

**Third Announcement**

# **Precision Forestry Symposium**

*Developments in Precision Forestry since 2006*

*Presented by*

**Department of Forest and Wood Science,  
Stellenbosch University, and the  
Chair for Forest Work Science and Applied Informatics,  
Technische Universität München**

**1 to 3 March 2010**

*Venue:*

**Wallenberg Research Centre  
Stellenbosch**

<http://www.sun.ac.za/forestry>



## **ABOUT THE PRECISION FORESTRY SIMPOSIUM:**

A series of three Precision Forestry (PF) Symposia have been presented in South Africa since 2003 under the auspices of the Department of Forest and Wood Science at Stellenbosch University, the Technische Universität München in Germany and the Precision Cooperative from Washington State University in the USA. In contrast to the first symposium presented in White River during 2003, which served the purpose of introducing the terms and practices of PF; the second symposium, held in Pietermaritzburg in 2004, presented the theme of preparing the South African Forestry Industry for PF.

The series of symposia culminated in the first South African International PF Symposium, hosted by Stellenbosch University and its partners, in cooperation with the International Union of Forest Research Organisations (IUFRO) during March 2006 ([www.sun.ac.za/forestry](http://www.sun.ac.za/forestry)). The following themes were included: remote sensing of forest land and vegetation, sensing, measuring and tagging of trees, equipment monitoring and management through GPS/GIS, real-time tracking of logs through the supply chain by means of RFID and similar technologies, decision support systems, data and information requirement and needs, road location, design, construction, and the utilisation precision technologies. This meeting attracted 110 delegates from some 16 countries.

In order to maintain the impetus of work done in the past Stellenbosch University and its partners are proud to announce the presentation of a scientific meeting dealing with PF in March 2010. The theme of this meeting will be "Developments in Precision Forestry since 2006" and it will be presented in Stellenbosch. The meeting will largely be addressed by invited speakers.

## **What is Precision Forestry?**

Precision Forestry uses *high technology sensing and analytical tools* to support site-specific, economic, environmental, and sustainable decision-making for the forestry sector supporting the forestry value chain from bare land to the customer buying a sheet of paper or board." PF thus provides for additional, adequate quality information about forests and the manufacturing of forest products to help maximize economic return within accepted, current constraints. It provides the tools to make good decisions, to obtain highly repeatable measurements, to take accurate actions, and provides for processes to initiate, cultivate and harvest trees, as well as enhance bio-diversity and other environmental resources. It includes planning and conducting site-specific forest management activities and operations to improve wood product quality and utilisation, reduce waste, increase profits, and maintain the quality of the environment.

## **Types of tools applied in Precision Forestry**

Measurement and Monitoring Tools:

- LIDAR (*Light Detection And Ranging*), RS (*remote sensing*) and IFSAR (*Interferometric Synthetic Aperture Radar*) can be used to study forest canopy characteristics, and to develop highly accurate digital elevation models, which are useful in determining stream channel initiation points, topography under forest canopy, etc.
- GPS (*Global Positioning System*) and INS (*Inertial Navigation Systems*) can be used for navigation under forest canopies for purposes such as electronically mapping.
- CT scanning (*computer tomography*).

Data management:

- GIS (*Geographic Information Systems*).
- RFID (*Radio Frequency Identification*).
- Web-based data management (*Harvesting systems benchmarking*).
- *Integrated Equipment Management Systems*.

Decision support:

- Spatial Optimization and scenario simulations.
- Decision support systems.
- ICT based Operations Research (OR) techniques (*simulations, network analysis*) and www applications in order to support DSS systems.
- Multi-Criteria Decision Analysis.
- Evaluation of wood quality – *wood properties*.

## THE SYMPOSIUM:

The symposium is planned over three days. This will include two days of presentations with a third day field trip. The programme will consist of keynote addresses and a number of invited speakers who will address new technologies and scientific developments. There is however adequate provision for voluntary contributions by other researchers, academics and practitioners from both South Africa and abroad.

### Objectives:

To bring decision-makers, forest scientists, forest practitioners, academics, forest managers and researchers, who are interested in PF together in one forum to share information, concepts and ideas within the broad listed topics. This interaction will facilitate networking to development joint projects and activities that will address priority issues.

### Invitation for papers for voluntary oral presentation and posters:

We hereby invite persons interested in Precision Forestry for oral presentation or posters according to the following themes.

- Landscape assessment and planning.
- Remote sensing and mensuration.
- Growth Simulation at single tree and stand level.
- Non-destructive wood quality assessment and wood quality modelling.
- Equipment monitoring and manangement.
- Forest operations simulations.
- Supply chain optimisation.

Please submit your abstract/s to Hannel Ham (hannelham@mweb.co.za) **before 15 December 2009** and indicate if it is for a presentation or poster. Abstracts should not exceed 250 words. Be sure to include your e-mail address so that we may send you a notice of receipt. A review panel will evaluate your abstracts and notify you of acceptance/rejection of your proposed oral presentation or poster no later than **10 January 2010**. Proceedings that contain extended abstracts (no more than 800 words) of papers and posters presented at the symposium will be distributed during the symposium. Extended abstracts need to be submitted by **31 January 2010**.

