

THE ONLINE INFORMATION BULLETIN OF THE GLOBAL FOREST SCIENCE NETWORK

SilviLaser 2010 – Point Cloud Brings Light into the Forest

By Fabian Enßle, Research Assistant, Dept. of Remote Sensing and LIS, University of Freiburg, Germany

This year the 10th international conference on LiDAR applications for assessing forest ecosystems – SilviLaser – was held in Freiburg, Germany. From 14-17 September, approximately 150 participants from 22 countries from all over the world discussed the latest findings and scientific developments. The conference was organized by the Department of Informatics and Biometrics - Forest Research Institute of Baden-Württemberg (FVA, Dr. Gerald Kändler) and the Department of Remote Sensing and Landscape Information Systems - Freiburg University (FeLis, Prof. Barbara Koch, Deputy Coordinator of IUFRO Unit 4.02.08).

Laser scanning for forest applications is a young and promising research topic. With 51 oral and 26 poster presentations in eight session themes, the conference was an excellent chance for scientists and practitioners to share their experiences on LiDAR. In addition to the six key speeches, the session themes were:

- Forest and Ecological Applications for Terrestrial Laser Scanning;**
- Satellite Based LiDAR Systems and Data for Forest and Environmental Applications;**
- Wood Quality Assessment with Laser;**
- Airborne Laserscanner (ALS) - Single Tree Based Inventories;**
- ALS - Ecological and Landscape Inventories;**
- ALS - Area Based Inventories;**
- ALS - Biomass and Forest Fuel Assessment; and**
- Multisensoral Applications with LiDAR Data.**



Photo by Andreas Fitz

The welcome speeches by Prof. Barbara Koch (University of Freiburg), Mr. Max Reger (Director of BW forest Service – ForstBW) and Prof. Hermann Schwengel (Vice Rector for Research, University of Freiburg) gave a brief introduction from the perspectives of science and practice.

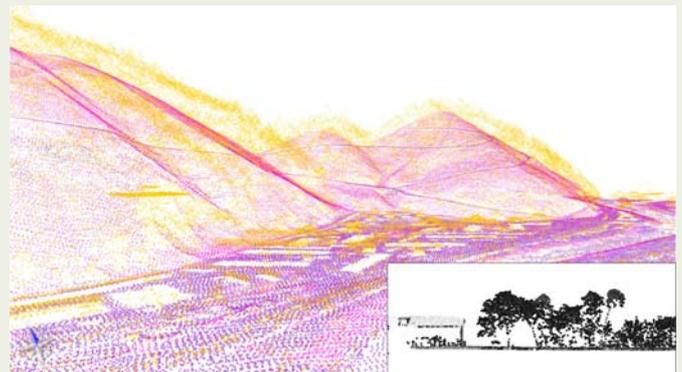


Illustration: Visualized laser data of an investigation area in Germany, courtesy of Dept. of Remote Sensing and LIS, University of Freiburg, Germany

Recent research on terrestrial laser scanning (TLS) data focuses on tree volume equations, canopy structure, tree architecture, individual stem mapping and wood quality assessment. The performance data depends on the site specific structure and there's still a need to develop automatic and robust algorithms.

Airborne laser scanning has a wide range of scientific and practical applications. Single tree detection was a frequent theme at the conference. Optimizing and benchmarking algorithms, leaf area detection, volume and height estimations as well as LiDAR behavior were discussed.

The data collected by satellite based LiDAR is important for wall-to-wall inventories. At the moment there is no active LiDAR satellite in the orbit. Mr. Nelson from NASA gave a future prospect on upcoming missions – ICESatII and DESDynI-LiDAR – with an expected launch in 2015 and 2017. In the submitted European Project LEAF (Lidar for Earth And Forests) 25 scientists develop the technical configuration for a satellite mission with main focus on forest inventories, topography, hydrology and archaeology.

This year's conference brought together a wide range of scientists and practitioners. Different sensor platforms, methods and new approaches for research were presented. At present there is only little use of LiDAR for forest industries. Participants expressed the wish for more presentations of practical experience and research on cost efficiency. The next SilviLaser conference will be held from 16-20 October 2011 in Tasmania, Australia.

Biannual IUFRO Landscape Ecology Conference 2010

By Raffaele Laforteza (Deputy Coordinator of IUFRO 8.01.02), and Yude Pan

The biannual conference of the IUFRO Landscape Ecology [Working Party 8.01.02](#), was held in Bragança, Portugal from September 21-27, 2010 under the title: "Forest Landscapes and Global Change - New Frontiers in Management, Conservation and Restoration". The conference was organized by the Instituto Politécnico de Bragança and CIMO Mountain Research Centre and strongly supported by the City of Bragança.

