

XXVI IUFRO World Congress, Stockholm, Sweden, 23-29 June 2024 Special Issue - Scientific Awards

The International Union of Forest Research Organizations (IUFRO) honors through a [variety of awards](#) those who advance science and promote international cooperation in all fields of research related to forestry. At each IUFRO World Congress, the following awards for scientific work are presented:

- **Scientific Achievement Award (SAA)**
- **Outstanding Doctoral Research Award (ODRA)**
- **IUFRO Student Award for Excellence in Forest Science (ISA)**
- **Best Poster Award (BPA)**
- **The IUFRO World Congress Host Scientific Award**

Winners of the SAA, ODRA, and ISA have already been selected and are presented in this special issue. The final selection of



shortlisted posters for BPA will happen during the Congress. Host Scientific Award winners will be presented separately.

SCIENTIFIC ACHIEVEMENT AWARD (SAA)

Award ceremonies on Monday, 24 and Tuesday, 25 June immediately after the Congress plenary sessions.

Awards are made for research results published in scientific journals, proceedings of scientific meetings or books, or appropriate patents or other relevant evidence that clearly demonstrates the importance of the scientific or technical achievement to the advancement of regional or world forestry or forest research.

Nominees must either belong to IUFRO Member Organizations or be Individual Members of IUFRO. [More!](#)

OUTSTANDING DOCTORAL RESEARCH AWARD (ODRA)

Award ceremony on Thursday 27 June immediately after the Congress plenary session.

At each World Congress, IUFRO recognizes outstanding individual scientific achievements of recent doctoral research. One award per IUFRO Division may be made subject to the availability of candidates of outstanding merit.

For the 2024 Congress, awards will be made for path-breaking doctoral dissertations completed in the period 2018-2023. Nominees must either belong to IUFRO Member Organizations or be Individual Members of IUFRO. [More!](#)

IUFRO STUDENT AWARD FOR EXCELLENCE IN FOREST SCIENCE (ISA)

Award ceremony on Friday 28 June immediately after the Congress plenary session.

This award aims at Master degree students (or equivalent) of forest-related sciences and recognizes outstanding individual scientific achievements made for degrees (or equivalent) completed in the period 2018-2023, to encourage further work within the fields of research covered by IUFRO. [More!](#)

BEST POSTER AWARD (BPA)

Special mention of award winners immediately after the Congress plenary session on Saturday, 29 June.

This award aims to encourage public dissemination of high-research and to recognize distinguished poster presentations during the IUFRO World Congress. [More!](#)

IUFRO WORLD CONGRESS HOST SCIENTIFIC AWARD

Award presentation on Monday, 24 June during the opening ceremony of the Congress.

In the course of preparing for a IUFRO World Congress, the Congress Organizing Committee (COC) is invited to recommend the recipient(s) of an award for pre-eminent forest scientists from the country/ies that host the Congress. [More!](#)

Scientific Achievement Award Winners 2024

Eckehard BROCKERHOFF

Dr. Brockerhoff, who obtained his PhD in Forest Entomology/Forest Ecology from the University of Toronto, Canada, is currently working at the Swiss Federal Institute for Forest, Snow and Landscape Research WSL.



He has had an impressive career of scientific discoveries, such as finding surprisingly high levels of biodiversity in planted forests, identification of forest insect invasion pathways, and advancing more efficient approaches to forest biosecurity. His work has substantially promoted both basic scientific knowledge on forest insects and applied work on managing biological invasions.

Dr. Brockerhoff's research on insects associated with wood packaging material has had important consequences for global biosecurity practices. His work on forest insect invasion pathways has played a key role in developing and justifying global biosecurity practices. This and a large body of his other studies have contributed to his reputation among his peers as one of the world's premier experts on forest biosecurity.

Throughout his career, Dr. Brockerhoff has exhibited outstanding scientific leadership, including his roles as leaders of research teams, both at the New Zealand Forest Research Institute Scion and the Swiss Federal Institute WSL. He also has devoted himself to several other leadership roles including editing scientific journals, organizing major conferences, and serving as an officer in scientific societies, most notably serving as IUFRO Division 7 coordinator for 10 years.

"It is a huge honour for me to receive a Scientific Achievement Award, and I am most grateful for this recognition. That this is an award from IUFRO makes it even more special. IUFRO has played a dominant role throughout my career, ever since I participated in my first Working Party Conference in 1996.

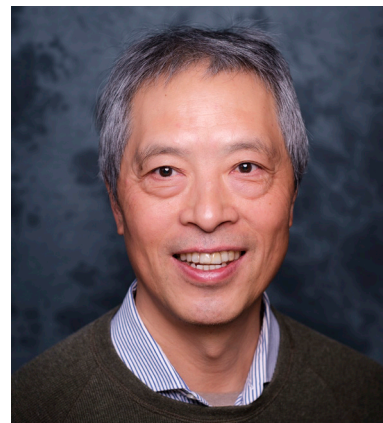
Over the years, IUFRO has provided the network that facilitated many important research collaborations with colleagues from all over the world.

My involvement in IUFRO would not have been possible without the support of my former and current employers, Scion and WSL, for which I would like to express my gratitude."

Eckehard Brockerhoff

Jiquan CHEN

Dr. Chen is a Professor of Geography, Environment, and Spatial Sciences from Michigan State University, U.S.A. He obtained his PhD in Ecosystem Analysis at the University of Washington, Seattle.



