

**FORESTSAT SYMPOSIUM**  
**5<sup>TH</sup>-9<sup>TH</sup> AUGUST 2002**  
**Heriot Watt University, Edinburgh, Scotland**

**PROGRAMME**

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**Monday 5<sup>th</sup> August 2002**

- 0930-1600 hrs      **Workshop**  
Cedar Room
- 1830-2030          **Registration & Icebreaker** (*sponsored by ESRI/ERDAS*)  
James Watt Centre 1

**Tuesday 6<sup>th</sup> August 2002**

- 0830-0915 hrs      *Registration and coffee*
- 1<sup>st</sup> Plenary Session**  
Main Auditorium
- 0915-0920          **Welcome**  
Steve Smith, UK
- 0920-0945          **Formal Opening**  
David Bills, UK / Hakan Wirten, Sweden
- 0945-1000          **Keynote: The Use Of Remote Sensing For Operational Forestry:  
The Truth Is Out There**  
Juan Suarez, UK
- 1000-1030          **Keynote: EU LIFE-Environment and ForestSAFE: Demonstration of use  
of satellite images, estimations and www in forestry to protect nature  
and prevent environmental accidents**  
Erik Sandstrom / Lars Bjork, Sweden
- 1030-1100          **Keynote: Implementation of Remote Sensing for Natural Resource  
Applications in the Forest Service**  
Tom Bobbe, USA
- 1100-1130          *Coffee*
- 2<sup>nd</sup> Plenary Session**  
Main Auditorium
- 1130-1200          **Keynote: Earth Observation Trends & Opportunities**  
Ian Downey, UK
- 1200-1230          **Keynote: The Development of More Efficient Tools For The 21<sup>st</sup> Century  
Forest Inventory Using Satellite data**  
Erkki Tomppo, Finland

- 1230-1300      **Keynote: Roles For Aerial Photography in Woodland Research, Management and Planning**  
David Miller, UK
- 1300-1400      *Lunch*
- Exhibitors session**  
Main Auditorium
- 1400-1540      Each presentation lasts for 10 minutes - 10 exhibitors
- 1540-1600      *Coffee*
- 3 Parallel Sessions.
- 1600-1740 hrs      Each presentation lasts for 15 minutes with 5 minutes of question time.
- Forest Inventory 1: Estimating Timber Volume and Other Stand Parameters (1)**  
Main Auditorium
- FI1.1            **Data acquisition for forest planning using airborne scanning laser**  
Erik Naasset, Norway
- FI1.2            **A method for forest stem volume estimation**  
Laura Sirro, Finland
- FI1.3            **Polarmetric SAR interferometry in Glen Affric - Final Results**  
Iain H Woodhouse, UK
- FI1.4            **Above ground forest biomass estimation using fully polarimetric/interferometric radar data**  
T. Mette, Germany
- FI1.5            **Estimating timber volume using forest canopy density mapper**  
Kamaruzaman Jusoff, Malaysia
- New Technologies 1**  
Carnegie Room (B)
- NT1.1            **Mobile GIS support for remote sensing data interpretation**  
Karel Charvat, Czech Republic
- NT1.2            **Remote sensing techniques**  
Theresa Braniff, UK
- NT1.3            **Application of future TerraSAR data for improvement of forest resource assessments**  
Stefan Leyk, Switzerland
- NT1.4            **Combined estimation of forest parameters from high- and medium resolution satellite imagery and forest inventory data**  
Ole Hagner, Sweden

**Siberia Project**

Carnegie Room (A)

- SP1                    **Sensor systems and data products in SIBERIA-11 - a Multi-Sensor approach for full greenhouse gas accounting in Siberia**  
Soren Hese, Germany
- SP2                    **Fire scar detection using SPOT-VEGETATION data**  
France Gerard, UK
- SP3                    **From data to a biomass map - the Siberia processing chain**  
Shaun Quegan, UK
- SP4                    **Multi-seasonal study of the SIBERIA classification procedure**  
Andreas Wiesmann, Germany
- SP5                    **Forest mapping with multi-temporal SAR**  
U. Wegmüller, Switzerland
- 1740-1800            Free time
- 1800-1930 hrs        **Exhibitors Reception: Whisky Tasting**  
Coffee Area

