

International Mountain Logging  
and 13<sup>th</sup> Pacific Northwest Skyline Symposium

Technical Presentations, Monday, Tuesday and Wednesday, April 3, 4 and 5.

<b>Topic 1: Logging Operation Innovations that Reduce Cost or Improve Value</b>	
Authors	Title
Pete Bailey Skyline Thinning Company, USA	A contractor's perspective on skyline thinning equipment and logging innovations.
Micahelle Dunham Forest Engineering Research Institute of Canada	Innovations and new directions in helicopter logging in British Columbia.
Hans Heinimann ETH Zurich, Switzerland	European logging operations in protected forests.
Robert King R and R King Logging, USA	Long span skyline logging: Past applications and current niche.
Kevin Lyons University of British Columbia, Canada	Considering strain in cables when using a lagrangian coordinate formulation.
Max Merlich Columbia Helicopters Inc, USA	Helicopter logging applications: Important considerations for project success.
Glen Murphy, Dzhamal Amishev and Francisca Belart Oregon State University, USA	Two sensor technologies for in-forest measurement and sorting of logs based on internal wood properties.
Martin Fischbacher and Martin Mairhofer Koller GmbH, Austria	New skyline logging technology for yarding and tree processing with a 2 person crew.
Morten Nitteberg Norwegian Forest and Landscape Institute Norway	From off-road to on-road harvesting in steep terrain in Norway.
Didier Pischedda, France	Utilization of cable logging in France.
Tolga Ozturk, Necmettin Senturk and Hulusi Acar Isatnbul University, Turkey	Forest skylines in Turkey.
Thomas Steinmuller and Guenter Affenzeller University of Natural Resources and Applied Life Sciences, Vienna Austria	Comparison of integrated with conventional harvester-forwarder-concepts in thinning operations.
<b>Topic 2: Forest Roads and Transportation Management</b>	
Authors	Title

James Archuleta USDA Forest Service, USA	Temporary road and landing obliteration within skyline logging units.
Masashi Saito, Kazuhiro Aruga, Keigo Matsue and Toshiaki Tasaka Utsunomiya University, Japan	Development of the forest road design technique using LIDAR data of the Funyu experimental forest.
Kevin Bold, Pamela Edwards, and Karl Williard Southern Illinois University, USA	Case studies of erosion control practices: the broad-based dip.
Kevin Boston, Marvin Pyles and Andrea Bord Oregon State University, USA	Engineering the forest road structure.
Jarel Bruce, University of Montana, USA; Han-Sup Han, Humboldt State University, USA; Abdullah E. Akay, Kahramanmaras Sutcu Imam University, Turkey; Woodam Chung, University of Montana, USA	A computer application to estimate forest road construction cost.
Christopher Carr and Ned Washburn, Morrison Foerster, USA; Marvin Pyles, Oregon State University, USA	Clean water act developments and forest roads: Changing the regulatory state-of-the art forest road location, design, construction, maintenance and management.
Elizabeth Dodson, University of Montana, USA; Woodam Chung, University of Montana, USA; Keith Mills, Oregon Department of Forestry, USA John Sessions, Oregon State University, USA	Transportation planning and decision analysis to determine low volume road standards, long term needs and environmental risks and tradeoffs.
Brandon Gallagher Weyerhaeuser, USA	Steep gradient fish passage culvert alternatives to bridges.
Chris Mathewson Forest Engineering Research Institute of Canada	Evaluating forest road construction techniques: A case study of the right -of-way logging and construction activities.
Keith Mills, B. Lettenmaier, R. Thoreson, B. Teran, G. Miller Oregon Department of Forestry, USA	Transportation planning for the Wilson River Watershed in the "Tillamook Burn".
Murphy, Glen and Jeff Wimer Oregon State University, USA	Controlling truck productivity and costs.
Christopher Surfleet, Arne Skaugset and Amy Simmons Oregon State University, USA	Assessment of forest road hydrology modelling by the distributed hydrology soil vegetation model (DHSVM).
Elizabeth Toman and Arne Skaugset	Reducing sediment production from forest roads.

