

04.10.2015	Registration & Icebreaker [Hotel Courtyard Marriott]
17:00 - 19:00	Registration
19:00 - 21:00	Icebreaker
05.10.2015	Conference Day 1 [Hotel Courtyard Marriott]
08:00 - 09:00	Registration
09:00 - 09:30	Opening – Welcome by: [Room: Dachstein I + II]
	University of Natural Resources and Life Sciences Vienna (BOKU) - <i>Georg Haberhauer</i>
	Coordinator, IUFRO Division 3, Forest Operations Engineering - <i>Woodam Chung</i>
	Head of Department of Forest and Soil Sciences (BOKU) & Organizing Committee - <i>Karl Stampfer</i>
	Head of Organising Committee of FORMEC 2016 in Warszawa (Poland) - <i>Tadeusz Moskalik</i>
	Head of Organising Committee of FORMEC 2017 in Braşov (Romania) - <i>Stelian Alexandru Borz</i>
09:30 - 10:10	Plenary Session I - [Room: Dachstein I + II]
	A0
	Moderator: <i>Karl Stampfer</i>
(2 x 20 min)	Expanding ground-based harvesting onto steep terrain: A review - <i>Rien Visser</i>
	Ergonomics and productivity improvements through machine automation - <i>Marko Paakkunainen</i>
10:10 - 10:40	Coffee Break
10:40 - 12:00	Plenary Session II - [Room: Dachstein I + II]
	A0
	Moderator: <i>Karl Stampfer</i>
	Teleoperation of harvesting machinery for a safer future - <i>Keith Raymond</i>
	Precision farming - Successful examples from agriculture - <i>Andreas Gronauer</i>
(4 x 20 min)	Forest road network and pavement engineering revisited - <i>Hans Rudolf Heinimann</i>
	Forest road construction - Old wine in new bottles - <i>Thomas Steinmüller</i>
12:00 - 13:30	Lunch Break
13:30 - 14:00	Poster Session I [Room: Dachstein Foyer & Feuerkogel]

	Session - [Room: Dachstein I] A1	Session - [Room: Dachstein II] B1	Session - [Room: Mondsee] C1
14:00 - 16:00	Taking on the challenge Challenges in forestry Moderator: <i>Dirk Jaeger</i>	Doing it Better! Productivity & efficiency I Moderator: <i>Nataschia Magagnotti</i>	Dirt track or Boulevard? Road construction & maintenance Moderator: <i>Eric R. Labelle</i>
(6 x 20min)	1. Critical slope in downhill timber skidding - <i>Andreja Đuka</i> ; <i>Tomislav Poršinsky</i> ; <i>Tibor Pentek</i> ; <i>Dubravko Horvat</i> 2. Stock and state of forest machines in Germany - <i>Jörg Hittenbeck</i> 3. Mechanization of French logging operations: challenges and prospects in 2020 - <i>Emmanuel Cacot</i> ; <i>Stephane Grulois</i> ; <i>Alain Thivolle-Cazat</i> ; <i>Paul Magaud</i> 4. High resolution forwarding data and evaluation of operator differences by use of TimberLink data - <i>Jussi Manner</i> ; <i>Tomas Nordfjell</i> ; <i>Ola Lindroos</i> 5. The economic situation of forest contractors in Bavaria - <i>Herbert Borchert</i> ; <i>Konstantin Benker</i> 6. Management of outsourced forest harvesting operations for better customer-contractor alignment - <i>Mattias Eriksson</i> ; <i>Luc LeBel</i> ; <i>Ola Lindroos</i>	1. Impact of slope on forwarder load size and productivity - <i>Martin Strandgard</i> ; <i>Rick Mitchell</i> ; <i>Mauricio Acuna</i> 2. Cutting productivity of windfalls in Finland - <i>Kalle Kärhä</i> ; <i>Tuomas Anttonen</i> ; <i>Teijo Palander</i> ; <i>Asko Poikela</i> ; <i>Sirkka Keskinen</i> ; <i>Ari Laurén</i> ; <i>Yrjö Nuutinen</i> ; <i>Pekka T. Rajala</i> 3. Long log harvesting