International Union of Forest Research Organizations
Union Internationale des Instituts de Recherches Forestières | Unión Internacional de Organizaciones de Investigación Forestal | Internationaler Verband Forstlicher Forschungsanstalten

IUFRO SPOTLIGHT

IUFRO
Interconnecting Forests, Science and People
125th Anniversary Congress 2017

The 125th Anniversary Congress on 18-22 September 2017 in Freiburg, Germany, will offer a wide selection of scientific sessions highlighting innovative research and interdisciplinary research approaches of relevance to forests, and focus on the transfer of scientific knowledge on critical global forest-related challenges to national and international political agendas. In a series of "Congress Spotlight" articles individual sessions shall be showcased to give a foretaste of the richness and scope of research findings that will be presented at the Congress. Keep updated at: http://iufro2017.com/

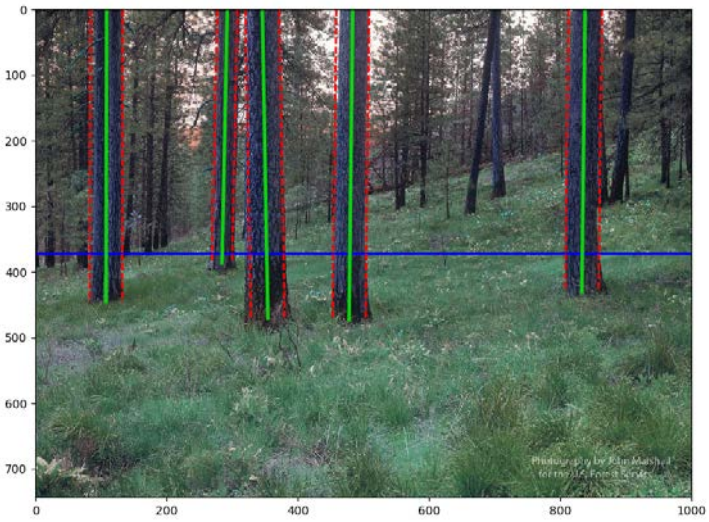
IUFRO 125th Anniversary Congress Spotlight / Theme 3 - #52 / August 2017

Building on tradition to plan for the future of forests

"We're trying to avoid throwing the baby out with the bathwater," said Dr. Jens Peter Skovsgaard of the Swedish University of Agricultural Sciences in Alnarp, Sweden.

He was speaking about forestry operations and research and how change can be evolutionary rather than revolutionary. Dr. Skovsgaard is coordinator of a session entitled: ***Forestry "Classic" for the Future***, at the IUFRO 125th Anniversary Congress in Freiburg, Germany in September.

"We want to re-examine the traditional role and practice of forestry from the perspectives of modern engineering technology and current environmental and social demands on forests and forest products," said Dr. Woodam Chung, Department of Forest Engineering, Management and Resources at Oregon State University, USA. Dr. Chung will moderate the "Classic" session at the IUFRO Congress.



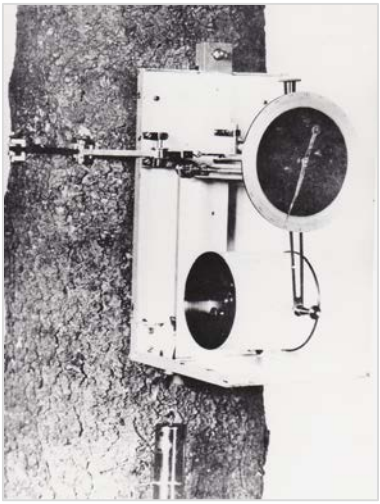
A 3D machine vision technology developed to detect and measure tree characteristics real-time during thinning operations. (Credit: Lucas Wells, Oregon State University)

To that end, the session will discuss contemporary and future-oriented research on the use of "classic" forest management practices aimed at developing new, modern aspects of traditional production forestry.

