



Invitation: Forest & Photonics 2016

Venue: Sokos Hotel Break, Ylä-Kolintie 39, 83960 Koli, Finland.

The international workshop of Photonics and Bio economy.

For the future development in the forest and bio economy photonics is the key enabling technology for new solutions and opportunities. Forest & Photonics 2016 workshop gathers together the industry and researchers in the fields of photonics and bio economy to bring up challenges, solutions and opportunities in these areas. Program for the event follows four themed tracks: Forest Inventory, Supply Chain, Industry and Virtual Reality.

PROGRAM – Wednesday 26th

10:00 **Registration**

10:30 **Opening the Forest & Photonics 2016**

Keynote speech, *Photons to Forests to the Global Carbon Cycle*, Jack A. Kaye, National Aeronautics and Space Administration NASA

Forest Inventory

- *Multispectral satellite imagery and airborne laser scanning in assessing boreal and tropical timber volume and forest biomass and carbon*, Vesa Leppänen, Arbonaut Ltd
- *Multi-purpose forest inventory - LIDAR data for optimizing forest road maintenance*, Blanca Sanz, UEF
- *UAV based forest inventory utilizing multiangular and multispectral imagery*, Eugene Lopatin, Natural Resources Institute Finland
- *Function-oriented fuzzy microcontrollers in forest inventory*, Alexei E. Vassiliev and Tatiana Yu. Ivanova, Peter the Great St. Petersburg Polytechnic University

Supply Chain

- *Solutions, challenges and opportunities in forestry machinery automation*, Marko Paakkunainen, John Deere Forestry Ltd
- *Improved accuracy by automated calibration of harvester measuring unit*, Jukka Malinen, UEF
- *Strength grading of spruce logs should be done already by harvester*, Stora Enso Wood Products

15:00 **Break**

15.25 **Supply Chain continues**

- *Challenges for sensor technology in wood supply chain*, Tapio Räsänen, Metsäteho Ltd
- *Automated system to measure stilbene content of solid heartwood of Scots pine*, Susanna Pulkka, Natural Resources Institute Finland

Keynote speech, Digital Forestry, Harri Kopola, VTT - Technical Research Centre of Finland

17:00 **Evening program:** Spa, relaxed dinner, networking and Jazz-music

PROGRAM – Thursday 27th

09:30 **Industry**

- *How optics is used for measuring systems in lumber industry, special features and challenges*, Jyrki Huttunen, Oplatek Group Ltd
- *How photonics is used in wood industry*, Jyrki Pesonen, Raute Ltd Mecano
- *Optical measuring in paper machines, applications and future possibilities*, Markku Mäntylä, Valmet Automation
- *Volume and quality estimation of wood chips using photogrammetry and texture analysis*, Jukka Antikainen, Natural Resources Institute Finland
- Presentation by Stora Enso Plc Biomaterials

11:00 **Break**

12.30 **Virtual Reality**

- *HiVision story - how we used virtual reality goggles to boost safety and comfort of timber handling operations*, Rafal Sornek, HIAB
- *HUD for forest machine based on laser diode DLP engine*, Marina Letunovskaya, ITMO University, Saint-Petersburg
- *Forest harvester driver's skills: profiling and improvement*, Mikko Saarimaa, North Karelia college, Valtimo
- *Case study: From device sales to smart devices and value adding services*, Jani Akkila, Process Genius Ltd

13:50 **Break**

14.20 Summary and conclusion of the F&P 2016

Make your registration to the event on 15th October 2016 at the latest: <http://bit.ly/2cStwpT>
Participating to the Forest & Photonics workshop 2016 is free of charge but registration is mandatory.

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Forest & Photonics 2016 website: www.tiedepuisto.fi/fp2016 **Twitter:** @forestphotonics

WELCOME!

**Photonics 4
Forestry**

Koli, Finland | 26 - 27 October 2016

Forest&Photonics Workshop

- » Forest Inventory
- » Supply chain
- » Industry
- » Virtual Reality



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