Dr. Chen is a highly distinguished scholar in the fields of landscape ecology and ecosystem science, with a focus on forested landscapes. He has made significant contributions to international scholarship through his groundbreaking research on edge effects in fragmented landscapes, biosphere-atmosphere exchanges in carbon and water in terrestrial ecosystems, and the dynamics of social-environmental systems (SES).

He is one of the few scholars who has attempted to quantitatively integrate SES functions at multiple spatial and temporal scales. His research on the interdependent dynamics of SES across Eurasian drylands has been particularly influential, as it has teased apart the influences of land use and policy shifts from a global climatic change perspective. This has made science more society-relevant and has opened up new avenues for research.

Dr. Chen's extensive research has also resulted in broad and lasting impacts on global collaborations, open access of data, and knowledge sharing. This has expanded the scale of his research and academic education and has resulted in regular workshops and joint publications through his ~15 years as (co-)chair of the Landscape Ecology Working Party of IUFRO (1994-2012).

Carol Jean Pierce COLFER

Dr. Colfer, who obtained her PhD in Cultural Anthropology from the University of Washington, U.S.A., retired 15 years ago, but her devotion to forests and people has no end in sight. She continues to focus on her pioneering work on incorporating the world of forest dwellers and local communities into professional forestry.



Her scholarship on gender and power as well as work with participatory and transdisciplinary approaches in forestry has contributed substantially to the work of gender and diversity at CGIAR and forestry organizations across the world today. Dr. Colfer has spent a lifetime working towards incorporating the knowledge, values and experience of forest dwellers and local communities into forestry research. Her careful attention to questions of power relations and work on gender and intersectionality has been an inspiration for scholars around the world.

Apart from her theoretical contributions, a great deal of her work has focused on using anthropological and transdisciplinary methods, thus providing tools and practical advice for those working with forestry. She has used transdisciplinary methods to communicate the knowledge and intelligence and potential of local people to forest professionals.

Dr. Colfer's determination for equity in forests led her to spearhead the Adaptive Collaborative Management (ACM) approach, meant to facilitate learning and collaboration between local communities and forest officials.

Shannon HAGERMAN

Dr. Hagerman is a professor at the Faculty of Forestry, University of British Columbia, Canada. She obtained her PhD on Human Dimensions of Natural Resources Conservation from the University of British Columbia, Faculty of Science.



Dr. Hagerman is an internationally recognized scholar in the interdisciplinary field of social-ecological systems. Her work addresses climate change and the role that forest interventions can play in adaptation and mitigation efforts. Her pioneering research on social aspects of emerging novel environmental interventions for forest management, including assisted migration of tree species, identified the interacting roles of values, trust, and the politics of knowledge, and blazed the trail for a new line of scholarly inquiry at the nexus of climate change and forests.

Through her innovative methodological approach, Dr. Hagerman's research demonstrates the complex ways that people make sense of novel environmental risks, and how over time, decision logics about intervening in nature are changing along with the environment itself. Her work provides crucial insights for policy makers who might otherwise misdiagnose forest controversies as stemming from a lack of public support for forest interventions when, in fact, concern from publics and communities often has more to do with who is making the decisions, who is benefitting, and the types of knowledge that are considered (or not).

Henrik HARTMANN

Dr. Hartmann is Head of the Institute for Forest Protection, Julius Kuehn-Institute, Federal Research Centre for Cultivated Plants, Germany, and professor for Forest Protection, Faculty of Forest Sciences and Forest Ecology, at the University of Göttingen, Germany. He obtained his PhD in Biology (Forest Ecology) from the Centre of Forest Research, Université du Québec à Montréal, Montréal, Québec, Canada.



Photo by J. Kaufmann/JKI

Dr. Hartmann began his career as a professional forester, but decided to go into research and graduate studies to better understand what he was observing. His research seeks to answer several related questions: What factors control how plants allocate the products of photosynthesis to the various demands from growth, respiration, storage or defense? How does this change when plants are stressed? How can these changes weaken trees to make them more vulnerable to declines in fitness leading to mortality?

With his group, he has made particularly innovative contributions to understand the role of storage reserves during stress and in tree mortality, and the priorities placed on allocation to storage and defense over growth during periods of carbon resource limitation.

He has successfully brought together a community of researchers to create the IUFRO Task Force on Tree Mortality and the International Tree Mortality Network Initiative.

"When I learned that I had been nominated and even selected for the IUFRO Award, I thought, 'Wow, what an achievement!' IUFRO is the largest forest research organization with a very long tradition. Being part of the prestigious crowd of awardees is a great honor.

When I left Germany in the 1990s to live in the Canadian wilderness, I would have never believed to become an IUFRO awardee sometime later working in the country where IUFRO was born in 1892. This award represents a summit in my career, and I will proudly continue my work in forest science."

Henrik Hartmann

Cindy PRESCOTT

Dr. Prescott is a professor at the Department of Forest and Conservation Sciences, University of British Columbia, Canada, and obtained her PhD in Terrestrial Ecology from the University of Calgary, Canada. She received the Canadian Forestry Scientific Achievement Award in 2005, holds an Honorary Doctorate from the University of Helsinki, and Honorary Professor status at Jiangxi Agricultural University.



Dr. Prescott is a world leader in decomposition, carbon sequestration, nutrient cycling, and nutrient availability in forest soils. Her research is both theoretically groundbreaking and has important practical implications. She has elevated the importance of sustainable carbon and nutrient management in forests and has recommended forestry practices based on her research findings. Her recent publications presenting the scientific basis for plant surplus carbon underlying many ecological phenomena are paradigm changing.

Her research has improved our scientific understanding of the interactions between trees and the belowground ecosystem, and the influences of forestry practices on soil organic matter and nutrient availability. It has also improved our ability to restore forests on poor or degraded soils.