The conference was a great success with the participation of 300 scientists and resource managers from 45 countries. It provided an important forum for presentation and discussion of the results of current researches related to forest landscape ecology and global environmental changes at the landscape level. The range of current and emerging issues of great importance in forest landscape ecology that was explored included:

Scaling in landscape analysis
Patterns and processes in changing landscapes
Disturbances in changing landscapes
Biodiversity conservation and planning in changing landscapes
Monitoring landscape change
Tools of landscape assessment and management
Management and sustainability of changing landscapes
Urban forestry in changing regions

Multi-scale approaches and the human dimension of landscape ecology provided the framework for stimulating discussions on understanding complex processes and landscape complexity, optimizing goods and services at multiple landscape levels in the context of global change, and developing new methods and tools for resource managers.



Photo by Jiquan Chen:
 Participants during one of the four simultaneous in-conference field trips to the Nogueira oak woodlands

A fellowship program was organized to support students from developing countries to attend the conference. Despite the low funding received, twenty-eight students from more than fifteen countries were selected, on competitive basis, to receive the travel funds for their attendance and research presentations in the conference. Besides, the conference attracted many students from universities of Portugal and the EU countries.

More detailed information on the conference can be found at <http://www.ipb.pt/iufro2010/>, or via email to the organizer of the conference: João Azevedo, [jazevedo\(at\)ipb.pt](mailto:jazevedo(at)ipb.pt)

Poplars and Willows: From Research Models to Multipurpose Trees for a Biobased Society

By Brian J. Stanton, IUFRO Coordinator, Unit 2.08.04
 GreenWood Resources

IUFRO's Fifth International Poplar Symposium (IPS-V) was held in Orvieto, Italy, 20-25 September, 2010. IPS-V was the largest and most widely attended of all of IUFRO's poplar symposia held so far (Seattle, Washington, U.S.A., 1995; Orleans, France, 1999; Uppsala, Sweden, 2003; and Nanjing, China, 2006). A total of over 220 delegates from 35 countries were represented at the symposium. Eleven keynote and 56 technical presentations were made in conjunction with seven scientific sessions focused on the following thematic areas:

(1) Population and Conservation Genetics,
(2) Genomics,
(3) Biotechnology,

(4) Production Systems,
(5) Environmental Applications,
(6) Host-Pest Interactions, and
(7) International Cooperative Programs.

Additionally, 143 poster presentations were displayed at IPS-V. Abstracts of all oral and poster presentations were included in a conference book that was provided to all IPS-V delegates. The conference organizers are planning on publishing selected IPS-V papers in three separate journals, *Biomass and Bioenergy*, *Tree Genetics and Genomes*, and *Tree Physiology*.

For the full report, please visit: <http://www.iufro.org/science/divisions/division-2/20000/20800/20804/activities/>

Uneven-aged Forest Management (UAFM) - an Integrative Use of Forest Resources

By Jurij Diaci and Dusan Rozenbergar, University of Ljubljana, Slovenia

The 7th IUFRO conference on uneven-aged silviculture of [Research Group 1.05.00](#) was entitled "Integrating ecologically based uneven-aged silviculture with increased demand for forests". The conference was organized by the Department of Forestry and Renewable Forest Resources at the Biotechnical Faculty of the University of Ljubljana in co-operation with the Slovenia Forest Service. The meeting took place in Ljubljana from 23 – 26 September, 2010. More than 90 participants from 28 countries were presenting and discussing research results.

Conference papers and discussions focused on the following aspects:

- (1) advantages of UAFM,
- (2) comparison of long term best practices of UAFM across different ecosystems,
- (3) understanding of UAFM and bridging with other silvicultural systems, and
- (4) discussion on guidelines for the future application.

In the 21st century it is expected that the demands of society on renewable resources, particularly forests, will increase. Therefore, wise management of forests will become increasingly important. Forests not only provide wood, but many other ecosystem services as well, ranging from biodiversity conservation and carbon storage to various social functions. Any form of management needs to consider these different functions.

This can be achieved through forest segregation (zoning) or integration concepts, or a combination of both. The first concept embraces industrial forestry supported with biotechnology in combination with forest reserves for ecological and social functions, whereas the integrative concept includes simultaneous use of forests for various goods and services.