by harvesters and combination forwarders - <i>Felix Rinderle</i> ; <i>Udo Hans Sauter</i> 4. Current practices and efficiency gaps in logging operations from European mountain forests - <i>Adrian Enache</i> ; <i>Martin Kühmaier</i> ; <i>Rien Visser</i> ; <i>Karl Stampfer</i> 5. Comparing the effectiveness of harvester use for thinning operations in beech and birch stands of 4th age class - <i>Martyna Rosińska</i> ; <i>Mariusz Bembenek</i> ; <i>Zbigniew Karaszewski</i> ; <i>Piotr S. Mederski</i> 6. Effectiveness of selection cutting in Russian Federation - <i>Pavel Kalinin</i>	1. Reengineering of Forest Road Networks – Integrated harvest and road network layout planning including road up- or downgrading - <i>Leo Gallus Bont</i> 2. Forest road network planning: a GIS-based evaluation in Italy - <i>Andrea Laschi</i> ; <i>Cristiano Foderi</i> ; <i>Enrico Marchi</i> 3. Reconstruction of the forest road network model with linear fuzzy modelling in the conversion of the coppice companies to high forest enterprises - <i>Hulusi H. Acar</i> ; <i>Ersin Dursun</i> 4. Technology of paving carriageways of permanently passable forest roads by shedding cover aggregates with the thixotropic mixture - <i>Jindřich Neruda</i> ; <i>Radomír Ulrich</i> ; <i>Martin Pajkoš</i> ; <i>Igor Večerka</i> ; <i>Věra Vrtěnová</i> 5. Maintenance of Macadam Forest Roads in Mountainous Terrain – Case Study for Management Unit “Belevine” - <i>Ivica Papa</i> ; <i>Tibor Pentek</i> ; <i>Hrvoje Nevečeral</i> ; <i>Kruno Lepoglavec</i> ; <i>Tomislav Poršinsky</i> ; <i>Željko Tomašić</i> 6. Fly ash for forest road rehabilitation - <i>Tommi Kaakkurivaara</i> ; <i>Pauli Kolisoja</i> ; <i>Nuutti Vuorimies</i> ; <i>Jori Uusitalo</i>
16:00 - 17:45	Free Time		
17:00	Guided walk from Hotel Courtyard Marriott to Lentos (Optional)		
17:45	Departure at Lentos - MS Kaiserin Elisabeth II - Be on time!		
17:45 - 23:00	Welcome Dinner & Boat Trip with MS Kaiserin Elisabeth II		
23:00	Arrival at Lentos		

06.10.2015			
Conference Day 2 [Hotel Courtyard Marriott]			
	Session - [Room: Dachstein I] A2	Session - [Room: Dachstein II] B2	Session - [Room: Mondsee] C2
08:00 - 10:00	<p>Down and dirty Harvesting & soil protection Moderator: <i>Tadeusz Moskalik</i></p>	<p>Chopping it down and chopping it up Bioenergy Moderator: <i>Raffaele Spinelli</i></p>	<p>We need roads to see the trees Extraction & Transport Moderator: <i>Rien Visser</i></p>
(6 x 20min)	<ol style="list-style-type: none"> 1. Ground pressure is a poor indicator for ecological and technical compatibility - <i>Jörn Erler</i> 2. Effects on soil physical characteristics after forwarder passes for logging operations - <i>Martina Cambi</i>; <i>Rodolfo Picchio</i>; <i>Stefano Grigolato</i>; <i>Enrico Marchi</i> 3. Assessing the ability of hardwood and softwood brush mats to distribute applied loads - <i>Eric R. Labelle</i>; <i>Dirk Jaeger</i>; <i>Benjamin Poltorak</i> 4. Forwarding on soft soils, comparison of rutting with and without wooden bridge sections - <i>Tomas Nordfjell</i>; <i>Alexander Östlund</i> 5. Automatic wheel load control system as a contribution to improve soil protection and technical trafficability - <i>Florian