



Transilvania
University
of Brasov
FACULTY OF SILVICULTURE
AND FOREST ENGINEERING

11TH INTERNATIONAL SYMPOSIUM *FOREST AND SUSTAINABLE DEVELOPMENT*

BRAȘOV, ROMANIA, 17-18 OCTOBER 2024

Venue: International Conference Center of the Transilvania University of Brasov (Aula *Sergiu T. Chiriacescu*).

Address: Iuliu Maniu Str. 41A, 500091, Brasov.

17/10/2024	Conference Day 1 [AULA "Sergiu T. Chiriacescu"]
08:30 -09:30	Registration [Main Hall – 1 st floor]
09:30 - 10:00	<p>Opening session</p> <p>[Aula Magna]</p> <p>Moderator: Alexandru Lucian CURTU</p> <p>Ioan Vasile ABRUDAN – Rector of the Transilvania University of Brasov, Romania</p> <p>Representatives of partner institutions</p>





17/10/2024	Conference Day 1 [AULA "Sergiu T. Chiriacescu"]
10:00 – 11:30	Plenary session [Aula Magna] Moderator: Bogdan POPA
10:00 – 10:30	Mechanisms of forest tree to cope with changing environmental conditions Oliver GAILING, University of Göttingen, Germany
10:30 – 11:00	How mycorrhizal associations affect tree nutrition and forest ecosystem carbon cycle Rodica PENA, Reading University, United Kingdom
11:00 – 11:30	Canopy height estimation from spaceborne images with uncertainty quantification: towards meeting user needs Ioannis MANAKOS, Centre for Research and Technology Hellas (CERTH), Greece
11:30 - 12:00	Coffee break [Main Hall – 1 st floor] and poster session [Main Hall – Ground floor]
12:00 – 13:00	Plenary session [Aula Magna]
12:00 – 12:30	How networked smart forest systems can help us achieve forest and sustainable development goals Robert KEEFE, University of Idaho College of Natural Resources, USA
12:30 – 13:00	Time studies: what for, how to Raffaele SPINELLI, Consiglio Nazionale delle Ricerche – Istituto per la Bioeconomia (CNR IBE), Firenze, ITALY
13:00 – 14:00	Lunch [Main Hall – Ground floor]



17/10/2024	Conference Day 1 [AULA "Sergiu T. Chiriacescu"]
14:00 – 16:00	<p>Parallel thematic sessions</p> <p><i>Session 1: Forest and wildlife ecology</i> [Aula Magna]</p> <p><i>Session 2: Forest and wildlife management</i> [Room: U I3]</p> <p><i>Session 3: Forest engineering</i> [Room: U I6]</p> <p><i>Session 4: Geomatics, informatics, modelling and statistics</i> [Room: U I7]</p> <p>Scientific Café <i>Forest pests, diseases, and their ecological and socio-economic consequences - ForestValue2</i> [Room: U I2]</p>
16:00 - 16:30	Coffee break [Main Hall – 1 st floor] and poster session [Main Hall – Ground floor]
16:30 – 18:00	<p>Parallel thematic sessions</p> <p><i>Session 1: Forest and wildlife ecology</i> [Aula Magna]</p> <p><i>Session 2: Forest and wildlife management</i> [Room: U I3]</p> <p><i>Session 3: Forest engineering</i> [Room: U I6]</p> <p><i>Session 4: Geomatics, informatics, modelling and statistics</i> [Room: U I7]</p>
19:00	Official Dinner, Hotel ARO Palace, Restaurant 8 th floor
18/10/2024	Conference Day 2 – Field trip, departure at 09:30 from Sânpetru experimental station 45.706002512300266, 25.64935829474133



