




International Scientific Conference on Hardwood Processing

September 24-25-26, 2007 Quebec City, Canada

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Event Program

TECHNICAL SESSION

September 24

Sponsored by Chemcraft International

8:15 am – 8:45 am Welcoming Remarks

8:45 am – 11:30 am

MARKETS

Moderator: Robert Beauregard, Ph.D., holder of the Industrial Research Chair on Engineered Wood Products for Structural and Appearance Applications (CIBISA), département des Sciences du bois et de la forêt, Université Laval, QC, Canada

Trends in tropical timber production and trade, 2005-2007

Keynote: Steven Johnson, Ph.D. – Forest Economics, Communications Manager, ITTO (International Tropical Timber Organisation), Yokohama, Japan.

Attitudes of Canadian Wood Household Furniture Retailers towards China, Canada and the USA as Manufacturing Source Countries

Torsten Lihra, Research Scientist, Group Leader - Furniture, FPInnovations-Forintek Division, Canada; Raoul Graf, Assistant Prof., Marketing Department, Université Laval, QC, Canada

10:00 am – 10:30 am Coffee break

Industrial Utilization of Hardwood in Sweden

Mats Nylinder, Department of Forest Products, Swedish University of Agricultural Sciences, Sweden; Lotta Woxblom, Research Assistant, Department of Forest Products, Swedish University of Agricultural Sciences, Uppsala, Sweden

Perspectives of Wood Resources, Competitive Ability and Wood Product Markets for Birch Industries in the Baltic Sea Area

Erkki Verkasalo, Prof. of Wood Science and Technology, METLA The Finnish Forest Research Institute, Joensuu Research Unit, Joensuu, Finland; Henrik Heräjärvi, Senior Researcher, METLA The Finnish Forest Research Institute, Joensuu Research Unit, Joensuu, Finland; Anne Toppinen, Program Manager, EFI European Forest Institute, Joensuu, Finland

11:30 pm – 1:15 pm Lunch

CONCURRENT SESSIONS

1:15 pm – 3:45 pm PRODUCT DEVELOPMENT, PERFORMANCE ASSESSMENT AND TESTING

Moderator: Cecilia Bustos, Ph.D., Prof. Department of Wood Science, and Director of the Wood Engineering program of the Wood Engineering Department of the Universidad del Bío-Bío (Concepción, Chile)

Product Development with Italian Underutilized Hardwood Species

Stefano Berti, Researcher CNR – IVALSA, Sesto Fiorentino, Italy; Michele Brunetti, Researcher CNR – IVALSA, Sesto Fiorentino, Italy; Michela Nocetti, Researcher CNR – IVALSA, Sesto Fiorentino, Italy

Brazilian Hardwood Species for Use as Utility Poles and Cross Arms-Testing, Processing and Implementation

David M. Carradine, Research Engineer, Washington State University Wood Materials and Engineering Laboratory, Pullman, WA, USA; J. R. Gonzalez, Technical Advisor, Rogers International Consulting, L.L.C., Salem, OR, USA

2:15 pm – 2:45 pm Coffee break

Paper Birch Red Heartwood

Guillaume Giroud, Université Laval, CRB, QC, Canada; Alain Cloutier, Professeur titulaire et directeur du Centre de recherche sur le bois, Université Laval, QC, Canada

Evaluation of the French Oak for a Structural Use

Jean-Denis Lanvin, Head of Mechanical Laboratories, CTBA, France; Didier Reuling, Research Manager, CTBA, Bordeaux, France; Yves Costrel, Secretary, APECF; Jacques Ducerf, President, APECF

1:15 pm – 5:30 pm FINISHING

Moderator: Marie-Lise Roux (INSA Engineer) in charge of the CTBA Furniture Area research and development

Evaluation of Coating Performance for Three Surfacing Methods on Paper Birch Wood

Julie Cool, Ph.D. Student, Université Laval, QC, Canada; **Roger E. Hernández**, Prof., Université Laval, QC, Canada

Surface Properties of Oil Finished Hardwood Floorings

Ahmed Koubaa, Prof., Université du Québec en Abitibi-Témiscamingue, QC, Canada

Clay-Based Acrylate Nanocomposites for Wood Coatings

Véronic Landry, Ph.D. Student, Université Laval, QC, Canada; **Bernard Riedl**, Prof., Université Laval, QC, Canada; **Pierre Blanchet**, Scientist, FPIInnovations-Forintek Division and Adjunct Prof., Université Laval, QC, Canada

Colour Change of Finished and Non-finished Hardwood in Outdoor Conditions

Martino Negri, Researcher CNR – IVALSA, San Michele all'Adige, Italy; **Jakub Sandak**, Ph.D CNR – IVALSA, San Michele all'Adige, Italy; **Barbara Tessadri**, Researcher CNR – IVALSA, San Michele all'Adige, Italy; **Ignazia Cuccui**, Researcher CNR – IVALSA, San Michele all'Adige, Italy