Schnaible</i>; <i>Dirk Jaeger</i>; <i>Gero Becker</i> 6. Mounding as method of reforestation of wet and "problematic" forests on organic soils in Latvia - <i>Dagnija Lazdina</i>; <i>Andis Lazdins</i>; <i>Andis Bardulis</i>; <i>Janis Liepins</i>; <i>Uldis Prindulis</i>; <i>Agris Zimelis</i>; <i>Kristaps Makovskis</i>; <i>Aris Jansons</i> 	<ol style="list-style-type: none"> 1. How drum design can affect chipper performance - <i>Nataschia Magagnotti</i>; <i>Raffaele Spinelli</i>; <i>Eugenio Cavallo</i>; <i>Lars Eliasson</i>; <i>Alessio Facello</i> 2. Use of synthetic rope in the extraction of stems and whole tree in a radiata pine thinning on steep terrain in the North of Spain - <i>Elena Canga</i>; <i>Sandra Sánchez-García</i>; <i>Alba Fanjul</i>; <i>Juan Majada</i> 3. Evaluation of the Flowcut prototype head designed for early, biomass dense, thinnings - <i>Örjan Grönlund</i>; <i>Dan Bergström</i>; <i>Maria Iwarsson</i>; <i>Lars Eliasson</i> 4. Productivity and cost of harvesting short-rotation birch stands on cut-away peatlands in northern Finland - <i>Paula Jylhä</i>; <i>Dan Bergström</i> 5. Determining the Effects of Felling Method and Season of Year on Coppice Regeneration - <i>Daniel de Souza</i>; <i>Tom Gallagher</i>; <i>Dana Mitchell</i>; <i>Mathew Smidt</i>; <i>Tim McDonald</i> 6. Impact of number of stems retained per stool on harvester productivity and fuel consumption in Eucalyptus globulus second rotation coppiced plantations in south west Western Australia - <i>Rick Mitchell</i>; <i>Martin Strandgard</i>; <i>Mauricio Acuna</i> 	<ol style="list-style-type: none"> 1. Modular portable composite bridge systems for forest industry applications – review of a research program - <i>Raitis Lacis</i>; <i>Kristaps Gode</i>; <i>Edgars Rudzitis</i> 2. The estimation of extraction (haulage) distance for forest harvesting using terrain model of 3D Virtual Globe of GoogleEarth® - <i>Selcuk Gumus</i>; <i>Taha Yasin Hatay</i> 3. Payload management of forestry trucks using different weighing systems in Australia - <i>Mohammad Reza Ghaffariyan</i>; <i>Mark Brown</i> 4. Load space utilization of forwarder Valmet 860.4 - <i>Zdravko Pandur</i>; <i>Dubravko Horvat</i>; <i>Marijan Šušnjar</i>; <i>Marko Zorić</i>; <i>Marko Knežević</i> 5. Semi-automated traffic counting method for forest roads - <i>Balázs Kisfaludi</i>; <i>Péter Primusz</i>; <i>József Péterfalvi</i> 6. Forest road network planning accordance to single selection silvicultural method and environmental considerations based on AHP method using GIS - <i>Amir Hossein Firouzan</i>; <i>Abed Mahsa Hakimi</i>
10:00 - 10:30	Coffee Break		

	Session - [Room: Dachstein I] A3	Session - [Room: Dachstein II] B3	Session - [Room: Mondsee] C3
10:30 - 12:30	Doing it even better Productivity & efficiency II Moderator: Hans R. Heinimann	Improving your Bio(energy) Bioenergy & quality improvement Moderator: Keith Raymond	Looking after Mama Nature Environmental & Human Impacts Moderator: Jörn Erler