17/10/2024	Forest and wildlife ecology
14:00 – 18:00	[Room: Aula Magna] Moderator: Ioan DUTCĂ
14:00 – 14:15	Changes in Norway spruce climate sensibility along elevational gradients in the Eastern Carpathians Andrei POPA, Jernej JEVŠENAK, Ionel POPA, Ovidiu BADEA, Allan BURAS
14:15 – 14:30	Case study regarding the involvement of saproxylic insects in the degradation of beech and fir wood from the Șinca Old-Growth Forest Ionuț-Marian DRAGOMIR, Gabriela-Aurora ISAIA, Mihai-Leonard DUDUMAN, Ion-Cătălin PETRIȚAN
14:30 – 14:45	Phylogenetic study of Quercus section Cerris - investigating evolution to help understand adaptation to climate change Botond Boldizsár LADOS, Klára CSEKE
14:45 – 15:00	Genetic patterns of native Hungarian oak (<i>Quercus frainetto</i> Ten.) stands on the Balkan Peninsula based on chloroplast microsatellite markers Klára CSEKE, Csilla Éva MOLNÁR, Botond Boldizsár LADOS, László NAGY, Attila BENKE
15:00 – 15:15	Climate change effects on tree species composition in the Southern region of the Republic of Moldova Cosmin COSOFREȚ, Ciprian PALAGHIANU, Nicolae TALPĂ, Alexei SAVIN, Laura BOURIAUD, Olivier BOURIAUD
15:15 – 15:30	Bison habitat changes in the context of climate change in Natural Park VanatoriNeamt Cosmin COSOFREȚ, Ionuț BARNOAIEA, Sebastian CĂȚĂNOIU, Laura BOURIAUD, Olivier BOURIAUD
15:30 – 15:45	Analysis of ichthyofauna composition, species distribution and water quality of the upper Olt River basin Ionuț CRISTEA, George ȘÎRBU, Georgeta Maria IONESCU, Claudiu PASCA, Marius POPA
15:45 – 16:00	Ecosystem services assessment in protected areas in Romania Roxana CAZACU, Constantin CAZACU, Marius POPA, Georgeta Maria IONESCU, Ion MIREA, Ovidiu IONESCU
16:00 – 16:30	Coffee break [Main Hall – 1st floor] and poster session [Main Hall – Ground floor]



17/10/2024 14:00 – 18:00	Forest and wildlife ecology [Room: Aula Magna] Moderator: Ioan DUTCĂ
16:30 – 16:45	Structural diversity dynamic of sessile-oak mixed forests driven by the dominant tree species Any Mary PETRIȚAN, Ștefan PETREA, Oliver MERCE, Daniel Ond TURCU, Virgil SCĂRLĂTESCU, Andrei Ioan APĂFĂIAN, Ion Cătălin PETRIȚAN
16:45 – 17:00	Analysing the adaptive reaction of European beech provenances from the perspective of quality traits Emanuel BEȘLIU, Alexandru Lucian CURTU, Marius BUDEANU
17:00 – 17:15	Reindeer husbandry meets forestry and wind power in Finland – from uncontrolled impacts to holistic land-use management Mikko JOKINEN
17:15 – 17:30	Aspects regarding the main indicators for characterization of forest ecosystems in the Bârgău Montains area Valentin LUPȘAN
17:30 – 18:00	Final Remarks & Conclusions



17/10/2024	Forest and wildlife management
14:00 – 18:00	[Room: U 13] Moderator: Ovidiu IONESCU
14:00 – 14:15	Analysis of human-bear conflicts from the last 10 years in Romania Ramon Romulus JURJ, Constantina JURJ, Alexandru GRIDAN, Georgeta Maria IONESCU, Ancuța FEDORCA, Mihai FEDORCA
14:15 – 14:30	Beaver management in the site Natura 2000 ROSCI 170 - The forest and the eutrophic marsh Prejmer Georgeta – Maria IONESCU, Daniel VIȘAN, Ovidiu IONESCU, Alexandru GRIDAN, Claudiu PASCA
14:30 – 14:45	Developing management measures in Natura 2000 Sites from Brașov metropolitan area Alexandru GRIDAN, Bianca BÎRZA, Ramon JURJ, Ancuța FEDORCA
14:45 – 15:00	Effect of fertilization on the nutrient uptake of black locust (<i>Robinia pseudoacacia</i> L.) in lowland plantations Attila BENKE, Tamás SÜLE, Valter TOLDI, Katalin BEREZKI
15:00 – 15:15	First step in standardising the collection of game statistics in Romania: a case study AJVPS Prahova Ion MIREA, Danie Ștefan ILIE, Mihai FEDORCA, Ancuța FEDORCA, Ramon JURJ, Alex GRIDAN, Roxana CAZACU, Daniel IORDACHE
15:15 – 15:30	Impact of forest management practices on ground vegetation in a pedunculate oak forest Maria Alexandra BAROGA, Victor Adrian INDREICA, Jorge CURIEL-YUSTE, Ion Cătălin PETRIȚAN
15:30 – 15:45	Monitoring wildlife species using photo-trap cameras – case study Buzau and Prahova counties Mihai FEDORCA, Ion MIREA, Ancuța FEDORCA
15:45 – 16:00	Perspectives on human – wildlife accidents reporting in Romania Florin Lucian TOIU, Iulia BACIU, Ancuța FEDORCA, Roxana CAZACU, Giorgiana VODA, Lucica Catalin TOIU, Ovidiu IONESCU
16:00 – 16:30	Coffee break [Main Hall – 1st floor] and poster session [Main Hall – Ground floor]



