50th International Symposium on Forestry Mechanization Brasov, Romania, 25th – 29th September 2017 <u>www.formec.ro</u>

PRELIMINARY CONFERENCE PROGRAMME

25/09/2017	Registration & Icebreaker [Hotel ARO Palace]			
17:00 - 19:00	Registration			
19:00 - 22:00	Icebreaker			
26/09/2017	Conference Day 1 [AULA T. Chiriacescu - UNITBV]			
08:00 & 08:30	Guided walk from Hotel Aro Palace to AULA T. Chiriacescu (Optional)			
08:15 - 09:00	Registration			
	Opening Ceremony – Welcome by: [Room: Aula Magna]			
	Rector, Transilvania University of Brasov			
	Univ.prof.dr. Ioan Vasile ABRUDAN			
	Dean, Faculty of Silviculture and Forest Engineering (Brasov)			
09:00 - 09:30	Univ.prof.dr. Alexandru Lucian CURTU			
	Vice-Dean, Faculty of Silviculture and Forest Engineering (Brasov) & Head of Organizing Committee			
	Univ.prof.dr. Stelian Alexandru BORZ			
	Head of Organising Committee of FORMEC 2018 in Madrid (Spain)			
	Univ.prof.dr. Eduardo TOLOSANA ESTEBAN			
	Plenary Session I - Keynote Speakers [Room: Aula Magna]			
09:30 - 10:30	A0			
	Moderator: Stelian Alexandru BORZ			
	50 th FORMEC Anniversary: achievements and perspectives for excellence in forest engineering RDI - <i>Univ.prof.dr. Karl STAMPFER</i>			
	(Head of Department of Forest and Soil Sciences, BOKU, Vienna)			
(3 x 20 min)	Forest Engineering Systems: history and future - Univ.prof.dr. Hans Rudolf HEINIMANN			
(0 11 20 111111)	(Department of Environmental Systems Science, Institute for Terrestrial Ecosystems, ETH Zürich)			
	CROJFE: achievements, excellence and future trends in forest engineering research - <i>Univ.prof.dr. Tibor PENTEK</i>			
10.00 11.00	(University of Zagreb, Faculty of Forest, Croatian Journal of Forest Engineering - CROJFE, Chief Editor)			
10:30 - 11:00	Coffee Break			
11:00 - 13:00	Plenary Session II - Keynote Speakers [Room: Aula Magna] Moderator: <i>Stelian Alexandru BORZ</i>			
_	EIB in action: realising the commercial and environmental potential of forest resources - <i>Dr. Hans-Harald JAHN</i>			
	(European Investment Bank, PJ/ETD/AGRUDEV, Head of Division) - TBC			
	Vision 2030 & RDI Agenda for the European Forest-based Sector - Mr. Johan ELVNERT			
	(European Forest-based Sector Technology Platform - FTP, Managing Director)			
(4 x 30 min)	EU Forest Strategy: increasing forest value chain competitiveness - <i>Mr. Jeremy WALL</i>			
	European Commission, DG GROW / Forest-based & Related Industries, Principal Administrator)			
	Strategic Agenda 2020 for the Romanian State Forests Management - Mr. Ciprian PAHONTU			
	(National Forest Administration – ROMSILVA, General Director) - TBC			
13:00 - 14:30	Lunch Break			
14:30 - 15:00	Poster Session I [Room: Aula T. Chiriacescu - Main Hall]			