"We learn from past forest practices, but also plan for the future while focusing on the present," said Dr. Chung. "It is important to share and learn the state-of-the-art technologies in each discipline in forestry and apply them across all forestry activities – from silviculture and genetics to forest harvesting and products – to fully realize the benefits of new technologies."

In addition to focusing on tangible classic products such as wood, the session will also look at potentially new or future-oriented products – bioenergy and bio-based products such as biofuels, ethanol, bio-based adhesives, etc. – and products for human health promotion, food production and pharmaceutical drugs.

Both scientists believe classic practices must continue to change.



Increment "autograph" by J. Friedrich, Austria, 1905.

As an example of how a practice might change, Dr. Chung noted that potential soil and water damages from ground-based forest equipment are big environmental concerns. Currently, to address those concerns, riparian management areas are set aside and-or timber harvesting is restricted.

"However," he said, "recent development of sensors and remote sensing technologies allow soil property and conditions to be measured at a high spatial resolution and incorporated into skid trail network planning, allowing machine paths to be avoided or reduced in wet, unstable or erosion prone areas."

"Most operational forestry activities are carried out to provide economic revenue, but it is also a basic principle of sustainable forest management to safeguard the forest for future generations," said Dr. Skovsgaard. "For this reason, forestry often considers conversion or transformation or adaptation of past or current silvicultural practices towards something 'better', something we believe will be better tailored towards future demands, future climatic conditions, etc."

But, Dr. Skovsgaard said, new methods and technologies are generally being imported to forestry rather than developed directly for forestry. This means they often need to be adapted and "this process is often limited by the small scale– when compared to other industries or professions – of forestry, because it does not pay, or because we don't have enough volume to fully implement new methods."

"We should be researching and developing our own tools, our own solutions," he said. "Right now, in many cases forestry can't afford the cost of adaptation."

As an example, he noted that eye operations are being performed using laser technology. "If or when laser technology is modified so that we can use the technology to prune branches on future crop trees, it could greatly lower production costs. But at this time, it is prohibitively expensive to adapt laser technologies for this purpose," he said.

He suggested two possible solutions to this issue: if large forest companies took on the responsibility for developing new technologies and making them available to smaller forests owners at reasonable cost; and-or if small-scale innovation companies or inventors did the development, provided their idea or product could be viably commercialized.

But the main thing, Dr. Skovsgaard reiterated, is to get people thinking about how existing operational forest-related techniques, approaches and philosophies might be tweaked rather than jettisoned, to better serve future forest needs.

Dr. Chung added: "Unique and different forest practices were developed in different regions based on their traditions, culture and needs. Although we can learn tremendously from other regions, sharing knowledge and experience across the globe is somewhat limited. The role of IUFRO and this IUFRO Congress address that very challenge."

The September 18-22 Congress in Freiburg will celebrate IUFRO's 125th anniversary. Founded in 1892 in Eberswalde Germany, IUFRO has grown to unite more than 15,000 scientists (who cooperate in IUFRO on a voluntary basis) in almost 700 member organizations in more than 120 countries.

IUFRO promotes global cooperation in forest-related research and enhances the understanding of the ecological, economic and social aspects of forests and trees. It disseminates scientific knowledge to stakeholders and decision-makers and contributes to forest policy and on-the-ground forest management.

About 2000 scientists from 89 countries are expected to attend the Congress. The Forestry "Classic" session in Freiburg will be one of 172 scientific sessions that will cover a wide array of topics dealing with various aspects of forest research.

See you at the IUFRO 125th Anniversary Congress in Freiburg, Germany!
Look out for #IUFRO2017 on Twitter and @iufro2017 on Facebook!

The International Union of Forest Research Organizations (IUFRO) is the only worldwide organization devoted to forest research and related sciences. Its members are research institutions, universities, and individual scientists as well as decision-making authorities and other stakeholders with a focus on forests and trees. Visit: http://www.iufro.org/
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