17/10/2024	Forest and wildlife management [Room: U 13] Moderator: Ovidiu IONESCU
14:00 – 18:00	
16:30 – 16:45	Projected changes in the natural forests of the Austrian-Hungarian border region under climate change László NAGY, Norbert MÓRICZ
16:45 – 17:00	Study on the conservative management of Bat Species in ROSCI0207 Postăvaruși ROSCI0195 Piatra Mare Cezar Georgian SPĂTARU, Levente BARTI, George Eugen SÎRBU, Flaviu VODĂ
17:00 – 17:15	Ungulate browsing impact in western Romania Darius HARDALAU, Ovidiu IONESCU
17:15 – 17:30	Wildlife-vehicle collisions in Brasov County: an analysis of the prevention actions Iulia BACIU, Mihai FEDORCA, Ancuța FEDORCA, Flaviu VODĂ, Ovidiu IONESCU
17:30 – 18:00	Final Remarks & Conclusions



17/10/2024	Forest engineering [Room: U 16] Moderator: Stelian Alexandru BORZ
14:00 – 18:00	
14:00 – 14:15	Blockchain technology in forest supply chains Lukas STOPFER
14:15 – 14:30	Open air woodchip storage and spray coating: a study case Gianni PICCHI, Carla NATI
14:30 – 14:45	Comparison of three types of skidders: time consumption and production costs Antonio ZUMBO, Stanimir STOILOV, Iliya NENOV, George ANGELOV, Angelo MAMMOLITI, Andrea R. PROTO
14:45 – 15:00	Assessment of the sustainability of a forest yard carried out with high level of mechanization in mixed chestnut coppices Rodolfo PICCHIO, Bruno FEMIA, Francesco LATTERINI, Rachele VENANZI
15:00 – 15:15	Analysis of soil disturbances in a oak coppice, due to forest operations carried out with advanced mechanization Rachele VENANZI, Linda RUGGIERO, Francesco LATTERINI, Rodolfo PICCHIO
15:15 – 15:30	Development and evaluation of automated postural classification models in forest operations using deep learning-based computer vision Gabriel Osei FORKUO, Stelian Alexandru BORZ
15:30 – 15:45	Tracing the timber from forest to the mill: an application of the SURF algorithm to fingerprint truckloads based on photographs taken at their ends Mirella ELIAS, Stelian Alexandru BORZ
15:45 – 16:00	Assessing sustainability in forest operations: a systematic review Laura Susana LLERENA CRUZ, Stelian Alexandru BORZ
16:00 – 16:30	Coffee break [Main Hall – 1st floor] and poster session [Main Hall – Ground floor]



17/10/2024	Forest engineering [Room: U 16] Moderator: Stelian Alexandru BORZ
14:00 – 18:00	
16:30 – 16:45	Learning curves, forest operators of mechanised harvesting systems and simulators: a systematic review Ana Alexandra REYES ROBALINO, Stelian Alexandru BORZ
16:45 – 17:00	Postural risk assessment in wood measurement: a follow-up study to explore new measurement options and to check the repeatability of outcomes when using digital options Stelian Alexandru BORZ, Eugen IORDACHE, Marina Viorela MARCU
17:00 – 17:15	Fuel consumption and time use in alpine cable yarder operations Raffaele SPINELLI, Natascia MAGAGNOTTI, Giulio COSOLA, Benjamin ENGLER, Stefan LEITNER, Renato VIDONI
17:15 – 17:30	First trial of a prototype chain-flail delimber on a short-rotation poplar plantation Natascia MAGAGNOTTI, Raffaele SPINELLI
17:30 – 18:00	Final Remarks & Conclusions