### Scientific review committee:

Pierre Ackerman	University of Stellenbosch
Walter Warkotsch	Technische Universität München
Martin Ziesak	Technische Universität München
Thomas Seifert	University of Stellenbosch
Anton Kunneke	University of Stellenbosch
Reino Pulkki	Lakehead University, Canada
Bo Dahlin	University of Helsinki
Bruce Talbot	Norwegian Forest and Landscape Institute

## REGISTRATION:

30 November 2009    Deadline for submission of poster/paper abstracts  
31 January 2010    Last date for registration

The registration fee will be ZAR 2 750.00/person (excluding VAT) and includes lunches, teas and a field excursion. Please complete the registration form and e-mail or fax it to Hannel Ham at [hannelham@mweb.co.za](mailto:hannelham@mweb.co.za) or +27 21 808 3603. Attendance to the symposium will only be confirmed once full payment has been received.

### Cancellation of registration:

No refund of registration fees will be considered after 31 January 2010.

### Contact and communication:

For further information please refer to the symposium website at [www.sun.ac.za/forestry](http://www.sun.ac.za/forestry), or contact Pierre Ackerman at +27 (21) 808 3323 or +27 (83) 292 2146 or [hannelham@mweb.co.za](mailto:hannelham@mweb.co.za)

## PRELIMINARY PROGRAMME:

### MONDAY: 1 March 2010

7:30 – 8:55            Registration and Opening  
9:00 – 10:30          SESSION 1:  
                         Landscape assessment and planning  
10:30 – 11:00        Tea and Poster session  
11:00 – 12:30        SESSION 2:  
                         Remote sensing and mensuration  
12:30 – 14:00        Lunch and Poster session  
14:00 – 15:30        SESSION 3:  
                         Growth simulation at single tree and stand level  
15:30 – 16:00        Tea and Poster session  
16:00 – 17:30        SESSION 4:  
                         Non-destructive wood quality assessment and wood quality modelling

### TUESDAY: 2 March 2010

                         FIELD DAY:  
08:30 – 16:00        Visit MTO Forest plantations in Boland, Western Cape, to view current Precision Forestry initiatives

### WEDNESDAY: 3 March 2010

9:00 – 10:30          SESSION 5:  
                         Equipment monitoring and management  
10:30 – 11:00        Tea and Poster session  
11:00 – 12:30        SESSION 6:  
                         Forest operations simulations  
12:30 – 14:00        Lunch and Poster session  
14:00 – 15:30        SESSION 7:  
                         Supply chain optimization  
15:30 – 16:00        Tea and Poster session  
16:00 – 17:30        Summary and Closure



**Registration Form**  
**Precision Forestry Symposium**  
**1 to 3 March 2010**  
**Stellenbosch – South Africa**  
**<http://www.sun.ac.za/forestry>**



The venue is Stellenbosch University, Stellenbosch, South Africa. Please visit the  
symposium website for additional information.

Please complete and return this form along with payment to the Symposium manager, Mrs Hannel Ham at either:  
Department of Forest and wood Science, Private Bag X1, Matieland. 7602. Or Fax: +27 21-808 3603 or E-mail:  
[hannelham@mweb.co.za](mailto:hannelham@mweb.co.za)

**REGISTRATION FORM**

No cancellations, refunds or late registrations will be accommodated after 30 Jan. 2010  
(see website for relevant deadlines)

1. DELEGATE CONTACT DETAILS			
Last Name:		Title (e.g. Mr/Mrs/Ms/Dr/Prof):	
First Name:			
Name on Badge:			
Organisation			
Position			
Mailing address:			
Suburb/Town			
Country/State			
Telephone (business):		Facsimile:	
Telephone(mobile/cell)		Email:	

<b>2. SPECIAL REQUIREMENTS:</b> Please note any specific dietary or other requirements (e.g. vegetarian meals or wheelchair access)
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<b>3. SYMPOSIUM REGISTRATION COST</b>
Cost per delegate ZAR 2 750.00 (excluding VAT)

### **PAYMENT DETAILS**

Please deposit amount payable into the following account and fax remittance to Mrs Hannel Ham (+27 21 808 3603) or e-mail (hannelham@mweb.co.za)

<b>Account name:</b>	University of Stellenbosch	
<b>Bank:</b>	Standard Bank, Stellenbosch Branch	
<b>Branch code:</b>	050610 (Overseas cheques - Swift Code: SBZAZAJJ)	
<b>Account number:</b>	073006955	
<b>Amount Paid:</b>		<b>Date Paid:</b>
<b>Method of Payment:</b>		
<input type="checkbox"/> Cheque payment	<input type="checkbox"/> Money order or bank draft	<input type="checkbox"/> Credit Card

<b>Credit Card Payment</b>	
<b>Date (DDMMJJ):</b>	
<b>Initials and Surname:</b>	
<b>Identity Number / Passport Number:</b>	
<b>Type of Card (e.g. Diners, VISA):</b>	
<b>Credit Card Number:</b>	
<b>CVC (Additional 3 digits at the back of the card):</b>	
<b>Expiry Date (MMJJ)</b>	
<b>Date:</b> _____	<b>Signature:</b> _____

I \_\_\_\_\_, the undersigned wish to register for the Precision Forestry Symposium, 2010 in Stellenbosch, and understand the registration terms and conditions as outlined on the Symposium's webpage <http://www.sun.ac.za/forestry/pf2010>.

Date: \_\_\_\_\_ Signature: \_\_\_\_\_

Invoice Issued	Confirmed Receipt of Payment	Confirmed Registration