	Session - [Room:TBA]	Session - [Room: TBA]	Session - [Room: TBA]	
	A1	B1	C1	
15:00 – 17:00	New trends	Towards bioeconomy	How much better?	
10.00	Cutting edge technology I	Biomass & bioenergy I	Performance of harvesting systems	
	Moderator: TBA	Moderator: TBA	Moderator: TBA	
	Automated Volumetric Measurement of Truckloads Through Multi-View Photo- grammetry and 3D Image Processing Soft- ware - Mauricio Acuna	1.Dynamic Simulation of Bioenergy Facility Locations in GIS Environment - Mika Aalto, Olli-Jussi Korpinen, Tapio Ranta	Comparison of Simulated Sorting with Bucking of Timber by Harvesters - <i>Jiri Dvorak, Martin Chytry, Pavel Natov</i>	
	2. Application of Laser Rangefinders in Forestry Surveys - <i>Tamás Bazsó, Péter Primusz</i>	Determining Chipper Maintenance Cost as a Function of Chipper Type, Age and Annual Use - Raffaele Spinelli, Natascia Magagnotti, Lars Eliasson	 Depth of Damage on Pine Logs from Feed Roller Spikes at Various Engine RPM in 4 Sea- sons - Zbigniew Karaszewski, Piotr S. Meder- ski, Agnieszka Łacka, Andrzej Noskowiak, Mariusz Bembenek, Martyna Rosińska 	
	3. The Analysis of Coniferous Logs Top Diameter Measurement Accuracy Under Bark Using Harvester and 3D Systems - Ziedonis Miklašēvičs	3. Hybrid Solutions as Measure to Increase Energy Efficiency - A Prototype of Hybrid Technology Chipper - Robert Prinz, Juha Laitila, Lars Eliasson, Johanna Routa1, Antti Asikainen	3.Productivity of CTL Harvesting by Operators' Age and Experience - <i>Jukka Malinen, Janne Taskinen, Timo Tolppa</i>	
(6 x 20min)	4. Use of High Multi-Temporal Ground Resolution Model by Portable Laser Scanner and Physical Parameters Sampling to Assess Soils Disturbance Caused by Logging Operation - Martina Cambi, Francesca Giannetti, Davide Travaglini, Gherardo Chirici, Enrico Marchi	4. Analysis of Chipping Operations and Chip Quality for Bioproducts - <i>John Vance</i> , <i>Jingxin Wang</i> , <i>Xinfeng Xie</i>	4. Performance of a Mid-Sized Harvester- Forwarder System in Integrated Harvesting of Sawmill, Pulpwood and Fuelwood - <i>Andrei</i> <i>Apăfăian</i> , <i>Andrea Rosario Proto</i> , <i>Stelian</i> <i>Alexandru Borz</i>	
	5. Determination of Forest Road Surface Roughness by Kinect Depth Imaging - Francesco Marinello, Andrea Rosario Proto, G. Zimbalatti, Raffaele Cavalli, Stefano Grigolato	5. A Characterisation of the Ash Content of Conifer Stump Wood Hogfuel - Coates En- da, Nieto Gámez Alejandro, Kent Thomas, Cronin Brian	5. Tractor Mounted Winching Systems for Small Scale Harvesting - <i>Mehmet Eker, Davut</i> <i>Özer</i>	
	6. Scopes and Limitations of the Use of UAV (Drones) to Support Forest Assessment and Operations - Study Case in Yungas Cloud Forest, North Argentina - Fernando Rossi, Gero Becker	6. The Possibility to Improve the Quality of Forest Chips During Transport - Arkadiusz Gendek, Tomasz Nurek, Witold Zychowicz, Krzysztof Górnicki	6. Productivity Analysis of Skidding Operations with Farm Tractor on Skid Roads: the Case of Osmaniye Forest Enterprise Chief, Turkey - Neşe Gülci, Sercan Gülci, Abdullah E. Akay	
17:00 - 18:00	Coffee Break / Poster Session II [Room: Aula T. Chiriacescu - Main Hall]			
18:00 - 20:00	Free Time			
20:00 - 23:00	Conference Dinner			