17/10/2024	Geomatics, informatics, modeling and statistics [Room: U 17]
14:00 – 18:00	Moderator: Mihai Daniel NIȚĂ
14:00 – 14:15	Econometric model for the forest sector Liviu-Stelian BEGU, Andreea-Oana BEGU
14:15 – 14:30	Urban forestry- safety assessment Levente DIMÉN, Alexandra DREGHICI
14:30 – 14:45	Ground surface retrieval in forest areas using satellite LiDAR data Mihnea CĂȚEANU
14:45 – 15:00	Evaluating the precision and reliability of tree measurement data from different scanner devices Sergiu-Constantin FLOREA, Mihai-Daniel NIȚĂ
15:00 – 15:15	Developing an AI tool for monitoring forest systems Mohamed-Islam KESKES, Mihai-Daniel NIȚĂ
15:15 – 15:30	Analysis of the influence of historical canopy disturbances on the hydrological regime in the Dâmbovița Valley watershed, upstream of Pecineagu reservoir Ioana Alexandra NICOLAE, Mihai Daniel NIȚĂ
15:30 – 15:45	Mapping forest height in Cuba using remote sensing Jorge DIAZ SUAREZ, Ioan CIORNEI, Mihai Daniel NIȚĂ
15:45 – 16:00	Influence of Forest Structure on Leaf Area Index (LAI) in Postavaru Mountain using Hemispheric Photography and Terrestrial LiDAR Mohamed AYA, Petru Tudor STĂNCIOIU, Mihai Daniel NIȚĂ
16:00 – 16:30	Coffee break [Main Hall – 1st floor] and poster session [Main Hall – Ground floor]



17/10/2024	Geomatics, informatics, modeling and statistics
14:00 – 18:00	[Room: U 17] Moderator: Mihai Daniel NIȚĂ
16:30 – 16:45	Potential of harvested wood products in greenhouse gas mitigation: a Romanian perspective Cosmin Ion BRAGA, Ștefan PETREA, Alexandru ZAHARIA, Tibor SERBAN, Alexandru Bogdan CUCU, Gheorghe Raul RADU
16:45 – 17:00	Reconstruction and analysis of historical point clouds for erosion monitoring: evolution of gullies from 1983 to present Mihai Daniel NIȚĂ, Finlandia BARBOSA, José Luis GARCÍA RODRÍGUEZ
17:00 – 17:15	Considerations on GNSS data analysis, according to EPN guidelines Mihaela-Simina PUIA, Vlad SORTA, Miluță FLUERAȘ
17:15 – 17:30	Modelling photogrammetric dataset in order to enhance urban planning Iuliana Maria PÂRVU, Iuliana Adriana CUIBAC PICU
17:30 – 18:00	Final Remarks & Conclusions



2nd Scientific Café organized with ForestValue2 Project WP6 – Task 6.4: "Citizen engagement, decision makers interactions"

17/10/2024	Forest Pests, Diseases, And Their Ecological And Socio-Economic Consequences"
14:00 – 16:00	[Room: U 12] Moderator: Ovidiu BADEA, Senior Research Specialist, "Marin Drăcea" INCDS
14:00 – 15:00	Subtopic 1 – Native pests and diseases and their impact on forest health status. Future approaches
	Constantin NEȚOIU , Expert, Senior Research Scientist, ASAS - Invited Speaker
	Andrei BUZATU , Researcher Marin Drăcea INCDS - Expert
	Ecaterina APOSTOL , Senior Research Scientist, Marin Drăcea INCDS - Rapporteur
15:00 – 16:00	Mihnea CIOCÎRLAN , Junior researcher, Marin Drăcea INCDS - Rapporteur
	Subtopic 2 – The impact of the invasive pests and diseases trough the forest ecosystems
	Flavius BĂLĂCENOIU , Expert, Researcher, Marin Drăcea INCDS - Invited Speaker
	Dănuț CHIRA , Senior Research Scientist, Marin Drăcea INCDS - Expert
16:00 – 16:30	Ioana PLEȘCA , Marin Drăcea INCDS - Researcher (online session) - Rapporteur
	Dragoș TOMA , Researcher, Marin Drăcea INCDS - Rapporteur
16:00 – 16:30	Coffee break [Main Hall – 1st floor] and poster session [Main Hall – Ground floor]