Uneven-aged forest management (UAFM) in its broadest sense is one of the oldest existing examples of the integrative use of forest resources. Yet, its use in Europe decreased in the second part of the 20th century due



Conference keynote speakers after hard day's work. From left to right: Renzo Motta (Italy), Glenn H. Stewart (New Zealand), Per Krister Angelstam (Sweden), Andrej Boncina (Slovenia), Thomas Knoke (Germany) and Thomas A. Spies (USA). Photo by Miroslav Svoboda

to rigid interpretation, but also due to forest health problems, excessive deer browsing and non-adapted technologies. Often UAFM was criticized for its loose connection with ecological processes, such as natural disturbance regimes. There are also many different interpretations of what UAFM is in various parts of the world and this has led to a greater range of more flexible applications. However, over the last few decades there has been growing interest in UAFM and it has become more and more important. The main reasons for this include the increased significance of nature conservation, ecosystem services, forest stability, recreational functions and difficult economic conditions. In spite of many successful practices of UAFM, its ability to integrate ecological theory and natural processes with forest stability, climate change adaptation, technological feasibility and economic efficiency are under debate.

More information about the conference including conference proceedings and presentations is available at: <http://web.bf.uni-lj.si/go/uafm2010/index.html>.

GFEP Editorial Team Met at United Nations to Draft Policy Brief on International Forest Governance

Since December 2009, a group of over 30 of the world's leading scientists working in the areas of environmental governance and international forest law has been carrying out a comprehensive assessment of the international forest regime in the framework of the CPF Global Forest Expert Panels (GFEP). Their assessment

report will be published in spring 2011 as a major contribution to the International Year of Forests 2011.

As this assessment is close to being finalized, a GFEP editorial team chaired by Professor Jeremy Rayner met on 24 September 2010 at the premises of the UNFF Secretariat in New York to draft a policy brief summarizing the main findings of the assessment. The policy brief will present the key messages of the assessment and identify options for improving the effectiveness of forest governance. Visit: <http://www.iufro.org/science/gfep/forest-regime-panel/>

Larix 2010: From Larch Genetics and Breeding to Silviculture

By Aleksey Fedorkov, Senior Researcher, Institute of Biology, Komi Science Center, Russian Academy of Sciences

Larch has been widely acknowledged as a fast-growing tree species with high quality timber. Larch timber is suitable as material for outdoor constructions, owing to its high mechanical strength and decay resistance. Larch is the most common tree species in Russia. More than 280 million ha in Russia, corresponding to 37% of the Russian forest area, are dominated by larch.

Between 7 and 11 September 2010, the Institute of Biology, Komi Science Center, Russian Academy of Sciences hosted the 7th International Symposium IUFRO Working Party [2.02.07](#) – Larch Breeding and Genetic Resources, LARIX 2010. Twenty researchers from 8 countries (Canada, Czech Republic, Finland, France, Japan, Norway, Russia and Sweden) gathered in Syktyvkar, Komi Republic, Russia. There were 15 presentations covering a wide range of topics related to genetic variability of larch species, adaptive capacity of larch species and populations to climate change, genetic variability of wood parameters and potential of interspecific hybridization.



Photo: Field excursion to three-year-old larch provenance field trial

The meeting agreed on the need to keep on collaborating in the field of genetic and phenotypic variation of Russian larch through a series of field trials established all over the world (Canada, China, Finland, Japan, Iceland, Norway, Sweden and Russia) using the same material.

The full presentations can be downloaded from: <http://ib.komisc.ru/add/j2/index.php>

Awards

IUFRO Distinguished Service Award for Dr. Seung Jin SUH

On 14 September 2010, at a meeting held at the Korea Forest Research Institute to review and evaluate the results of the XXIII IUFRO World Congress, the IUFRO DSA was awarded to Dr. Seung Jin Suh, former Minister of Korea Forest Service, for his vital role in convening the XXIII IUFRO World Congress in Seoul and for his support to IUFRO. The DSA recognizes those whose work has substantially contributed to furthering the scientific, technical, and organizational aims of IUFRO.



Photo: IUFRO Immediate Past President Don K Lee (left) presents the award to Dr. Suh during the opening ceremony.

Marcus Wallenberg Award 2010

The Swedish King awarded the Marcus Wallenberg Prize to Professor Hans Joachim Blass, Karlsruhe Institute of Technology (KIT), Germany, for his path breaking work regarding innovative and reliable structural timber connections which have high load transfer capacity and can be efficiently applied at construction sites and within industrial processes.