Dr. Prescott also served the forest science community as an editor of two major journals: *Forest Ecology and Management* and *Canadian Journal of Forest Research* and was the first woman to hold these positions.

“As the principle international network of forest scientists, IUFRO plays a critical role in linking our research to the policies and practices governing the management of forested landscapes around the world.

To have my scientific efforts recognized by this organization means that my research is being put to work for the betterment of forests, globally. This is what forest scientists strive for throughout our careers, so it is gratifying to receive this award.”

Cindy Prescott

John SESSIONS

Dr. Sessions is University Distinguished Professor of Forestry at Oregon State University, U.S.A., from where he also obtained his PhD in Forest Management. He is one of the most distinguished and influential professors in the field of forest engineering.



Throughout his career spanning over four decades, Dr. Sessions has made incredible contributions to academia, industry, government, and international organizations, and has inspired numerous students and professionals. His research has been dedicated to developing innovative solutions for managing forests and their resources, covering a wide range of topics including forest economics, logging mechanics, forest biomass supply chain, and heuristic optimization algorithms for complex forest planning problems.

With over 400 publications, Dr. Sessions is one of the most accomplished researchers in forest engineering, and his groundbreaking work has had a profound impact on the direction of forest engineering research, education, and practices worldwide.

In addition to his research and teaching activities, Dr. Sessions is a sought-after speaker at conferences and workshops worldwide and has served as a consultant to government agencies, industry groups, and international organizations across all continents. He has chaired IUFRO Unit 3.06.00 ‘Forest operations in difficult terrain’ and played a crucial role in establishing international partnerships and collaborations in the field of forest engineering.

“I am delighted and honored to be recognized by IUFRO for the Scientific Achievement Award. Thirty-eight years ago, I began my association with IUFRO in Division 3 as Chair of the Mountain Logging Working Party. I have been privileged to have collaborated with many IUFRO scientists over the last 50 years, including many of my former students.

Of the awards I have received, I consider the Scientific Achievement Award to be the highest recognition of the contributions in which I have had the opportunity to participate. I look forward to continuing to contribute to our profession.”

John Sessions

Ge SUN

Dr. Sun is a research hydrologist and project leader at the U.S. Forest Service Southern Research Station and obtained his PhD from the University of Florida, U.S.A. He is a world-renowned forest hydrologist who has made outstanding contributions to our fundamental knowledge about the relationship between forests and water.



Dr. Sun's most notable contributions to forest science include effects of management on evapotranspiration and water yield and quantifying forests' contribution to drinking water supply. By scaling up empirical station-based studies, Dr. Sun led the development of various simulation models including the ecosystem service assessment tool, Water Supply Stress Index (WaSSI), that has been widely used for evaluating effects of land use and climate change on national water supply and carbon sequestration.

Dr. Sun has served as Coordinator of IUFRO Working Party 8.01.07 'Hydrologic processes and watershed management' for several years and he also is an active member of the IUFRO Forest and Water Task Force. He co-initiated the IUFRO International Conference on Forest and Water in a Changing Environment, a prime forum for forest hydrologists.

Dr. Sun is a founding member of the US-China Carbon Consortium that promotes international research on carbon and water fluxes to address global climate change, and he also served as an agency science expert for USAID missions in Africa and Asia.

"I am thrilled to receive the SAA from IUFRO – this is an enormous honor for me. I am grateful to IUFRO and the award committee that values the work on forests and water. This award is not just for me - I acknowledge many of my colleagues at the US Forest Service and collaborators and friends around the world, and I also thank my family members for supporting my career without reservations."

Ge Sun

"I would like to express my gratitude to colleagues and peers who nominated and selected me for this award. It's a recognition of my former and current lab members and collaborators. I feel fortunate to be part of a growing community to push the frontiers of tree genomics and biotechnology research. This award is a motivation for me to continue research and mentoring the next generation of scientists in this journey."

CJ Tsai

Chung-Jui (CJ) TSAI

Dr. Tsai, Warnell School of Forestry and Natural Resource, Department of Genetics, and Department of Plant Biology, University of Georgia, U.S.A, is a W.N. "Hank" Haynes Professor and Georgia Research Alliance Eminent Scholar. She obtained her PhD in Forest Science from the School of Forestry and Wood Products, Michigan Technological University.



Dr. Tsai's research team pioneered the application of CRISPR genome editing to trees, creating mutant poplars with 100% biallelic editing efficiencies. The bioinformatic pipelines and databases that she developed to facilitate variant-free guide RNA design are applicable to a wide range of animal and plant species with heterozygous genomes. Her work also demonstrated the long-term (>4 years) stability and specificity of CRISPR-mediated edits in vegetatively propagated trees. Work in Dr. Tsai's lab has also resulted in the development of several programs and algorithms to address genomics data analysis challenges, and she has significantly contributed to the understanding of the molecular genetics aspects of xylogenesis that have traditionally been under-studied. Furthermore, Dr. Tsai has contributed to the understanding of salicinoids as major defense metabolites of leaves and shoots of *Populus* and *Salix* (family Salicaceae).

Dr. Tsai has established herself as a prominent scholar whose work answers fundamental questions concerning wood formation and defense in trees. Her achievements are indeed significant and are integral to our understanding of tree biology thereby advancing forest research.

Brenda WINGFIELD

Dr. Wingfield is professor at the Department Biochemistry, Genetics and Microbiology, University of Pretoria, South Africa. She obtained her PhD in Microbiology from the University of Stellenbosch.