**Wednesday 7<sup>th</sup> August**

**3<sup>rd</sup> Plenary Session**

Main Auditorium

- 0900-0930 hrs        **Keynote: Using remote sensing to quantify the role of forests in the carbon cycle**  
Shaun Quegan, UK
- 0930-1000            **Keynote: Satellite Remote Sensing for Forest Change Detection & Landscape Structure Analysis Over Large Areas**  
Steve Franklin, Canada
- 1000-1030            **Keynote: Predicting Forest Stand Structure and Terrain characteristics using small footprint LIDAR**  
Mike Renslow, USA
- 1030-1100            *Coffee*
- 3 Parallel Sessions
- 1100-1300 hrs        Each presentation lasts for 15 minutes with 5 minutes of question time.

**Forest Inventory 2: Monitoring Change in Forest Conditions**

Main Auditorium

- FI2.1                    **Techniques for forest/non-forest mapping using inventory data and satellite imagery**  
Ronald E McRoberts, USA

- FI2.2            **Forest inventory information for multi angle texture signatures of high resolution airborne stereo scanner data**  
Soren Hese, Germany
- FI2.3            **Large Area Forest Mapping Using Segmentation Based Imaged Classification**  
Barbara Koch, Germany
- FI2.4            **User-centred design for the FOREMMS forestry monitoring system.**  
Martin Maguire, UK
- FI2.5            **Spatial variability of leaf area index within a beech stand based on in situ measurements and remote sensing**  
Nathalie Breda, France
- FI2.6            **FOREMMS - a system prototype for large scale environmental forest monitoring**  
Anders Rognes, Norway
- Forest Inventory 3: Identifying Vegetation Types and Forest Structure**  
Carnegie Room (B)
- FI3.1            **Analysis of forests spatial structure using SAR and Ikonos data**  
Muljanto Nugroho, The Netherlands
- FI3.2            **Detection of clear cuttings with help of multi-temporal panchromatic high-altitude aerial photographs, image segmentation and unsupervised classification**  
Anssi Pekkarinen, Finland
- FI3.3            **Local radiometric calibration of digital aerial photographs for multi source forest inventory**  
Sakari Tuominen, Finland
- FI3.4            **Multi-purpose vegetation assessment, inventory and monitoring: the treescape system**  
Klaus R Halbritter, Germany
- FI3.5            **Habitat quality mapping using remote sensing and ecological niche factor analysis**  
Heiko Balzter, UK
- New Technologies 2**  
Wardlaw Room
- NT2.1           **Monitoring of forest ecosystems by using passive microwave remote sensing**  
E Santi, Italy
- NT2.2           **Airborne laserscanning**  
Stephen Stables / Steve Chafer, UK
- NT2.3           **Forestry applications of radar remote sensing with sensors In-situ**  
Henrique Lorenzo, Spain

- NT2.4            **The b correction: an empirical topographic normalization method for forest observed radiance**  
Vincini Massimo, Italy
- NT2.5            **Seeing the woods and the trees!**  
A. A. Wild, UK
- NT2.6            **Image WEB Server, N Efficient System For Working With Images Through The World Wide WEB: Tragsatec's on Line Image Catalogue Applications**  
Javier Fernandez Casals, Spain
- 1300-1400 hrs        *Lunch*
- 3 Parallel Sessions
- 1400-1540 hrs        Each presentation lasts for 15 minutes with 5 minutes of question time.
- Forest Inventory 4: Estimating Timber Volume and Other Stand Parameters (2)**  
Main Auditorium
- FI4.1            **An application of LIDAR in Forest Inventory**  
Robert C Parker, USA
- FI4.2            **Estimation of forest stand parameters from IKONOS panchromatic data**  
Yasumasa Hirata, Japan
- FI4.3            **An investigation of the potential of Landsat TM and Synthetic Aperture Radar (SAR) imagery for deriving timber volume in Britain's upland conifer plantations**  
D.N.M. Donoghue & P.J. Watts, UK
- FI4.4            **Accuracy issues in the assessment of deciduous woodland canopy height by airborne laser scanning**  
Ross Hill, UK
- FI4.5            **Application of digital photogrammetry for estimating timber volume in Eucalyptus globulus Labill stands in Galicia**  
David Miranda, Spain
- Forest Growth 1**  
Carnegie Room (B)
- FG1.1            **Estimation of 19 years of tree growth in a conifer plantation from satellite-borne radar. X3**  
Heiko Balzter, UK
- FG1.2            **Forest Carbon Accounting using Lidar and Modelling Based Approaches**  
Genevieve Patenaude, UK
- FG1.3            **Capability for biomass assessment and mapping of forest structure with radar remote sensing in boreal forests**  
Konstantin Olschofsky, Germany

