

Australian
Programme
and
Registration

Forest Data Collection - Remote Sensing - Inventory Management

forest tech2019

13 - 14 November 2019, Melbourne, Australia

Event Sponsors:



Supporting FIEA Partners:



www.foresttech.events

Tuesday 12 November 2019

Pre-Conference Half-Day Workshop

1.00pm - 4.30pm, Bayview Eden Melbourne

Hyperspectral & Thermal Imagery for Forestry Operations

DAY ONE: Wednesday 13 November 2019

9.00am Welcome & Introduction - FIEA

SESSION 1: DISRUPTIVE TECHNOLOGIES - WHAT, WHY AND HOW?

9.10am Digital Transformation of the Forest Industry Opportunities and challenges
Lee Hickin, National Technology Officer, Microsoft Australia

SESSION 2: TAKING DISRUPTIVE TECHNOLOGIES OUT OF THE LAB AND INTO THE FOREST

9.45am **The IoT - Bringing Scalable Satellite Connectivity to Forestry Operations**
Max Girault, Global Sales & Business Development Manager, Fleet Space Technologies

10.15am Morning Tea & Networking

10.45am **UAV Swarm Systems for Herbicide Application and Seed Deployment**
Matthew Aghai, Director of Research & Development, DroneSeed, USA

11.15am **Changing Forest Inventory as we know it.** Full forest inventory tree assessments using VR
David Herries, GM, Interpine, New Zealand

11.45am **Tech TALKS:** Short presentations on new product innovations

12.15pm Lunch & Networking

SESSION 3: ADVANCEMENTS IN REMOTE SENSING & FIELD DATA CAPTURE TECHNOLOGIES. APPLICATION IN THE FOREST

1.30pm **An ALS Single-tree Inventory in North America for Growth Modelling and Tree Merchandising**
Dan Kluskiewicz, Lead Geospatial Programmer, Northwest Management, USA

2.00pm **Hyperspectral & Thermal imagery** (acquired by manned and unmanned aircraft systems) **for forestry operations.** An international update on current technologies and future applications
Professor Pablo J. Zarco-Tejada, Team Leader HyperSens Lab., University of Melbourne

2.30pm **Extracting Individual Tree Metrics through Advanced Terrestrial LiDAR Scanning**
Wing Zhong, Solutions Engineer, GreenValley International, USA

3.00pm Afternoon Tea & Networking

SESSION 4: Applied Research Results Showing Promise. Opportunities for forest and resource managers

3.30pm **Deep Learning and Opportunities in Forestry Remote Sensing**
Grant Pearce, Geomatics Scientist, Scion, New Zealand

4.00pm **New Tools for Measuring Forest Health.** Detecting disease at a tree-by-tree level using drones, photogrammetry, computer vision and machine learning
Dr. Lloyd Windrim, Postdoctoral Research Fellow & Dr. Mitch Bryson, Academic Fellow in Aerial and Marine Robotics, Australian Centre for Field Robotics, University of Sydney

4.30pm **Below-canopy UAV Photogrammetry for Forest Inventory and Habitat Assessment Applications**
Sean Krisanski, PhD Student, ARC Centre for Forest Value, University of Tasmania

5.00pm Refreshments & Networking

DAY TWO: Thursday 14 November 2019

SESSION 5: TRANSFORMING GEOSPATIAL DATA INTO KNOWLEDGE. THE PRACTICAL APPLICATION AND OPERATIONAL USE OF REMOTE SENSING DATA

8.30am **How to make the Most of Your Aerial Imagery.** Applying advanced image analytics for better forest management decisions
Sven Huettermann, Geomatic Engineer, SKYLAB, Germany

9.00am **Strengthening of Near Real Time Satellite Monitoring through Partnerships**
James Saunders, Remote Sensing Specialist, Swift Geospatial, South Africa

9.30am **Use of LiDAR Data for Forest Inventory, Planning and Management**
Operational implementation of LiDAR technology by a global forest products company
Fernando Bustamante, Technical Manager, Forestal Arauco, Chile

10.00am Morning Tea & Networking

10.30am **Forest Inventories with LiDAR Technology.** Comparisons between area based and individual tree assessments from recent trials on *P. radiata* plantations in Chile
Dr. Guillermo Palacios, Founder & CEO/ Miguel Lara, R&D Coordinator, IDAF Forestry Consulting, Spain

SESSION 6: UAV'S - FROM RESEARCH AND TRIALS TO FOREST OPERATIONS. INNOVATIONS, USES AND PRACTICAL IMPLEMENTATION

11.00am **Beyond Visual Line of Sight for UAV's** - Unlocking the next frontier for forestry remote sensing
Robin Hartley, Manager UAV Operations and Geospatial Scientist, Scion, New Zealand

11.30pm **Hovermap - Enabling Autonomous Under-Canopy Drone Flight and Lidar Mapping**
Mark Hickey, GM Queensland/National Business Manager, C.R. Kennedy

12.00pm **Frontline Deployment of UAV's in Forestry and Fire-Fighting Operations**
Andrew Kemsley, Senior Planner, Hardwoods Division, Forestry Corporation NSW

12.30pm Lunch & Networking

1.30pm **Early Evaluation of Post Planting Seedling Survival with UAV's.** Results from recent FCNSW trials
Mike Sutton, Forest Information and Planning Manager, Forestry Corporation NSW

SESSION 7: PRACTICAL APPLICATION OF NEW MAPPING & MOBILE APPS IN THE FOREST

2.00pm **Young Innovators.** Young foresters discuss the role they play in using and encouraging tech adoption within the industry
Kelsey Johnson, ForestSmart-Compliance Management System, PF Olsen & tbc

2.30pm **Case Study: Innovating on a Grand Scale to Manage and Mitigate Bushfire Risk**
Mark Noonan, Senior Group Leader Spatial Management, NSW Department of Planning & Industry

3.00pm Conference Concludes



BACKGROUND:

ForestTECH is this region's premier forestry technology series. It's run for Australasia's forest resource managers, planners and inventory foresters by the Forest Industry Engineering Association (FIEA). Since 2007, it's the one event every year that continues to draw in foresters into one location in both countries

Who will be attending ForestTECH 2019?