Dr. Wingfield is a world-leading scientist who has published over 450 manuscripts in the discipline of forest health, specifically around speciation and evolution of fungi. Her research has been foundational in understanding the population diver-

sity of pathogens that globally cause disease in commercial plantations or natural forests. It has contributed to developing new methods and approaches to manage or control numerous diseases and provided robust scientific data to aid efforts to reduce or prevent spread of unwanted pathogens internationally.

Dr. Wingfield has thus played a pivotal role in driving applied biotechnology in the forestry industry. Her pioneering work in the use of molecular techniques for the diagnosis of plant diseases has enabled earlier and more accurate detection of pathogens, thereby facilitating the implementation of more effective control measures.

In addition to her research, she has mentored over 100 students and collaborated with researchers across the world. Whilst Dr. Wingfield has not held formal roles within IUFRO

she is a regular participant at IUFRO congresses and conferences where she leads or actively participates in group discussions and initiatives looking at global ways to address forest health issues.

"I am incredibly grateful and honored to have received the Scientific Achievement Award. Receiving this award will undoubtedly have a positive impact on my research programme. It reinforces the value of my research and opens doors for collaboration in the field."

"This recognition serves as a motivation to continue pushing the boundaries of scientific inquiry and making meaningful contributions to fungal genomics."

Brenda Wingfield

Outstanding Doctoral Research Award Winners 2024

Juliette ARCHAMBEAU

Dr. Archambeau is a post-doctoral researcher at the UK Centre for Ecology & Hydrology, Edinburgh, United Kingdom. She obtained her PhD in Sciences from Bordeaux University, France.



She conducted her doctoral research from September 2018 to January 2022 at UMR BIOGECO, INRAE, France, on the understanding of the origin and predicting adaptive genetic variation at large scale in the genomic era: a case study in maritime pine.

In a context of climate change and great uncertainty about the future of forests, the doctoral research conducted is relevant to forecast the adaptive responses of natural forests in the face of increasing climatic pressure. Apart from the novel insights on adaptive processes in natural populations of forest trees, it also provides a way for operative forest management to increase forest resilience and maintenance of valuable ecosystem services.

Finally, the PhD research identified some main climatic drivers of past adaptation in a main forest tree species, maritime pine, which is also useful to understand how natural populations and plantations of the species will perform under future climates.

"I am deeply honoured to be awarded the Outstanding Doctoral Research Award from IUFRO. During my PhD, I used maritime pine (Pinus pinaster Ait.) as model species to understand how forest tree populations adapt to changing environments; a thorny but major question in the context of climate change."

"I am extremely grateful to IUFRO for considering my doctoral work to be of interest to forest research and for giving me the opportunity to take part in the IUFRO World Congress in Stockholm. As I wish to continue working in forest research, this conference offers me a chance to present my work and meet other scientists and stakeholders of the forestry sector."

Juliette Archambeau

Sandrine BRÈTEAU-AMORES

Dr. Brèteau-Amores is a researcher at APESA and an associate researcher at INRAE (BETA and ETTIS), France. She obtained her PhD in Economics from the University of Lorraine after conducting her doctoral research at the Bureau of Theoretical and Applied Economics (BETA) at INRAE Grand-Est, France, from October 2017-November 2020.



Her thesis aims at (i) testing and comparing different management-based adaptation options for drought reduction in forests in order to avoid projected risk of dieback, from a private forest owner's perspective (financial balance), while considering the impact of these strategic decisions on carbon storage (carbon balance); and (ii) proposing a new (risk sharing) adaptation option in the form of an index-based insurance contract against drought-induced risk of dieback.

The thesis explores a wide range of adaptation strategies: incremental, transitional and transformational management-based adaptation as well as a market-based adaptation. It constitutes the first attempt at studying a combination of management-based adaptation strategies that were built with forest experts. A new model of forest insurance (index insurance) was proposed for a new type of risk, severe drought.

"I would like to express my gratitude to IUFRO for honouring me with this prestigious award, drawing attention to a compelling and complex subject that, unfortunately, is becoming of growing importance: the adaptation of forests to extreme natural risks, particularly drought.

This recognition goes beyond the acknowledgement of my doctoral work. It recognizes the unwavering support I received throughout my research journey and underscores the necessity to bridge environmental and social sciences, while promoting collaboration between academic research and practical fieldwork. I trust that this award will encourage ongoing support for research in this domain along with a deep appreciation for hybrid profiles like mine."

Sandrine Brêteau-Amores

Tuo HE

Dr. He is Associate Professor at the Chinese Research Institute of Wood Industry, Chinese Academy of Forestry. Aiming at breaking the barrier of conventional wood anatomy methods on species-level identification, the nominee conducted his doctoral research both at the Chinese Academy of Forestry from September 2016 to October 2017, and the USDA Forest Products Laboratory from October 2017 to October 2018.



Dr. He's doctoral research focused on wood species identification using state-of-art computer vision in combination with deep learning models. The traditional field screening of wood species relies on wood anatomists with hand lenses and is a

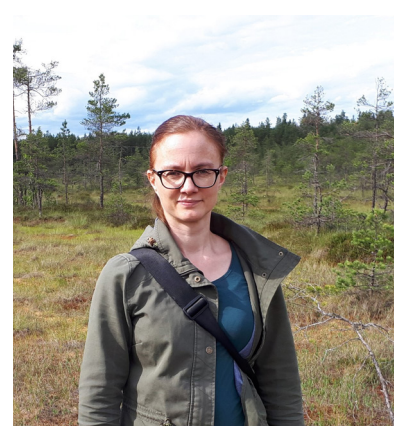
time-consuming method that generally only identifies specimens to the genus level. Dr. He developed a portable device to capture images from wood specimens and build the image data set for CITES-listed tree species and their look-alikes.