27/09/2017	Conference Day 2 [AULA T. Chiriacescu - UNITBV]			
	Session - [Room: TBA] A2	Session - [Room: TBA] B2	Session - [Room: TBA] C2	Session - [Room: TBA] D1
08:30 - 10:30	Doing it even better	Infrastructure is the key	Innovation for mobilization	Backing the industry
10:30	Performance of harvesting systems II	Forest road networks	Optimized Transport & Logistics	Forest operations & enterprises
	Moderator: TBA	Moderator: TBA	Moderator: TBA	Moderator: TBA
	1. Trunk Utilisation as a Factor Affecting Harvester Productivity - Martyna Rosińska, Mariusz Bembenek, Zbigniew Ka- raszewski, Agnieszka Łacka, Piotr S. Mederski	1. Conditions of Forest Road Network in Terms of Sustainabil- ity in Geraka - Kimmeria - Xanthi Forest Complex - Daoutis Chris- todoulos, George Tasionas, Di- mitrios E. Farmakis, Vasileios C. Drosos	Utilization of Phone Application Technology to Record Log Truck Movement in the Southeastern US - Marissa Jo Daniel, Tom Gallagher, Tim McDonald, Dana Mitchell	 A Study at Different Scales of the Potential of Biomass Use: GIS, Yields, Costs and Logistics - San- dra Sánchez-García, Eduardo To- losana, Lars Eliasson, Dimitris Ath- anassiadis, Celia Martínez, Juan Majada, Elena Canga
	2. The effectiveness of the process of harvesting of poplar wood from plantation for paper and chipboard Witold Zychowicz, Tomasz Nurek, Monika Aniszewska, Arkadiusz Gendek	2. Challenges in Forest Road Network Development in Eastern Europe - <i>Stelian Alexandru Borz</i>	2. Design and Implementation of an Integrated Transport Framework System to Optimize Timber and Biomass Supply Logistics: A Case Study in Asturias, Spain - Mauricio Acuna, Elena Canga, Sandra Sánchez-García	2. Comparison of Video-Based and Conventional Time and Motion Studies of Mechanized Forest Op- erations - Maximilian Kammermei- er, Eric R. Labelle, Fabian Schulmeyer
(6 x 20min)	3. What Density of Strip Roads for Early Thinning? Productivity and Cost of Various Mechanised Thinning Operations in 2nd Age Class Pine Stand - Piotr Mederski, Mariusz Bembenek, Zbigniew Karaszewski, Martyna Rosińska, Zenon Pilarek, Michał Surus	3. A New Spatially Explicit Method to Assess the Quality of a Forest Network in Terms of Terrain Access for Harvesting Operations - Bont Leo Gallus	3. Roundwood and Biomass Transport: Comparing Spain and Australia - <i>Rubén Laina, Mauricio</i> <i>Acuña, Juan Picos</i>	3. Harvesting 800K M3 of Wood: What Does It Take? - Stelian Alexandru Borz, Mădălina Fornea, Marcian Bîrda
	Improvements in Forwarder Technology as the Forest Operations Practitioners See It - Stelian Alexandru Borz	4. Development of the New Method for Assessing Condition of Forest Road Surface - Marijan Šušnjar, Zdravko Pandur, Hrvoje Nevečerel, Kruno Lepoglavec, Marin Bačić	4. Forest Products Transport by Activating Upgraded Forest Road and Intermediate Depots - <i>Mika</i> <i>Yoshida, Jiyoung Son, Hideo Sakai</i>	4. Timber Harvesting Methods in Eastern European Countries - Tadeusz Moskalik
	5. New Principle for Harvester	5.Predicting the Traffic of a Forest Road Network - Balázs	5. Developing Primer Transportation Plan for Forested Areas Under	5. Use of Timber Harvesting Data from Single Grip Harvesters - A