- FG1.4            **Retrieval of forest biomass information from Sar data**  
Thuy Le Toan, France
- FG1.5            **Mapping of forest information using I-band polarimetric SAR**  
G Florsch, France

**Forest Health 1**

Wardlaw Room

- FH1.1            **Operational use of remote sensing data in mapping the forest burned areas in North-western Italy**  
Fabio Giannetti, Italy
- FH1.2            **Toward a meso-theory of wildfire modeling: A complex systems approach using artificial neural networks**  
Ronald J McCormick, USA
- FH1.3            **Generation of forest parameters for fire behaviour modelling using LIDAR**  
David Riaño, Spain
- FH1.4            **Methods for fast storm damage assessment by remote sensing - options with optical data – experiences from damage assessment of the storm Lothar in Germany**  
Gernot Ramminger / Matthias Dees, Germany

1540-1610 hrs

*Coffee*

3 Parallel Sessions

1610-1710 hrs

Each presentation lasts for 15 minutes with 5 minutes of question time.

**Forest Inventory 5: Monitoring Natural Regeneration and Forest Management, and Forest Mapping**

Main Auditorium

- FI5.1            **Monitoring natural regeneration using optical remote sensing techniques**  
Tim J Malthus, UK
- FI5.2            **Forest Management Using Remotely Sensed Data Acquired at Middle Infrared Wavelengths (3.0-5.0  $\mu$ m)**  
D.S. Boyd, UK
- FI5.3            **Ecological multi criteria evaluation as fuzzy prior probability supporting regional forest type mapping**  
La Mela Veca, Italy

**Forest Growth 2**

Carnegie Room (B)

- FG2.1            **Investigating forest physiology using airborne hyperspectral data**  
C. Nichol, UK

- FG2.2            **Retrieval of canopy structure and biochemistry from hyperspectral imagery: application of MIVIS and VIRS spectrometers to Mediterranean coniferous and broadleaf forests**  
S. Raddi, Italy
- FG2.3            **Estimating forest stand height using SAR Interferometry: A comparison of current spaceborne and airborne interferometric systems**  
Laine Skinner, UK
- Forest Health 2**  
Wardlaw Room
- FH2.1            **Monitoring vegetation stresses in Sicily using Landsat TM and Hydro-morphological dataset**  
Giuseppe Ciraolo, Italy
- FH2.2            **Remote sensing, digital terrain modelling and GIS as tools to determine the spreading borderline of airborne pollutants in the coniferous boreal forest on the Kola Peninsula**  
Bemd Cyffka, Germany
- FH2.3            **Fusion of active and passable optical remote sensing techniques for quantifying forest photosynthetic pigments**  
Alan Blackburn, UK
- Poster Session**  
Poster Hall
- 1710-1810        Poster authors have the opportunity to be at their posters for this period
- P1                **Environmental and ecological analyses using classified satellite imagery and forest inventory data**  
Ronald E McRoberts, USA
- P2                **Mobile forest management**  
Karel Charvat, Czech Republic
- P3                **Multi-level segmentation of remote sensing imagery for mapping and monitoring forest transitions**  
M.H. Obbink, The Netherlands
- P4                **A vegetation model to analyse the polarimetric signature of vegetation**  
Cyril Dahon, France
- P5                **Forest Structural Condition Assessment using High-Resolution Airborne Digital Camera Imagery**  
D. King, Canada
- P6                **Evaluation of Interferometric Radar Tree Mapping Parameters Using Tree Grouping Approach**  
M. Nugroho, The Netherlands
- P7                **Utilization of Satellite Technology to Enhance Forest Inventory Efficacy: An Operational Demonstration**  
P. Glass, UK