With Dr. He's AI-based wood identification system called iWood customs enforcement capabilities have been significantly enhanced. This system has become a strong support for CITES implementation and combatting illegal logging and associated trade.

Dr. He was elected as Deputy Coordinator of IUFRO 5.16.01 'Wood collections and databases', and Secretary-General of the National Innovation Alliance of Wood Collections of China. He works with other scientists to build a national and international platform for sharing wood collections and related scientific data to promote forensic wood identification techniques.

Maija Kaarina LAMPELA

Dr. Lampela is a senior scientist at the Geological Survey of Finland. She obtained her PhD from the Faculty of Agriculture and Forestry, University of Helsinki. Her dissertation in the field of Forest Ecology and Management focused on "Ecological prerequisites for successful reforestation of degraded tropical peatlands".



Peatlands are important ecosystems for biodiversity and carbon storage. Tropical peat swamp forest (TPSF) is a major peat-forming ecosystem in Southeast Asia. However, vast scale land conversions have resulted in forest degradation and environmental damage, creating an urgent need for conservation and restoration efforts. Dr. Lampela's dissertation focused on the soil properties, ground surface microtopography, and vegetation patterns of natural TPSFs, and the reforestation of degraded tropical peatlands.

Her dissertation research yielded novel data on the tree species ecology of the tropical peat swamp forest ecosystem, providing the most detailed information to date on floristic composition at a microscale and in relation to peat physical and chemical characteristics. This knowledge was applied to an investigation of potential species for restoration activities.

"I am very honored and pleased to be chosen as a receiver of this award. I take this as a recognition for the whole tropical peatland restoration research, since this work couldn't have been completed without the long-lasting collaboration and support from the local communities and colleagues both from Southeast Asia and Europe."

Maija Kaarina Lampela

Pipiet LARASATIE

Dr. Larasatie is an Assistant Professor of Forest Products Marketing at University of Arkansas at Monticello (UAM), U.S.A. She did her PhD with the title “Women in Forest Sector Leadership: A Multi-country Study” at Oregon State University, U.S.A., from 2016 to 2021. The study investigates women’s perspectives on gender dynamics and their leadership experience in the forest sector.



The gender inequality phenomenon has affected the leadership environment in the forest sector. Although there are efforts to increase gender equality in the forest sector, the industry is still associated with a blue-collar masculinity and macho-masculinity workplace culture. Gender-based leadership research has historically associated management and leadership with agentic qualities such as assertiveness and competitiveness that are perceived as masculine stereotypes, leading to a “think manager-think male” paradigm.

Dr. Larasatie’s dissertation is, therefore, a path-breaking, innovative research of a comprehensive intersectionality between gender and leadership study in a men-dominated forest sector. In the forest sector industry, she finds that although there are positive changes toward more gender diverse and inclusive workplaces, the movement is slow.

“Receiving this award validates my encouragement to continue my work in diversifying the workforce and creating inclusive workplaces in the forest sector.”

I look forward to collaborating with IUFRO researchers to advance forest related science and practices. I also hope that my research will inspire more young women to pursue leadership roles in the forest sector and contribute to its sustainable development.”

Pipiet Larasatie

#IUFRO2024: The World of Forest Science Gathers in Stockholm, Sweden, on 23-29 June 2024!

- Meet renowned scientists and top leaders from all over the world!
- Co-create and discuss solutions for a sustainable future!
- Focus on next generations and green employment!

<https://iufro2024.com/>

Elena MARRA

Dr. Marra is a technologist at the Institute of Research on Terrestrial Ecosystems, Italian National Research Council (IRET-CNR), Italy. She obtained her PhD in “Sustainable Management of Agricultural, Forest and Food Resources” from the University of Florence, Italy. The title of the thesis is “Investigating the impact of ground-based logging systems on soil characteristics by applying emerging methods”.



Wheel ruts have traditionally been measured manually, which is a method trustworthy on each collected transect but time consuming and not efficient for dispersed forest logging sites. Thus, only a relatively small number of transects can be sampled, making the task better suited for the application of modern geospatial technologies. However, there is a recognizable gap in the literature when it comes to comparing new and traditional methods of assessing the impacts of forestry-machine trafficking on soil.

Dr. Marra’s PhD work has been innovative because it developed and applied modern technologies such as portable laser scanners compared with close-range photogrammetry, remote measuring using structure from motion (SfM) and images acquired by drones.

Adrián PASCUAL

Dr. Pascual is an Assistant Research Professor at the Department of Geographical Sciences, University of Maryland, U.S.A. He carried out his doctoral research from June 2014 to October 2018 at the University of Eastern Finland focusing on the integration of ALS-based forest inventory into forest planning when the aim is to create dynamic treatment units (DTUs).



This is the first study that integrates forest inventory supported by lidar data to management planning methods based on spatial optimizations to create management units. The dynamic treatment units (DTUs) approach leads to the abandonment of the traditional concept in which management units, also referred to as stands or compartments, are regar-

ded as fixed units that do not evolve in space and time. The recognition of stand boundaries as permanent units is a constraint that ignores the effect of stand dynamics or harvesting prescriptions on growing stock attributes. The implementation of DTU-based planning systems in the Mediterranean area is a great opportunity to extend the usability of ALS data toward planning applications.