<http://www.mwp.org/index.cfm?PageAction=ReadMore&id=35>

Announcements

USGS Mendenhall Research Fellowship Program

Center of Excellence for Geospatial Information Science: 49 post doc opportunities for FY 2012 (starting Oct 1, 2011) have just been announced via the Mendenhall Research Fellowship program, see: <http://geology.usgs.gov/postdoc/>.

All positions are 2-year opportunities paid at the GS-12 level with benefits. Most positions are available in the field of geology but there are others, including a GeoWeb opportunity with CEGIS: <http://geology.usgs.gov/postdoc/2012/opps/opp35.html>

Celebrating Forests for People The International Year of Forests * 2011



<http://www.un.org/en/events/iyof2011/>

Erasmus Mundus – MSc European Forestry Scholarships

The Master of Science in European Forestry (MSc EF) is provided by a consortium of seven well known European universities. The MSc EF is an international double-degree program. The focus of the MSc EF is on the international dimensions of forest resource management and utilization, supported by a sound understanding of ecological conditions and their dynamics in Europe. The deadline for submitting applications for scholarships is 31 December 2010.

Visit: <http://www.europeanforestry.net/>

Norwegian Funding Opportunity for Public Health Projects

The Secretariat of the Northern Dimension Partnership in Public Health and Social Well-being (NDPHS) is pleased to announce funding available through the NDPHS Project Pipeline for projects aiming to improve health and social well-being in the Northern Dimension area. Further details and requirements can be found at <http://www.ndphs.org/?pipeline.donor.view,10>

Publications

IUFRO Online Proceedings Archive

Find proceedings of IUFRO meetings at: <http://www.iufro.org/publications/proceedings/proceedings-meetings-2010/>

If the proceedings of your IUFRO conference or meeting are not yet online, kindly contact us at office@iufro.org. We are also happy to archive printed courtesy copies of your conference proceedings.

Wörterbuch Umwelt und Forstwirtschaft (English/German, German/English)

by Walter Warkotsch and Renate Prueeller
ISBN 978-3-935638-00-5. 482 pages
<http://www.verlagkessel.de>

10 Messages for 2010 – Forest Ecosystems

By European Environment Agency, Copenhagen 2010
Each message provides a short assessment focusing on a specific ecosystem or issue related to biodiversity in Europe. <http://www.eea.europa.eu/publications/10-messages-for-2010>

Forest Day 4 Cancún, Mexico, 5 December 2010



<http://www.forestsclimatechange.org/history.html>

At Forest Day 4, IUFRO and IUCN are planning to hold a Learning Event on:
Promoting synergies between climate change mitigation and adaptation across forest landscapes

IUFRO Meetings

Search our [online calendar](#) for a full list of meetings. Find non-IUFRO meetings on the IUFRO [Noticeboard](#).
Also search for forest-related events at:
<http://www.gfis.net>

19-20 November 2010

China-ASEAN International Wood Culture Symposium and Wood Products Exhibition Nanning, China

[IUFRO 5.00.00, 5.10.01](#), International Wood Culture Society China, China-ASEAN Timber and Wood Products Exhibition Office

Contact: Jinling Su, su@iwcs.com

<http://www.iwcs.com/thread.cfm?Category=2940&Thread=15741&InFrame=0>

7-10 December 2010

Asia and the Pacific Symposium – Vulnerability Assessments to Natural and Anthropogenic Hazards

Manila, Philippines

APAFRI (Asia Pacific Chapter of IUFRO)

Contact: Sim Heok-Choh, simhc@frim.gov.my

<http://erdb.denr.gov.ph/announce.php>

15-18 May 2011

International Symposium on Dynamics and Ecological Services of Deadwood in Forest Ecosystems

Quebec, Canada

IUFRO [8.02.02](#)

Contact: Suzanne Brais, Suzanne.Brais@uqat.ca

<http://deadwood2011.uqat.ca/>

16-18 May 2011

11th International Conference on Wood & Biofiber Plastic Composites and Nanotechnology in Wood Composites Symposium

Madison, Wisconsin

[IUFRO 5.00.00](#), USDA Forest Products Laboratory and Forest Products Society

Contact: Julie Lang, [conferences\(at\)forestprod.org](mailto:conferences(at)forestprod.org)
<http://www.forestprod.org/woodandbiofibercomposites/conference.html>

12-15 June 2011

34th COFE Annual meeting 2011: Engineering the forest value chain
 Quebec City, Canada

[IUFRO 3.01.00](#)

Contact: Jean-Francois Gingras, [jean-francois.gingras\(at\)fpinnovations.ca](mailto:jean-francois.gingras(at)fpinnovations.ca)
<https://www.cirrelt.ca/COFE2011/>