Poster Presentations

No.	Title	Authors
1.1	Measurements on the monumental willow trees of Romania	Diana VASILE , Andrei Ioan APĂFĂIAN, Raluca ENESCU, Virgil SCĂRLĂTESCU, Vlad CRIȘAN, Simona COMAN
1.2	First insights into the genetic pattern of native Hungarian ash (<i>Fraxinus angustifolia</i> Vahl subsp. <i>danubialis</i>) and common ash (<i>Fraxinus excelsior</i> L.) populations and their putative hybrids	Csilla Éva MOLNÁR , László NAGY, András KOLTAY, Botond Boldizsár LADOS, Attila BENKE, Klára CSEKE
1.3	Phoretic mite communities associated with <i>Ips typographus</i> (Linnaeus, 1758) and <i>Ips duplicatus</i> (Sahlber, 1836) (Coleoptera: Scolytinae) in a Norway spruce forest of Romania	Dragoș TOMA , Gabriela-Aurora ISAIA, Carol DIETER
1.4	Natura 2000 beetle species from the "Fr. Deubel" and "Ed. Scheeser-G. Theiss-E. Geist" Collections of the Faculty of Silviculture and Forest Engineering-Brașov	Ionuț-Marian DRAGOMIR , Daniel-Kazimir KURZELUK
1.5	Modules in case of forest fire intervention and the use of sensors for fire detection in the high fire risk area	Flaviu-Nicolae MAN , Alin Olimpiu EPURE
1.6	A new site with <i>Quercus pubescens</i> Willd. in the VranceaSubcarpathians: an important forest genetic resource for reconstructing degraded lands	Bogdan-Ionuț PLEȘCA , Ciprian TUDOR, József Pál FRINK, Cristinel CONSTANDACHE, Laurențiu POPOVICI, Ioana Maria PLEȘCA
1.7	Genetic variation of <i>Quercus petraea</i> (Matt) Liebl. provenances in two Romanian common garden experiments	Ioana Maria PLEȘCA , Ecaterina Nicoleta APOSTOL, Bogdan Ionuț PLEȘCA, Robert Cristian IVAN, Ana Maria UNGUREANU
1.8	The health state of some pine stands and their behaviour on degraded lands from forest steppe site of Subcarpathians of Curvature	Ciprian TUDOR , Cristinel CONSTANDACHE, Laurentiu POPOVICI, Valentina AGA



No.	Title	Authors
1.9	Chloroplast DNA variation and genetic differentiation in <i>Swietenia</i> species	Liuder Isidoro RODRÍGUEZ COCA, Elena CIOCÎRLAN, Alexandru Lucian CURTU
1.10	Genetic structure of two small, isolated <i>Pinus cembra</i> populations from the Brasov region	Mihai Bogdan FĂNĂȚAN, George Iulian STANCIULESCU, Iulia ENE, Marina SHELLER, Alexandru Lucian CURTU
1.11	Does heterozygosity affect bud burst and architectural tree characteristics? A case study for European beech	Mihnea-Ioan-Cezar CIOCÎRLAN, Elena CIOCÎRLAN, Gheorghe Raul RADU, Dănuț CHIRA, Oliver GAILING, Ourania GRIGORIADOU-ZORMPA, Mihai-Daniel NIȚĂ, Alexandru Lucian CURTU
1.12	Analysis of windbreakage of Douglas fir provenance trials established in Romania	Emanuel STOICA, Alin Mădălin ALEXANDRU, Georgeta MIHAI, Alexandru Lucian CURTU, Virgil SCĂRLĂTESCU
1.13	Genetic variation and adaptability of pedunculate oak (<i>Quercus robur</i> L.) in a common garden experiment in Central Romania	Ana-Maria UNGUREANU, Ecaterina Nicoleta APOSTOL, Robert Cristian IVAN, Alexandru Lucian CURTU
2.1	Comparative study of exploitable stands with Norway spruce, from Harghitei, Bârgăului and Suhard Mountains	Valentin LUPȘAN, Gábor MOLNÁR, Marian TRISCIUC
2.2	Evolution of some structural, qualitative and stability parameters in Norway spruce stands from risk areas to disturbing factors	Radu VLAD, Alexandra STEFAN, Gheorghe STEFAN
2.3	iPhone digital technology versus traditional methods: analyzing tree and stand measurement	Gheorghe-Marian TUDORAN, Avram CICSA, Alexandru-Claudiu DOBRE
2.4	The survival of oak seedlings in an agroforestry system near Craiova (southern-eastern Romania): preliminary results	Cristian Mihai ENESCU