“Receiving the Odra is definitely stamina to my efforts to apply decision-making models for conservation science and operations, and on fostering spaceborne and airborne lidar to support relevant stakeholders and exciting missions such as our own, the Global Ecosystem Dynamics Investigation (GEDI) mission, the most exciting mission in NASA’s history for forest ecosystems.

I am all gratefulness to the people that have helped me grow in academia.”

Adrián Pascual

Josephine QUEFFELEC

Dr. Queffelec is a post-doctoral researcher at the Canadian Forest Service. She did her PhD research at the University of Pretoria, South Africa, during 2016-2021. Her thesis title was “Influence of reproductive biology on the invasive dynamics of *Sirex noctilio*” and focused on the relationship between reproductive biology and the invasion of South African pine plantations by the woodwasp *Sirex noctilio*. Although *Sirex noctilio* is an important pest of pines globally, its complicated life-history has made studying it challenging and many aspects of its reproductive biology were unknown.



Dr. Queffelec reviewed the literature on insect reproductive traits and generated a synthetic review that focused on the relationship between reproductive biology and establishment capacity in the Hymenoptera. This review was published in *Biological Invasions* and formed the basis for her current postdoctoral work that is co-funded by the US and Canadian Forest Services. It highlights the diverse reproductive traits that insects can have and the impact these different traits can have on establishment success.

“I am deeply grateful to IUFRO and honored to be receiving the Outstanding Doctoral Research Award. I am also incredibly proud to be representing South Africa and to show the academic excellence of the University of Pretoria, as I will be the third Alumnus to be receiving this honor.

Receiving the award will help me build a stronger network within IUFRO and within the field of forest entomology. It will also provide me with carrier opportunities by helping me stand out while applying for research positions in the future.”

Josephine Queffelec

Stanislas ZANVO

Dr. Zanzo conducted his doctoral research in Ecology, Biodiversity and Evolution under joint supervision of the University of Abomey-Calavi (Benin) and the University of Toulouse 3 – Paul Sabatier (France). He is a lead researcher on a fully funded project by US Department in West Africa “Stakeholder Integrated Conservation for sustainable African and Chinese Traditional Medicine development in Benin- a global TM hotspot”.



Dr. Zanzo’s doctoral research is one of the pioneering research projects focused on pangolins in West Africa. Pangolins are the most heavily trafficked mammals in the world, especially African pangolins. Dr. Zanzo’s work filled substantial knowledge gaps on African pangolins, especially on the white-bellied and giant pangolins, which are at great extinction risk, by providing relevant data, essential for their effective conservation. His results on the geographic distribution, population trends, and drivers are a reference framework for designing the global distribution map for white-bellied and giant pangolins but also to establish conservation priority areas in West Africa over the next two decades. Dr. Zanzo also identified the source forests of specimens traded in the bushmeat and traditional medicine markets. Such data are prerequisites for tackling wildlife crime and combatting transnational organized crime.

26TH IUFRO WORLD CONGRESS

Welcome to the Nordic/Baltic region of Europe



IUFRO Student Award for Excellence in Forest Science Winners 2024

Annie BIJU

Annie Biju is a Research Scholar in forest biotechnology at the Forest Research Institute, Dehradun, India, from where she also obtained her Master's of Science degree in Forestry. She is currently serving as the Coordinator for the Joint IUFRO - IFSA Task Force on Forest Education.



Her Master thesis was conducted at Kerala Forest Research Institute with the title 'Genetic Polymorphism in Selected Plus Trees of Teak Using EST - SSR Markers'. She used molecular biology techniques such as genomic DNA isolation, PCR amplification, gel analysis, documentation, gel elution, SSR genotyping, and data analysis using population genetics softwares such as GenAEx, Powermarker etc.

Annie Biju's study identified plus trees with probable adaptive potential towards stress which could be further utilized for establishing climate resilient teak plantations in Kerala and South India. From existing teak genetic resources, she identified 32 private alleles from her study with probable adaptive potential using four EST - SSR Markers.

Her current work is on 'CRISPR/Cas 9 - based Functional Evaluation of Gene(s) for Resistance against Fusarium Wilt in *Dalbergia sissoo*'.

Liam GILSON

Liam Gilson, University of British Columbia, Canada, obtained their M.Sc. in Sustainable Forest Management from Oregon State University, U.S.A. The title of their thesis is "Drivers of Productivity Differences between Native and Exotic Range Douglas-fir Plantations in Oregon and New Zealand".



Liam Gilson's research, published in their M.Sc. thesis and subsequent peer-reviewed publication, contributes incremental science towards understanding responses of a tree species to environmental conditions outside those in its current geogra-

phic range. Their work therefore contributes to building strategies for mitigating effects of climate change on a very important tree species both ecologically and commercially.

Their research helps fill a gap in fundamental research on identifying climatic factors that explain growth differences observed at a wide range of geographic scales. A major innovation of this research was the growth analysis of plantations in both Oregon and Washington that originated from exactly the same seedlot.

Liam Gilson's current research seeks to create climate-sensitive growth and mortality models for interior spruce (*Picea glauca* X *Picea engelmannii*), a species of commercial and cultural importance in British Columbia, Canada.

"I feel really honored to have been nominated for the IUFRO Student Award for Excellence in Forest Science."

"As a student and early career scientist, this recognition feels very validating of all the effort that goes into even small research projects like my Master's work and will help me to establish myself in the forest science community as I move forward in my career."

Liam Gilson

Apsana KAFLE

Apsana Kafle is engaged as a research assistant at the University of Alberta, Canada, to study the response of boreal conifers (white spruce and lodgepole pine) to drought and silviculture management. She also obtained her M.Sc. in Forest Biology and Management from the University of Alberta.