(6 x 20min)	1. Management and evaluation on team logging operation by GPS - efficiency and process improvement - Toshio Nitami 2. Economic analysis of a Eucalyptus globulus stocking and harvesting trial in Western Australia - Mauricio Acuna ; John Wiedemann ; Martin Strandgard ; Rick Mitchell 3. Estimating harvester productivities in pine stands of different ages and thinning intensities - Piotr S. Mederski ; Mariusz Bembenek ; Zbigniew Karaszewski ; Agnieszka Łacka ; Anna Szczepańska-Álvarez ; Martyyna Rosińska 4. The propose of performance standards for forwarders - Jiri Dvorak ; Pavel Natov ; Grzegorz Szewczyk ; Sadik Caglar 5. Selection of debarking technique for Pine logs in cut-to-length harvesting method - Mehmet Eker ; Davut Özer 6. Performance evaluation of artificial neural networks to modelling winching time of Timber Jack 450C - Hadi Bayati ; Akbar Najafi	1. Profitability of drying wood chips integrated into fuel wood supply - Jyrki Raitila ; Veli-Pekka Heiskanen 2. Validation of prediction models for estimating the moisture content of small diameter stem wood - Johanna Routa ; Marja Kolström ; Johanna Ruotsalainen ; Lauri Sikanen 3. Effect of sieve size and assortment on wood fuel quality during chipping operations - Kalvis Kons ; Dan Bergström ; Fulvio Di Fulvio 4. Accurate estimation of wood chip volume to increase efficiency in allocating chipper and transport capacities - Fabian Schultmeyer ; Karl Hüttl ; Herbert Borchert 5. Quality and productivity in comminution of small-diameter tree bundles - Yrjö Nuutinen ; Matleena Rytkönen ; Dan Bergström ; Fulvio di Fulvio ; Bo Dahlin ; Ismo Tiihonen ; Aaron Petty 6. Effects of moisture content on supply costs and CO ₂ emissions for an optimized supply network - Christian Kanzian ; Martin Kühmaier ; Gernot Erber	1. Influence of wheel load and wheel slip on rutting in forest operations - Sven Pasemann ; Jörn Erler ; Jörg Hittenbeck 2. Life cycle assessment and techno-economic analysis of energy crops utilization for biofuels in the Northeastern United States - Weiguo Liu ; Jingxin Wang 3. Evaluating the influence of root collar on stump height following mechanized forest operations - Joachim B. Heppelmann ; Eric R. Labelle ; Johannes Windisch ; Herbert Borchert ; Fabian Schultmeyer 4. Impact of traditional and arboricultural timber harvesting methods on the extent of damage to natural regeneration in the shelter wood - Tadeusz Moskalik ; Rafat Sokulski 5. Noise and vibration exposure in full-tree logging systems in the Southeastern U.S.A. - Stephanie Lynch ; Mathew Smidt ; Elizabeth Maples ; Richard Seseke 6. Skidding performance in reduced accessibility conditions - productivity and time consumption - Stelian Alexandru Borz
12:30 - 14:00	Lunch Break		
14:00 - 14:30	Poster Session II [Room: Dachstein Foyer & Feuerkogel]		

14:30 – 16:30	Session - [Room: Dachstein I] A4 <i>Going places</i> Improved planning I Moderator: Andreja Đuka	Session - [Room: Dachstein II] B4 <i>Getting it there</i> Wood chip supply chains Moderator: Tom Gallagher	Session - [Room: Mondsee] C4 <i>Flying High</i> Cable yarding Moderator: Pierre Ackerman