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	Heads for Hardwood - Knobloch Christian	Kisfaludi, Péter Primusz and József Péterfalvi	the Risk of Winter Storm Damage - Abdullah E. Akay, İnanç Taş	Survey of Contractors in Central Germany - Jaeger Dirk, Hammerich Kevin, Wagner Thilo, Müller Olaf, Suchomel Christian
		 Design and Construction Experiences with Simple Soil Stabilization Based Pavements - József Péterfalvi, Péter Primusz, Balázs Kisfaludi 	6. Improved Route Generation for Logging Trucks Considering Curvature, Hilliness and Intersections - Gunnar Svenson, Patrik Flisberg, Mikael Rönnqvist	6. Planning of Skid Roads After Forest Fire in Turkey (A Case Study of Adrasan Forest Enterprise) - Tolga Ozturk, Ebru Bilici
10:30 - 11:00		Coffee Break / Poster Session II [Room: Aula T. Chiriacescu - Main Ha	all]
	Session - [Room: TBA] A3	Session - [Room: TBA] B3	Session - [Room: Aula Magna] C3	Session - [Room: TBA] D2
11:00 - 13:00	Creativity reloaded Innovations & process optimi- zation	Improving your Bio(energy) Bioenergy & quality improve- ment	All about timber flow Wood supply chain challenges I	Humans and nature Social & environmental challeng- es
	Moderator: TBA	Moderator: TBA	Moderator: TBA	Moderator: TBA
(6 x 20min)	Optimized Clearing and Early Thinning by Spacer and Motor- Saw - Christian Suchomel, Dirk Jaeger	Impact of Splitting on the Drying Performance of Poplar (Populus Spp. L.) Logs Stored in Piles for Energy Purposes - Gernot Erber, Karl Stampfer	In-Forest Debarking of Radiata Pine to Improve Supply Chain Efficiency in Australia and New Zealand: Effect of Harvesting Season, System and Equipment - Mauricio Acuna, Glen Murphy	Good Practices in Health and Safety in Forest Enterprises - Edgar Kastenholz, Joachim Morat, Ute Seeling
	2. A New Technique for Precommercial Thinning Using a Clearing Saw Designed for Top Spacing - <i>Michel Soucy, Martin Béland</i>	2. The Comminution Cost of Wood Raw Material for Fuel in Estonian Conditions - A Case Study - <i>Marek Irdla, Allar Padari,</i> Vahur Kurvits, Peeter Muiste	2. Innovative and Adapted Wood Supply Chains as a Prerequisite for Sustainable Management of the Brazilian Atlantic Forest - Pedro Britto, Dirk Jaeger, Stephan Hoff- mann, Renato Robert, Alfredo Fan- tini	2. Characteristics and Improvement of Forestry Workers Training in Croatia - <i>Matija Landekić</i> , <i>Ivan Mar-</i> <i>tinić</i> , <i>Matija Bakarić</i> , <i>Tibor Pentek</i> , <i>Tomislav Poršinsky</i> , <i>Mario Šporčić</i>
	3. Scenario Planning for Skid Trail Implementation and Long Term Trafficability - Christophe Ginet, Philippe Ruch, Morgan Vuillermoz	3. Reducing Fuel Consumption and Improving Chip Quality by Adjusting Chipper Settings - Pau- lo Silva, Ângelo Moura, Raffaele Spinelli	3. Forecast of Forest Biomass Supply Chain Capacity and Efficiency at The Regional, Local and Individual Level in Finland - Kalle Karttunen, Mika Aalto, Jarno Föhr, Tapio Ranta	3. Trainees' Perceptions of Logger Training: The Effect of Course De- mographic Variation on Survey Outcomes - Natascia Magagnotti, Mathew Smidt, Raffaele Spinelli
	4. Implementation of the Optimization Model Results in a Spatial Wood Flow Analysis Using GIS - Katrina Amerika, Maris Kuzmins	Performance of a Mobile Star Screen to Improve Woodchip Quality of Forest Residues - Christoph Huber, Huberta	4. Multiobjective Optimization of Timber and Bioenergy Supply Chain from Beetle-Killed Biomass in Colorado - <i>Ji She, Hee Han,</i>	4. The Dialog Tool: A Support Document for Deeper Trust - Philippe Ruch, Xxavier Montagny, Morgan Vuillermoz









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		Kroisleitner, Karl Stampfer	Woodam Chung	
	5. Multiple-Objective Stem Bucking in Log Cutting of Norway Spruce (Picea Abies) Stems for Maximizing Monetary Value of Timber Trade in Finland - Teijo Palander, Kalle Kärhä, Joonas Mutanens	5. Future Scenario Analysis for Predicting Forest Woody Biomass Availability for Energy Use and Its Economic Impact for The Mexican Bioeconomy - Ulises Flores, Dirk Jaeger	5. Research Trends in European Forest Fuel Supply Chains: A Review of the Last Ten Years (2007-2017) - Martin Kühmaier, Gernot Erber	5. Is LCA In Forestry Still at Starting Position? - <i>Andreja Đuka, Dinko</i> Vusić, Marin Bačić, David Janeš, Zdravko Pandur, Ivica Papa
	6. Optimal Timber Supply in Time Slots with Integrated Planning of Harvest and Transport Operations - Thomas Smaltschinski, Martin Müller	6. Pre-Feasibility Study of Supply Systems Based on Artificial Dry- ing of Forest Chips Made of De- limbed Stems - Juha Laitila, Jaakko Repola, Anssi Ahtikoski, Johanna Routa	6. Review of Efficient and Cost- Effective Biomass Recovery Tech- nologies and Supply Chains in For- est Operations - Mohammad Reza Ghaffariyan, Mark Brown, Mauricio Acuna, John Sessions, Tom Gal- lagher, Martin Kühmaier, Raffaele Spinelli et al.	Soil Protection in Wood Harvesting: Insights from Production-, Industrial- and Institutional Economics - Oliver Thees
13:00 - 14:30	Lunch Break			
14:30 -	Session - [Room: TBA] A4	Session - [Room: Aula Magna] B4	Session - [Room: TBA] C4	Session - [Room: Aula Magna] D3
	Looking after Mama Nature	Mitigating the risks	For the cashflow	It's about lumberjacks
14:30 – 16:30	Environmental footprint	Safety & ergonomics in steep terrain	Economic performance	It's about lumberjacks Manual operations challenges
		Safety & ergonomics		It's about lumberjacks Manual operations challenges Moderator: TBA
16:30	Environmental footprint Moderator: TBA 1. New Techniques for Estimating the Extent, Severity and Distribution of Soil Disturbance from Machine Traffic During Clearfell Harvesting - Bruce Talbot, Rasmus Astrup	Safety & ergonomics in steep terrain	Economic performance	It's about lumberjacks Manual operations challenges
	Environmental footprint Moderator: TBA 1. New Techniques for Estimating the Extent, Severity and Distribution of Soil Disturbance from Machine Traffic During Clearfell Harvesting - Bruce Talbot, Ras-	Safety & ergonomics in steep terrain Moderator: TBA 1. The Influence of Soiling on the Breaking Strength of Covered and Uncovered 12-Strand Uhmpe- Ropes for Forestry Ap-	Economic performance Moderator: TBA 1. Economic Analysis of Long-Term Operation of a Harvester and Forwarder Under Forest Owner Management - Martin Chytry, Pavel	It's about lumberjacks Manual operations challenges Moderator: TBA 1. Using Sound Pressure Sensors to Monitor the Performance of Manually Operated Circular Saws: What Parameters Can Be Inferred? - Nicolae Talagai, Marius Cheţa, Daniel Şerban, Mădălina Fornea, Stelian Alexandru Borz, Gheorghe