The primary objective of her thesis research was to determine a forest management approach that will ensure a steady supply of timber in the face of changes in the climate and human-caused disturbances in the boreal forest.

Her research is an example of climate-smart silviculture, an evolving concept to acknowledge the challenges and opportunities posed by climate change in forestry. Unlike traditional silviculture, which focuses on single objectives such as mitigating climate impacts or meeting timber supply needs, this research recognizes the potential of utilizing

silvicultural tools to address current forest management challenges like wildfires and pest infestations, while also meeting future demands for forest products. The research has identified silviculture tools for sustainably managing boreal forests of Western Canada to address the timber supply crisis faced globally.

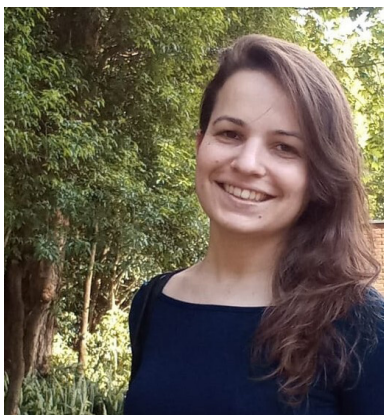
“I am deeply honored to receive the IUFRO Student Award for Excellence in Forest Science. This recognition is a powerful motivator for my early-career journey, affirming my commitment to addressing forestry challenges. The award represents a crucial steppingstone, providing confidence and opportunities for impactful contributions.

Being acknowledged by IUFRO opens doors to a global network of professionals, fostering collaboration and idea exchange. The accompanying chance to attend the conference is an invaluable opportunity for learning and growth. I express sincere gratitude for this honor, excited about the doors it will open and the collaborations it will inspire.”

Apsana Kafle

Aline KROLOW SOARES

Aline Krolow Soares is a post-doctoral researcher at the Federal University of Paraná, Curitiba, Brazil. She obtained an M.Sc. in Materials Science and Engineering from the Federal University of Pelotas (2018) and a Ph.D. in Materials Engineering and Science at Federal University of Paraná (2023).



In the course of her research, she developed a unique methodology to recover effluent residues from a eucalyptus essential oil distillation industry, focusing on biorefinery and circular economy concepts. For this purpose, the effluent by-products were used in the new distillations cycle to reduce the use of clean water and increase the concentration of higher-value bioactive compounds. The spectroscopic, colorimetric, and chromatographic methods were employed to characterize the products. The high concentration of sugars in the by-product was suitable for producing lactic acid through a fermentation process, which has broad applicability in the pharmaceutical industry.

Based on the outcome obtained in the research, it was possible to reduce water usage by up to seven times and bring high-value commercial products for applications in the pharmaceutical, food, and technological material industries.

“I am so very happy to receive the IUFRO Student Award for Excellence in Forest Science, particularly considering the high potential that the forestry sector represents for sustainability and new business opportunities.

I believe that this award is a unique opportunity for my personal and professional growth because it is a significant source of motivation to continue exploring innovations, science, technology, and sustainability through planted forests.”

Aline Krolow Soares

Aditi MISHRA

Aditi Mishra is a Ph.D. research scholar specializing in Forest Ecology at the G.B. Pant National Institute of Himalayan Environment, Almora, India. She obtained her M.Sc. in Environment Management from the Forest Research Institute deemed to be University, Dehradun, India.



Aditi Mishra’s research focused on monitoring the plant phenological shifts using ground based remote sensing techniques - phenocams. The phenocams or digital time lapse cameras were deployed on selected economically important tree species to monitor phenological changes. The main objective of the study was to assess the effectiveness of phenocams as a tool for monitoring phenology. Monitoring phenological changes is important because it provides valuable information about how plant species are responding to environmental changes such as climate change, which is a global concern.

The innovation of monitoring plant phenological shifts using phenocams lies in its non-invasive and cost-effective approach. This approach allows researchers to collect large amounts of data on plant phenology over long periods of time, which can be analyzed to gain insights into how environmental factors are affecting plant growth and development.

“Beyond its academic value, this award represents a commitment to fostering positive change in the region. Through my work, I aspire to bring about tangible improvements in the lives of those residing in the Himalayan foothills. It serves as a tremendous encouragement, opening doors to collaboration with experts and stakeholders who share a common goal.”

Aditi Mishra

Sara MOTTE

Sara Motte obtained her M.Sc. in Bioscience Engineering: Forest and Nature Management (Magna cum Laude), from Ghent University (UGent), Belgium. The research was conducted at Ghent University (UGent) and included a fieldwork campaign in the Democratic Republic of the Congo.



Sara Motte's research focuses on the significant contribution of the Congo Basin to climate change mitigation by exploring the process of carbon sequestration and its underlying mechanisms. The research findings, which involve a comparative analysis of present-day species compositions with a unique forest inventory dating back to 1916, offer vital new insights into the ongoing debate surrounding the drivers of the carbon sink in the Congo Basin. Understanding these drivers is crucial for predicting the future of this invaluable carbon sink.

Being 52 years older than the previously oldest known forest inventory in Central Africa and 66 years older than the previously oldest known forest inventory in the DR Congo, the inventory analyzed in this research gives a unique new century-wide window on Central African forest history.

“Receiving the IUFRO Student Award for Excellence in Forest Science is a great honor as it recognizes the hard work – part of it during sometimes challenging fieldwork conditions – that went into this Master’s thesis. It has given me a major boost of confidence and further fueled my motivation to continue my career in academia.