15-18 June 2011

Forest Products Marketing and Business Management and the UNECE/FAO Team of Specialists on Forest Products Markets and Marketing Pre-Conference to the Forest Products Society 65th International Convention
 Portland, Oregon, United States

[IUFRO 5.10.00](#)

Contact: Chris Knowles, [Chris.Knowles\(at\)oregonstate.edu](mailto:Chris.Knowles(at)oregonstate.edu);
 Eric N. Hansen, [eric.hansen2\(at\)oregonstate.edu](mailto:eric.hansen2(at)oregonstate.edu)
<http://www.iufro.org/science/divisions/division-5/50000/51000/activities/>

7-9 September 2011

Novel Risks with Bark and Wood Boring Insects in Broadleaved and Conifer Forests
 Sopron, Hungary

[IUFRO 7.03.05](#)

Contact: Barbara J. Bentz, [bbentz\(at\)fs.fed.us](mailto:bbentz(at)fs.fed.us);
 Ferenc Lakatos, [flakatos\(at\)emk.nyme.hu](mailto:flakatos(at)emk.nyme.hu), Rudolf Wegensteiner, [rudolf.wegensteiner\(at\)boku.ac.at](mailto:rudolf.wegensteiner(at)boku.ac.at)
<http://www.iufro.org/science/divisions/division-7/70000/70300/70305/activities/>

14-16 September 2011

17th International Nondestructive Testing and Evaluation of Wood Symposium
 Sopron, Hungary

[IUFRO 5.02.00, 5.02.01](#)

Contact: Ferenc Divos, [divos\(at\)fmk.nyme.hu](mailto:divos(at)fmk.nyme.hu)
<http://woodndt.nyme.hu/>

Other Meetings

17-19 November 2010

IV Congreso Andino Amazónico de derecho Forestal Ambiental "Bosque y Cambio Climático"
 Cobija-Pando, Bolivia

Contact: Wilson Rocha, [wrocha\(at\)tnc.org](mailto:wrocha(at)tnc.org)
<http://www.congresoderechoforestal.com>

25-26 November 2010

Environmental Assessment and Forestry Governance in Central Africa
 Brazzaville, Congo

Secretariat for Environmental Assessment in Central Africa (SEACA), Congo Association for Environmental Impact Assessment (ACEIE)

<http://www.iufro.org/discover/noticeboard/#c12666>

16-21 January 2011

ETH PhD-Academy on Sustainability and Technology: Climate Change Mitigation and Adaptation: An Organizational Science Perspective
 Zurich, Switzerland

Swiss Federal Institute of Technology (ETH)

Contact: Timo Busch, [tobusch\(at\)ethz.ch](mailto:tobusch(at)ethz.ch)
http://www.sustec.ethz.ch/education/PhD_Academy

5-8 April 2011

Second Mediterranean Forest Week
 Avignon, France

EFI Mediterranean Regional Office – EFIMED

<http://www.efimed.efi.int/portal/1475>

13-14 April 2011

Trees, People and the Built Environment
 Birmingham, UK

Hosted by the Institute of Chartered Foresters

Contact: Mark Johnston, Myerscough College, mjohnston@myerscough.ac.uk

<http://www.charteredforesters.org/conference/>

25-29 April 2011

5^o Congreso Forestal de Cuba
 VI Simposio Internacional sobre Sistemas Agroforestales

V Encuentro de Jóvenes Investigadores

La Habana, Cuba

Contact: [congreso5\(at\)forestales.co.cu](mailto:congreso5(at)forestales.co.cu)

9-12 May 2011

2011 North American Forest Insect Work Conference

Portland, Oregon

<http://kelab.tamu.edu/nafiwc2011/>

23-27 July 2011

2011 International Society of Arboriculture (ISA) International Conference

Sydney, Australia

<http://www.isa-arbor.com/conference/default.aspx>

18-23 August 2011

8th IALE World Congress: Landscape Ecology for Sustainable Environment and Culture
 Beijing, China

Chinese Academy of Sciences (CAS), Intern'l Association for Landscape Ecology (IALE), *et al.*

Contact: Liding Chen, [iale2011\(at\)sina.com](mailto:iale2011(at)sina.com)
<http://www.iale2011.org/>

21-24 November 2011

BIOLIEF 2011 – 2nd World Conference on Biological Invasions and Ecosystem Functioning
 Mar del Plata, Argentina

Grupo de Investigación y Educación en Temás Ambientales (GRIETA) <http://www.grieta.org.ar/>

<http://www.grieta.org.ar/biolief/>