and Urban Analyst: Point cloud to urban models Raj Mohan Rao, Overwatch Geospatial	An Introduction to LiDAR - what it is, how it works and it will also include an overview of: what specifications of the data are important for feature extraction (especially for feature extraction from LA); the work-flow that LA and UA enable; of LA and UA features.
0945 – 1030	Enabling technologies and inherent features of fully integrated laser scanning systems Optech Incorporated	This workshop will provide a basic overview of the technologies that contribute to airborne and ground based LiDAR systems and will provide an understanding of the common features and its applications.
1030 – 1130	Request-for-Proposal (RFP) development for LiDAR data collection projects Bill Emison, MARS® Product Manager, Merrick & Company	This presentation will discuss the process for developing a comprehensive, cost effective LiDAR data collection Request-for-Proposal (RFP) document.
1330 – 1400	High-volume orthophoto Production using simultaneously acquired LiDAR data and aerial imagery Thomas Laue, INPHO GmbH, Germany	This workshop will focus on an efficient workflow for fast orthophoto production and will show how current software and hardware technologies can be used for processing many thousands of images within a short time, applying distributed processing and fully automated data handling.
1400 – 1500	Complete, end-to-end, workflow of typical LiDAR projects from pre-flight planning through to data processing and final deliverables. TopoSys North America Inc.	This workshop will provide an in-depth view of the step-by-step processes and workflows of typical LiDAR projects and data processing.

Social Events at ILMF 08

An opportunity to experience Denver and Colorado at its best, while connecting with an international audience of LiDAR professionals! Who says work can't be fun!

For more information email info@lidarmap.org

ICE BREAKER EVENING Wednesday February 20 2008

5.30pm - 8.30pm

Wynkoop Brewery, 1634 18th Street, Denver

Delegates are invited to join the Rocky ROGUES* at The Wynkoop Brewing Company, Colorado's oldest brew pub housed in the glorious J. S. Brown Mercantile Building. Not only a great introduction to the spirit of Denver but an ideal opportunity to meet up with the Geospatial community in Colorado - the ROGUES have specifically planned this gathering to coincide with ILMF and we have a sense that it is one of those events not to be missed!



OPENING NIGHT COCKTAIL RECEPTION Thursday February 21 2008

5.30pm- 7.00pm

Exhibit Hall at the Adam's Mark Hotel

Need more time to meet with the exhibiting companies – ensure that you stay on for the evening and join us at our cocktail reception in the exhibit hall.



SKI TRAIN TRIP Saturday February 23 2008

Skiers and sightseers alike are invited to enjoy a day at Winter Park, one of Colorado's most popular winter destinations. The ILMF team are hiring two private club cars aboard America's largest scheduled passenger train for a postcard-perfect journey through the dramatic peaks of the Rockies. On arrival at Winter Park, you can ski, snowboard, ride a snowcat, snowmobile, dog sled or why not try snowshoeing or cross country skiing?

For further information go to: www.lidarmap.org/ilmf2008/skitrain.aspx or to book your place email info@lidarmap.org Ski Train: \$90 per ticket

Lift tickets not included in price



* WHO ARE THE ROCKY ROGUES?

Rocky Rogues was founded by a small group of Geospatial people in Colorado to promote the open exchange of industry information and camaraderie in an informal setting. Good news travels fast by Word-of-Mouth, and ROGUES distribution is now in excess of 600 members; and people are in demand. Wynkoop Brewpub was selected due to great central location and the fact the Wynkoop was the ROGUE Brewpub that broke from tradition and did it their way. Other Brewpubs across the nation followed... and Wynkoop founder John Hickenlooper, was voted Mayor of Denver (twice!). Ignore the press releases and corporate hype. ROGUES openly share the factual stories behind who's who and what's what. This circle of trust provides an invaluable service for busy people needing to get results and not the company line. ROGUES crosses all industries, applications, brands, levels of management, and departments. No officers, no rules, no regulations, no dress code, no voting, no BS... it works. Open enrollment, send an email to ken@kenturnbull.com to be included on the distribution.



TO BOOK ACCOMMODATION:

Book your accommodation on-line
www.lidarmap.org/ilmf2008/accommodation.aspx

If you prefer book by phone:
Within the USA: **1 800 444 ADAM (2326)**
International callers: **+1 303 893 3333**



The Adam's Mark is the official hotel for ILMF 2008. Book your rooms before January 25, 2008 to obtain the group rate. ILMF 2008 will be held at the Adam's Mark Hotel which is located in the heart of downtown Denver directly on the popular 16th Street Pedestrian Mall spanning one mile in length. There is a FREE shuttle, though everything on the mall is within walking distance, giving you access to over 300 dining, shopping and entertainment options.

The ILMF 2008 meeting has secured the group rate of \$149 for single or double rooms, including a limited number of government per diem rooms.

FOR FURTHER INFORMATION CONTACT:



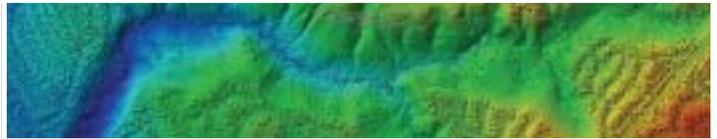
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Email: info@lidarmap.org

TO REGISTER:

Book your place today
Register on-line at:
www.lidarmap.org/register
For Early Bird Discount book before December 15, 2007



DELEGATE RATES	EARLY BIRD	STANDARD
Full Delegate Rate Includes access to the main Conference over two days, access to the Basics to Lidar Workshop Series, all refreshment breaks, both lunches, entrance to the Cocktail Reception and a copy of the Conference Proceedings.	\$399 USD	\$499 USD
Day Delegate Rate Includes access to the main Conference, access to the Lidar Workshop Series, refreshment breaks and lunch for ONE DAY ONLY. Also includes entrance to the Cocktail Reception (for Thursday delegates only) and a copy of the Conference Proceedings.	\$239 USD	\$299 USD
Full Student Rate Includes access to the main Conference over two days, access to the Basics to Lidar Workshop Series, all refreshment breaks, both lunches, entrance to the Cocktail Reception and a Copy of the Conference Proceedings. Valid for students in possession of a valid student ID card at the time of ILMF 2008.	\$239 USD	\$299 USD
Student Day Rate Includes access to the main Conference and Lidar Workshop Series, refreshment breaks and lunch for ONE DAY ONLY. Also includes entrance to the Cocktail Reception (for Thursday delegates only) and a copy of Conference Proceedings. Valid for students in possession of a valid student ID card at the time of ILMF 2008.	\$149 USD	\$179 USD
Exhibition Only Visitors If you would like to visit the ILMF 08 exhibition, you may do so free of charge. Please note that if you wish to attend the conference or workshops you will need to register as a delegate.	FREE	FREE