Moreover, receiving the award with a thesis on forest ecology in the Congo Basin highlights the importance and global significance of this field of research and I hope it helps drawing attention to the region. Excited to see which other doors this will open in the future.”

Sara Motte

Barbara ÖLLERER

Barbara Öllerer obtained her degree of Diplom-Ingenieurin (Dipl.-Ing.) in the Master's programme Forest Sciences from the University of Natural Resources and Life Sciences, Vienna, Austria. The title of her Master's thesis is “Gender-specific barriers in forestry: How do Austrian female leaders perceive barriers and what are their strategies to overcome them?”



In this thesis Barbara Öllerer addresses gender issues in the Austrian forestry sector. The Austrian forestry sector, as is the case in many other countries worldwide, is traditionally male dominated. Although the sector is of great economic importance, there is currently very little literature that addresses gender issues in the Austrian forestry sector. Most of the research takes place in Scandinavia.

The thesis goes beyond merely using numbers and statistics as the only measure of gender equality and examines the underlying values, norms, and structures. It conducts an empirical investigation based on qualitative interviews and addresses reasons for underrepresentation, gender-specific barriers, and goes one step further by additionally addressing ways to overcome them. Thus, the thesis is an important contribution to research in this field.

Kamana POUDEL

Kamana Poudel obtained her Master's degree from the University of Kentucky, U.S.A. The title of her thesis is “Economic Contribution of Forest Sector in Kentucky: Community Dependence and Economic Well-Being.” Her current doctoral research at the College of Forestry at Oregon State University focuses on private and public land forest policies and the economy of the rural forest dependent communities.



There has been a lot of research on dependence on the forest sector and its relationship to the economic well-being of these communities in other regions mostly in the U.S.A. and Canada. However, a literature gap exists regarding the state of Kentucky, a state highly dependent on the forest sector.

To address this research gap, Kamana Poudel's research aims to examine the relationship between forest sector dependence and economic well-being not only at the statewide level but also within three regions of Kentucky. The first classification is based on physiographic delineation, which considers geographical features, while the second classification is based on poverty rates. This research provides a unique analysis of the forest sector in Kentucky.

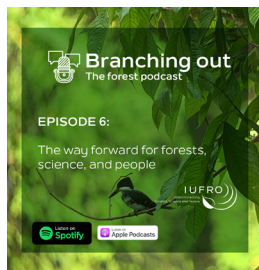
"I am truly humbled and honored to have been nominated for the 'IUFRO Student Award for Excellence in Forest Science' and equally excited about the prospect of receiving the award during the IUFRO World Forest Congress in Stockholm, Sweden.

This recognition symbolizes the collective efforts of everyone who has supported and guided me throughout my academic journey. I believe this award will not only shine a spotlight on my work but also provide the opportunity to network and collaborate with scholars from around the world."

Kamana Poudel

New IUFRO Podcast Episode: The Way Forward for Forests, Science and People

In our season finale, we talked with *Daniela Kleinschmit*, professor of forest and environmental policy at the University of Freiburg, Germany, and incoming President of IUFRO; *Woodam Chung*, professor of forest engineering at Oregon State University and incoming IUFRO Vice-President for Divisions; and *Isabelle Claire Dela Paz*, President of the International Forestry Students' Association (IFSA).



One of the highlights of our discussion was the outlook on the upcoming IUFRO World Congress in Stockholm this summer. Our guests shared their expectations for this global gathering, emphasizing the importance of collaboration and knowledge-sharing in addressing the challenges facing our forests.

From climate change to biodiversity loss, our guests underlined the myriad of challenges facing the forest research community in the coming years and highlighted innovative approaches to tackle these challenges.

Stay tuned for more episodes in our next season as we continue to discover the role of forests and trees for people and nature, while we unravel complex forest topics and keep you up to date with forest research.

Visit and listen at: [IUFRO: IUFRO Podcasts / Publications](#)

Seongmin SHIN

Seongmin Shin has been a research consultant at the Center for International Forestry Research (CIFOR) Bogor, Indonesia since March 2023. He obtained his Master of Science in Agriculture from Seoul National University, Republic of Korea. Currently, Seongmin Shin is undertaking a research project on "The Poverty Dynamics of Tree Planting Initiatives: Unpacking Sustainability Paradigms".



With a systematic review approach, his research has focused on agroforestry in the Asia-Pacific region to assess the current state of knowledge and identify research gaps. Additionally, he led a book chapter on comparing soil microfauna diversity between a burnt and unburnt peatland in Indonesia while working for CIFOR. The research has contributed to understanding soil macrofauna diversity, properties and changes in a burnt peatland area undergoing restoration by establishing a bioenergy plantation.

Seongmin Shin has employed various innovative technical methods to address the research questions in forest science. Among other things, he evaluated and analyzed the effects of forest restoration in agroforestry practice against disasters (fire) on environmental dynamics and livelihood with forest plots and other statistical tools in climate-smart forestry.

"I am profoundly honored to receive the IUFRO Student Award for Excellence in Forest Science. This prestigious recognition is not just a personal milestone but also a testament to the collective efforts of my mentors, colleagues, and the communities I've worked with.

As I continue to explore the intricate dynamics of forestry, the award fuels my commitment to advancing research contributions in agroforestry, carbon credits, and global green growth initiatives.

Again, it is a privilege to be acknowledged as an IFSA awardee, and I am excited about the future contributions towards a more inclusive and sustainable world."

Seongmin Shin

XXVI IUFRO World Congress 2024
Stockholm, Sweden, 23-29 June 2024
FORESTS AND SOCIETY TOWARDS 2050

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