(6 x 20min)	1. Assessment of Winter Harvesting Operation in Mediterranean City of Kahramanmaraş in Turkey - <i>Abdullah Emin Akay; Orhan Erdaş; Halit Büyüksakallı; Dursun Şakar</i> 2. Sensor-based, automated monitoring of fully mechanised harvesting processes – including options for automated process control - <i>Martin Ziesak; Daniela Rommel; Stephan Ying; Patrick Preusch</i> 3. Evaluation of RFID UHF tags for electronic marking of standing trees - <i>Gianni Picchi; Martin Kühmaier; Juan De Dios Diaz</i> 4. Survival test of RFID UHF tags in timber harvesting operations - <i>Gianni Picchi; Martin Kühmaier; Juan De Dios Diaz</i> 5. Evaluation of the educational influence on forwarding planning capacity - <i>Ola Lindroos; Emil Brangenfeldt</i> 6. SLOPE, a 3D forest virtual system to support harvesting operations in mountain areas - <i>Daniele Magliocchetti; Federico Prandi; Giulio Panizzoni; Davide Lotto; Raffaele De Amicis</i>	1. Main innovation types of forest biomass supply chains - <i>Kalle Karttunen; Juha Laitila; Tapio Ranta</i> 2. A trial to evaluate three harvesting methods in a conifer first thinning in Ireland: cut to length harvesting, integrated harvesting, and whole tree harvesting - <i>Enda Coates; Brian Cronin; Tom Kent</i> 3. Developing biomass supply systems for forested marginal lands in Sweden - <i>Raul Fernandez-Lacruz; Dan Bergström</i> 4. The efficiency of the logistics of energy wood procurement chain in the north-eastern Poland - <i>Witold Zychowicz; Arkadiusz Gendek</i> 5. Effects of harvested tree size and density of undergrowth on the operational efficiency of a bundle-harvester system in early fuel wood thinnings - <i>Fulvio Di Fulvio; Dan Bergström; Yrjö Nuutinen</i>	1. An analysis of whole tree harvesting in North Italian cable logging operations - <i>Carolina Lombardini; Fabio De Francesco; Giovanni Aminti</i> 2. „Lowland cable yarder” in four different process variants - <i>Benjamin Engler; Christina Förster; Jörn Erler</i> 3. Efficiency of topping trees in cable yarding operations - <i>Christoph Huber; Karl Stampfer</i> 4. Terrain-going cable yarders: Systems alternatives and conditions for application - <i>Bruce Talbot; Stephan Hoffmann</i> 5. Case study of the Active 70 cable yarder in New Zealand plantation forests - <i>Thornton Campbell; Hunter Harrill; Rien Visser</i> 6. Evaluation of cable yarding method by means of multi-decision making and GIS in post fire harvesting - <i>Ebru Bilici; Tolga Öztürk; Muhittin İnan</i>
16:30 – 17:00	Coffee Break		

17:00 – 19:00	Session - [Room: Dachstein I] A5 <i>Going even more places</i> Improved planning II Moderator: Bruce Talbot	Session - [Room: Dachstein II] B5 <i>Going the right way</i> Logistics Moderator: Tomas Nordfjell	Session - [Room: Mondsee] C5 <i>Not easy on the slopes</i> Steep terrain Moderator: Raffaele Cavalli
(6 x 20min)	1. Computer vision, context aware aided, cable logging process - <i>Marek Pierzchala</i> ; <i>Knut Kvaal</i> 2. Towards better pre-clearance guideline of undergrowth on first thinnings: Case study Stora Enso Wood Supply Finland - <i>Kalle Kärhä</i> 3. Harmonizing measurements from wood harvesting machines to support near real time spatio-temporally enabled dashboards for process control - <i>Manfred Mittlboeck</i> ; <i>Johannes Scholz</i> ; <i>Ralph Jank</i> 4. LiDAR-based forest warehouse concept - <i>Martin Opferkuch</i> 5. Development and implementation of new