Oregon State University, USA	
David Tomberlin, NOAA Fisheries, USA Teresa Ish, University of California, Santa Cruz, USA	When is logging road erosion worth monitoring?
Aladdin Yuksel, Abdullah Akay, Orhan Erdas and Mahmut Reis Kahramanmaras Sutcu Imam University Turkey	Estimating average annual sediment production from the road network in Baskonus Research and Application Forest of KSU in Turkey.
<b>Topic 3: Harvest Planning and Quality Control Assessments</b>	
Woodam Chung, University of Montana, USA John Sessions, Oregon State University, USA John Holub, Confederated Salish and Kootenai Tribes, USA	SlopeRunner 1.0: A program to evaluate cable logging feasibility and the effectiveness of tower locations.
Muhittin Inan Istanbul University, Turkey	Spectral based modelling of forest resources and its potential use in harvesting.
Edwin Miyata, Francis Greulich, Kazuhiro Aruga, Koki Inoue Takushoku University, Japan	Determining the best machine and machine systems for harvesting operations.
Akira Kato and Peter Schiess University of Washington, USA	LIDAR derived tree parameters.
Masami Shiba Kyoto University, Japan	A GIS-based interactive spatial decision support system for integrating the management of protection and production forests
Henk Stander, Matthew Thompson and John Sessions Oregon State University USA	Introducing GuyLinePC: An educational tool for determining guyline configuration

<b>Topic 4: Environmental Quality in Mountain Logging</b>	
Mike Curran, BC Forest Service Chuck Bulmer, BC Forest Service Doug Maynard, Canadian Forest Service Peter Jordan, BC Forest Service Canada	Roads, trails and landings: Environmental considerations in managing the aisles to our library of forest resources.
Kelly Kibler Oregon State University, USA	Changes in stream temperature and canopy cover following timber harvesting of non-fish bearing headwater streams.
Timothy Otis Oregon State University, USA	Downstream temperature impacts of harvest in the Hinkle Creek Paired Watershed Study.

Arne Skaugset Oregon State University, USA	Contemporary paired watershed studies in the Pacific Northwest: Evaluating the effectiveness of contemporary forest practices.
Nicholas Zegre, Arne Skaugset and Lisa Ganio Oregon State University, USA Dan Moore, The University of British Columbia	The effects of contemporary forest harvesting practices on headwater and basin scale hydrology: First year post-harvest results.
<b>Topic 5: Biomass Utilization for Energy and Biofuels</b>	
Jack MacDonald Forest Engineering Research Institute of Canada	Estimated costs for harvesting, comminuting, and transporting beetle-killed pine in the Quesnel/Nazko area of Central British Columbia.
Fei Pan, University of Idaho Han Sup Han, Humboldt State University USA	Production and Cost of Harvesting and Transportation of Small-Diameter Trees for Energy.
Fei Pan, University of Idaho Han Sup Han, Humboldt State University USA	Net energy output from harvesting small-diameter trees with a mechanized system.
Tetsuhiko Yoshimura, Kyoto University, Japan Bruce Hartsough, University of California-Davis, USA	Conceptual evaluation of harvesting systems for fuel reduction and biomass collection on steep terrain using system dynamics.
<b>Topic 6: Workforce Recruitment, Training, Retention and Safety issues</b>	
Mike McDowell Weyerhaeuser, USA	World-class safety performance in a Pacific Northwest forest operation.
Rick Toupin and Greg Filip USDA Forest Service, USA	Danger trees.
Michael Vanderberg and Glen Murphy Oregon State University, USA	24/7 forest harvesting: Implications for production planning.
Bruce McMorland Forest Engineering Research Institute of Canada	Workforce recruitment, training and retention in British Columbia.