No.	Title	Authors
2.5	The ecological reconstruction of the forest ecosystems affected by harmful climatic factors within the Magura Odobesti protected natural area	Cristinel CONSTANDACHE, Laurențiu POPOVICI , Ciprian TUDOR, Virgil IVAN
3.1	The real cost of forest resources conservation: The case of the Rodna Mountains National Park	Leon Costan URSA
3.2	25 years monitoring of atmospheric deposition in the Rarau Mountains (Eastern Romanian Carpathians)	Marius CURCA , Amelia BUCULEI, Ștefan LECA, Carmen IACOBAN
3.3	Size-growth relationship for Norway spruce (<i>Picea abies</i> (L.) H. Karst) silver fir (<i>Abies alba</i> Mill.) and beech (<i>Fagus sylvatica</i> L.) stands from the north of the Eastern Carpathians	Alexandra ȘTEFAN (ISPRAVNIC) , Răzvan Vasile CÂMPU, Gheorghe ȘTEFAN, Radu VLAD
3.4	Structure of some Norway spruce (<i>Picea abies</i> L.) stands in the north of the Eastern Carpathians	Gheorghe ȘTEFAN, Răzvan Vasile CÂMPU, Alexandra ȘTEFAN , Radu VLAD, Any Mary PETRIȚAN
3.5	Recycled materials. A successful revival of wooden products for a circular bioeconomy	Andrei Ioan APĂFĂIAN , Raul RADU, Vlad CRIȘAN, Diana VASILE
3.6	Extracting small-sized eucalyptus logs by farm tractors equipped with backhoe grapples: a simulation of cycle time, productivity and efficiency in Thai short-rotation forestry	Tomi KAAKKURIVAARA , Nopparat KAAKKURIVAARA, Stelian Alexandru BORZ
3.7	Assessment of wood quality at spruce trees affected by a forest fire	Alexandru OLARU-ZAFIESCU, Alice Elena TESILEANU, Ionuț MITOFAN, Elena Camelia MUȘAT



No.	Title	Authors
3.8	The impact of forest fires on trees development and wood quality, using non-destructive and destructive methods	Alice Elena TESILEANU, Alexandru OLARU-ZAFIESCU, Ionuț MITOFAN, Elena Camelia MUȘAT
3.9	Investigation of changes in air quality levels during debarking operations	Tolga OZTURK, Ebru BILICI , Muhittin INAN, Batin YER
3.10	Planning stream protection zone harvesting with a LiDAR-based Single Tree Inventory (STI) and developing GIS tool	Ebru BILICI , Robert F. KEEF, Timothy E. LINK, Furkan CAKMAK
3.11	Evaluation of post-fire salvage logging in the Mediterranean Area	Salvatore F. PAPANDREA, Maria Francesca CATALDO, Giuseppe BOMBINO, Pasquale A. MARZILIANO, Andrea R. PROTO
4.1	iPhone Measure app in today's forestry: a survey on the accuracy of measuring tree characteristics	Andrei Ioan APĂFĂIAN, Andrei AVASILOAIE, Maria Magdalena VASILESCU
4.2	R code on detecting peak discharge	Valentina AGA
4.3	A comparative study of different methods for acquiring and processing aerial images	Lemonia RAGIA , Mihai Daniel NIȚĂ
4.4	The use of Geographic Information Systems in the planning of bicycle routes in the Zănoaga - Bran area	Cornel Cristian TEREȘNEU , Cristian Samuel TEREȘNEU



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