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	Assisted CTL Harvester Forwarder Thinning in Northwest US - Preston Green, Woodam Chung, Ben Leshchinsky, John Sessions, Stephen Fitzgerald, Jeff Wimer	tive - Questions, Answers, and Practical Outcomes - <i>Dzhamal</i> <i>Amishev, Jim Hunt</i>	vesting in Spruce Stands When Considering Nutrient Cycling - Borchert Herbert, Fritsch Christian, Weis Wendelin, Kölling Christian, Göttlein Axel	Sound Pressure Sensors to Automate Data Collection in Motor-Manual Production Studies - Marius Cheţa, Nicolae Talagai, Stelian Alexandru Borz
	4. Pressure Allocation Under Forest Tires - Static and Dynamic Examination and Rutting Process in Field Tests - <i>Hinte Bastian</i> , <i>Brokmeier Henrik</i>	4. Operators in Steep Slope Log- ging and Safety Measurement - John Garland, Francisca Belart, Robert Crawford, Woodam Chung, Tamara Cushing, Laurel Kincl, Ben Leshchinsky, John Sessions, Jeff Wimer	4. An Approach for Active Cost Control in Running Timber Harvest- ing Operations - Michael Starke, Martin Ziesak	4. Determining the Vibrations Transmitted by Electric Chainsaws in Conifer Cross-Cutting Operations - Enrico Marchi, Francesco Neri, Andrea Laschi, Cristiano Foderi, Martina Cambi, Fabio Fabiano
	5. Stump Treatment Against Heterobasidion Annosum in Finn- ish Forests - <i>Kalle Kärhä, Ville</i> <i>Koivusalo, Teijo Palander</i>	5. Using of Fine Kinney Risk Assessment Method in the Wood Production Process - Saliha Ün- ver-Okan, H. Hulusi Acar, İbrahim Ergenç	5. Challenges in Road Construction and Timber Harvesting in Japan - Hideo Sakai	5. Field Performance of Motor- Manual Felling in Willow Short Ro- tation Crops - <i>Nicolae Talagai, Ste-</i> <i>lian Alexandru Borz</i>
	6. Estimating Marginal Tree(S) Damaged Following Forest Harvesting by Artificial Neural Networks - Hadi Bayati, Akbar Najafi			
16:30 – 17:00	Coffee Break / Poster Session II [Room: Aula T. Chiriacescu - Main Hall]			ili]
47.00	Closing ceremony – Welcome by: [Room: Aula Magna]			
17:00 – 18:00	Vice-Dean, Faculty of Silviculture and Forest Engineering (Brasov) & Head of Organizing Committee Univ.prof.dr. Stelian Alexandru BORZ			ng Committee
18:00 - 20:00	Free time			
20:00 - 23:00	Conference Dinner			

28/09/2017	Field Trip to FOREST ROMANIA
	Forest machinery and technology fair [Zizin: www.forestromania.com]
9:00	Transfer Hotel Aro PALACE - FOREST ROMANIA 9:00
16:00	Transfer FOREST ROMANIA - Hotel ARO PALACE: 16:00
17:00	Free time











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