features in a route selection and distance measurement system - <i>Gunnar Svenson</i> ; <i>Patrik Flisberg</i> ; <i>Mikael Rönnqvist</i> 6. Terrain evaluation to identify landing locations in mountain areas using soft computation techniques - <i>Sattar Ezzati</i> ; <i>Akbar Najafi</i> ; <i>Pete Bettinger</i> ; <i>Ljusk Ola Eriksson</i>	1. Optimization and logistics of chip distribution using LiDAR technology and network analysis in a mountainous region of Northern Spain - <i>Sandra Sánchez-García</i> ; <i>Miguel Pérez</i> ; <i>Covadonga Prendes</i> ; <i>Elena Canga</i> 2. Optimum bucking method for clear-cutting operations in Nasu Forest Owners' Co-operative, Tochigi Prefecture, Japan - <i>Kazuhiro Aruga</i> ; <i>Yoshiko Mizuniwa</i> ; <i>Ryo Uemura</i> ; <i>Chikara Nakahata</i> 3. ForstInVoice – Optimizing logistics service pattern in fully mechanized harvesting procedure - <i>Björn Urbanke</i> ; <i>Hans-Ulrich Dietz</i> ; <i>Ute Seeling</i> ; <i>Thomas Wehner</i> 4. Real-time managing of timber and biomass procurement, harvesting and supply based on multiple end-users demands in mountain forests - <i>Seppo Huurinainen</i> 5. Optimizing logistics of saw logs for a medium sized sawmill - <i>Juha Rikala</i> ; <i>Kyle Eyvindson</i> ; <i>Aaron Petty</i> ; <i>Veli-Pekka Kivinen</i> ; <i>Bo Dahlin</i> 6. An assessment of the logistics, cost and life cycle of supplying wood products in Tennessee - <i>Dalia Abbas</i>	1. Cable logging contract rates in the Alps: the effect of regional variability and technical constraints - <i>Raffaele Spinelli</i> ; <i>Rien Visser</i> ; <i>Oliver Thees</i> ; <i>Hans Udo Sauter</i> ; <i>Nike Krajnc</i> ; <i>Catherine Riond</i> ; <i>Natascia Magagnotti</i> 2. Self-charging wireless module for remote monitoring of forest machines - <i>Stefano Grigolato</i> ; <i>Francesco Marinello</i> ; <i>Andrea Pezzuolo</i> ; <i>Sandro Forigo</i> ; <i>Luigi Sartori</i> ; <i>Raffaele Cavalli</i> 3. Yarding with a tethered balloon, a new start in the French Alps - <i>Paul Magaud</i> ; <i>Francis De Morogues</i> ; <i>Mahmoud Chakroun</i> 4. Steep-slope timber-harvesting research in Western Canada - <i>Dzhamal Amishev</i> ; <i>James Hunt</i> 5. Research of kinematics and dynamics of tracked timber harvesting vehicle running gear - <i>Vladislav Klubnichkin</i> ; <i>Evgeny Klubnichkin</i> 6. Sensor Based Data Collecting on Motormanual Wood Harvesting Operations - <i>Oliver Thees</i> ; <i>Fritz Frutig</i> , <i>Renato Lemm</i>
19:00 - 20:00	Free Time		
19:30	Guided walk from Hotel Courtyard Marriott to Josef Brewery (Optional)		
20:00 - 23:00	Conference Dinner - [Josef Brewery]		

07.10.2015	Field Trip to AUSTROFOMA
	Forest machinery and bioenergy fair [Hochficht: www.austrofoma.at]
08:00	Transfer Hotel Courtyard Marriott - AUSTROFOMA: 8:00
15:30	Transfer AUSTROFOMA - Hotel Hotel Courtyard Marriott: 15:30
18:30	Guided walk from Hotel Courtyard Marriott to Cubus
19:00 - 23:00	Conference Dinner - [Cubus]

08.10.2015	Field Trip to AUSTROFOMA
	Forest machinery and bioenergy fair [Hochficht: www.austrofoma.at]
08:00	Transfer Hotel Courtyard Marriott - AUSTROFOMA: 8:00
15:30	Transfer AUSTROFOMA - Hotel Hotel Courtyard Marriott: 15:30