- P8                    **Forecasting the inter-annual trends in terrestrial vegetation dynamics using time series modelling techniques**  
Doreen Boyd, UK
- P9                    **Evaluation of Rectification Between Fieldwork Data and High Resolution Remote Sensing Data**  
B. Suryokusumo, The Netherlands
- P10                  **Extension of forest attributes over the land surface by the application of different classification algorithms to Landsat ETM+ imagery**  
La Mela Veca, Italy
- P11                  **National Inventory of Woodland and Trees: aspects of Britain's most recent national forest inventory**  
G. Bull, UK
- P12                  **SAR for forestry applications**  
Edward D. Wallington, UK
- 1810-                Free evening (some tickets for Edinburgh Tattoo available)

**Thursday 8<sup>th</sup> August 2002**

**4<sup>th</sup> Plenary Session**

Main Auditorium

- 0900-0930 hrs     **Keynote: A Prototype European Forest Information System: An Internet-based Product**  
Pam Kennedy, Italy
- 0930-1000         **Keynote: What Can Remote Sensing provide for Biodiversity Assessment**  
Barbara Koch, Germany
- 1000-1030         **Keynote: Remote sensing monitoring for tropical forest ecology and fire impact assessment**  
Dirk Hoekman, The Netherlands
- 1030-1100         *Coffee*
- 3 Parallel Sessions
- 1100-1300 hrs     Each session lasts for 15 minutes with 5 minutes of question time.

**Forest Inventory 6: Monitoring Forest Establishment and Development**

Main Auditorium

- FI6.1                **An evaluation of the use of satellite data for monitoring Picea sitchensis plantation forest establishment and growth**  
D.N.M. Donoghue & P.J. Watts, UK
- FI6.2                **Deriving nationwide estimates of forest variables for Sweden using Landsat ETM+ and field data**  
Mats Nilsson, Sweden

- FI6.3            **Detection of single tree in aerial images using template**  
Kenneth Olofsson, Sweden
- FI6.4            **Biomass estimation of Thetford forest from SAR data: potential and limitations**  
Clare Rowland, UK
- FI6.5            **Ikonos-2 imagery potential for forest stand mapping**  
Francois Kayitakire, Belgium
- FI6.6            **Forestry Applications of CARABAS**  
Gary Smith, Sweden
- Forest Ecology**  
Carnegie Room (B)
- FE1              **Improved methods of biodiversity assessment: comparison of spatial landscape metrics by pixel and image segment based approaches**  
Sandra Luque, Finland
- FE2              **Analysis of Spatial forest structure using spatial recession rule**  
Muljanto Nugroho, The Netherlands
- FE3              **Monitoring biodiversity indicators - the case of forest fragmentation in Europe**  
Pam Kennedy, Italy
- FE4              **Towards operational forestry tools for Kyoto Protocol reporting**  
Espen Volden, Italy
- FE5              **Earth Observation for Natura 2000+ EON2000+**  
Andrew Richman, UK
- FE6              **Scaling effects on predictive models of species richness**  
O. Viedma, Spain
- Developments in European Countries with Economies in Transition**  
Wardlaw Room
- EE1              **Methodologies to enhance and improve Biodiversity in the Czech Republic: Breeding and Improvement of Forest Tree Species**  
J Frydl, Czech Republic
- EE2              **Current status of forest databases from the point of view of GIS and Remote Sensing techniques implementation in Slovakia**  
Tomas Bucha, Slovakia
- EE3              **The Latvian State Forestry Research Institute: A review of the main research directions of forest taxation in the Republic of Latvia**  
Dagnis Dubrovskis, Latvia
- EE4              **ITC Tools for Post Windthrow Management in the Romanian Forests and Forest Information System for Europe**  
Gabriela C. Florescu, Romania