- Forest resource managers
- GIS, mapping & remote sensing specialists
- Inventory foresters
- Forest managers
- Forest owners
- Forestry researchers
- Forestry consultants
- Technology & equipment suppliers

What happened last year?

Well over 250 delegates attended the ForestTECH series in November 2018. All of the major forestry companies in Australia and New Zealand were represented. With the technology series now well and truly making its mark on the forestry technology calendar, representatives from major Indonesian, Malaysian, South African and South American forestry companies also attended ForestTECH 2018.

What's planned for 2019?

Key themes this year include;

- Storage, processing and management of "big data"
- The practical application of automation, robotics and sensors by forest managers
- Integrating virtual and augmented reality into forestry operations
- Results and lessons from reconciling remote sensing data into the field
- Satellite tools for mapping, planning and operations
- New innovations in mobile forest apps and collection tools
- Results from remote sensing research and in-forest trials
- Workflow solutions for data collected from airborne and UAV systems
- New mapping and GIS applications
- Changing skill sets required by today's forest resource managers

Venue: Bayview Eden Melbourne, 6 Queens Road, Melbourne, Australia

Accommodation: Special ForestTECH 2019 room rates from \$162 (incl GST) for a superior or twin room are available to delegates at the Bayview Eden Melbourne. Please state you are attending the ForestTECH 2019 conference when booking.

For room reservations phone 03 9250 2222 or E-mail: bayvieweden@bayviewhotels.com or book directly using the hotel's website, www.bayviewhotels.com/eden



ForestTECH 2019 Workshop:

To capitalise on those travelling into Melbourne, a half-day workshop has also been set up this year for ForestTECH 2019 conference delegates.

It's titled "Hyperspectral & Thermal Imagery (acquired by manned and unmanned aircraft and satellite systems) for Forestry Operations" and is being set up by Professor Pablo J. Zarco-Tejada, HyperSens Team Leader, University of Melbourne & Dr Christine Stone, Leader NSW DPI Forest Science. The workshop will provide an introduction and provide examples of how hyperspectral and thermal imagery can contribute to precision forestry.

Details for the workshop can be found on the event website. To attend the workshop delegates will need to have registered for the ForestTECH 2019 conference.

Please note that FIEA reserves the right to change the programme if needed without prior knowledge to event delegates.



Presented by: Forest Industry Engineering Association (FIEA), a division of Innovatek Ltd



4 Ways to Register

-  Website: www.foresttech.events
-  Tel: (+64) 7 921 1382
-  Fax: (+64) 7 921 1381
-  Post: FIEA, PO Box 1230, Rotorua 3040, New Zealand.

SPECIAL Early Bird Discount: Register BEFORE Friday 4 October 2019
Discounts are also available for multiple registrations and listed supporting industry association members.

Delegate Details:

Name: _____	Position: _____	Email: _____	Workshop <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
_____	_____	_____	
_____	_____	_____	
_____	_____	_____	

Company: _____

Postal Address: _____

Contact Person: _____

Tel: _____ Fax: _____

Programme Rates:	Rate/Delegate	# Attendees	Total
Conference Early Bird Rate <i>(applies before or on 4 October 2019)</i>	AU\$890		\$
Conference Standard Rate <i>(applies after 4 October 2019)</i>	AU\$990		\$
Conference Group Rate <i>(when booking 3 or more delegates - same workplace)</i>	AU\$795		\$
Supporting Association Discount Rate <i>(Participating Associations listed below)</i>	AU\$890		\$
FIEA Discounts			-\$
Workshop 1 <i>(Tue 12 Nov. Hyperspectral & Thermal Imagery)</i>	AU\$40		\$
SUB TOTAL			\$
+ GST (10%)			\$
GRAND TOTAL			\$

Registration Details:

- * NOTE: A credit card fee of 2.5% applies to all Credit Card transactions.
- All prices exclude GST (10%).
- Forest Industry Engineering Association (FIEA) member discounts of 10-25% apply on ALL listed Conference Rates. FIEA Membership Details and Benefits can be seen on www.fiea.org.nz. Membership status and discounts available can be checked by calling our FIEA offices.
- **Supporting Associations** include: Australian Forest Products Association, Victorian Association of Forest Industries.
- To be **eligible for the Early Bird Rate**, registrations and payment must be received **ON or BEFORE Friday 4 October 2019**. All 'Early Bird' discounts require payment at time of registration and before the cut-off date in order to receive any discount. Any discounts offered (including group discounts) require payment at the time of registration.
- Your conference registration payment covers the **morning and afternoon teas, lunches, refreshments, a conference handbook and access to presentations** (electronic download for those presentations where presenter approval has been given).

Cancellation policy: For cancellations **on or before Friday 4 October** a 10% administration fee applies. Cancellations received **after 4 October** are non-refundable but are transferrable. Please allow 30 days for refunds to be processed. If you wish to transfer your registration to another individual from within your company, please provide us with at least 24 hours advance notice.

Payment:

- Cheque payable to Forest Industry Engineering Association, or
- Direct credit our Westpac Australia Account: BSB 033115 Account # 137710, or
- Please debit my MasterCard / Visa (circle one)

Amount enclosed: \$ _____ Cardholder's signature: _____

Credit card number: _____ CSC Number: _____

Expiry date: _____ Cardholder's name: _____