3:15 pm – 3:30 pm Coffee break

Novel Encapsulated Additive Technology NEAT-Based Light Stabilizers for the UV Protection of Wood Coatings

Daniel Rogez, Ciba Specialty Chemicals Inc; **Frank Pirrung**, Ciba Specialty Chemicals Inc; **Christian Schaller**, Ciba Specialty Chemicals Inc, Switzerland

Waterbase Finishing Systems on Hardwood and Furniture

Marie-Lise Roux, CTBA, France

Micro and Hydro-sandblasting for Wood and Wood Coatings

Laurence Podgorski, CTBA, France; **Véronique Georges**, CTBA Pôle Construction, Bordeaux, France; **Peter Svane**, Coating Consultancy, Taastrup, Denmark

Characterization of the Hardwood Surface

Sandak Jakub, Ph.D CNR – IVALSA, San Michele all'Adige, Italy; **Martino Negri**, Researcher CNR – IVALSA, San Michele all'Adige, Italy

5:30 pm – 7:00 pm Cocktail and Poster Session

September 25

Sponsored by Hexion Specialty Chemicals

8:00 am – 12:15 pm

OPTIMIZATION AND PROCESS

Moderator: Urs Buehlmann, Ph.D., CEO of Buehlmann Consulting, Malibu, CA

White Beech: a Tricky Problem in the Drying Process

Ottaviano Allegretti, Researcher CNR – IVALSA, San Michele all'Adige, Italy; Rodolfo Cividini, Private Consulting, Trieste, Italy; Livio Travan, NARDI s.r.l. Kiln Dryer, Soave Verona, Italy

Potential Advantages of Curve Sawing Hardwood Logs

Philip Araman, Scientist, USDA Forest Service Southern Research Station, Blacksburg, VA, USA; Brian Bond, Assistant Prof., Virginia Tech, Blacksburg, VA, USA; Mark White, Prof., Virginia Tech, Blacksburg, VA, USA; Peter Hamner, Research Associate, Virginia Tech, Blacksburg, VA

Super Heated Steam Drying of European Hardwoods

Wolfgang Gard, Delft University of Technology, The Netherlands; Michel Riepen, Senior Researcher, Wood Drying Centre Europe, Delft, The Netherlands

FTIR Spectroscopy and FTIR Microscopy in Combination with Cluster Analysis as Tools for Analysis and Control of Wood Properties and Production Processes

Günter Müller, Georg-August University Göttingen, Germany; Andrea Polle, Prof., Institute of Forest Botany, Department I: Forest Botany and Tree Physiology, Georg-August-University Göttingen, Göttingen, Germany

10:00 am – 10:15 am Coffee break

Hardwood Lumber Manufacturing Optimization Using NIR Spectroscopy

Adam Taylor, University of Tennessee, USA; MK Jeong, Assistant Prof., Industrial and Information Engineering, University of Tennessee, USA; Christian Steiner, Summer Intern, Tennessee Forest Products Center, University of Tennessee; Timothy Young, Res. Assoc. Prof., Tennessee Forest Products Center, University of Tennessee, USA

Species Independent Machine Grading of Hardwoods

Jan Van de Kuilen, TU Delft, The Netherlands & CNR – IVALSA, San Michele all'Adige, Italy; G.J.P. Ravensshorts, TNO Building and Underground Space, Delft, The Netherlands; Ario Ceccotti, Professor and CNR – IVALSA Director, Italy

The Impact of Real-Time Statistical Process Control Systems on Lumber Thickness Variation in Sawmills

Timothy M. Young, University of Tennessee, Knoxville, USA; Adam M. Taylor, Assistant Professor, University of Tennessee, Knoxville, USA

11:45 pm – 1:15 pm Lunch

1:15 pm – 3:15 pm

SUPPLY CHAIN MANAGEMENT

Moderator: Sophie D'Amours, Ph.D. Professor, CIRRELT', FORAC, Université Laval, holder of a Canada Research Chair in planning value creating network, and general director of the FOR@C Research Consortium dedicated to supply chain issues within the forest product industry

Setting up an Integrated Plant of Solid Wood Panels Supplying the Furniture Enterprise of the Future - An Exploratory Analysis

Riadh Azouzi, Research Associate, Industrial Research Chair on Engineered Wood Products for Structural

and Appearance Applications, CIBISA, Université Laval, QC, Canada; Robert Beaugard, Associate Prof., Industrial Research Chair on Engineered Wood Products for Structural and Appearance Applications (CIBISA), département des Sciences du bois et de la forêt, Université Laval, QC, Canada; Sophie D'Amours, Professor, CIRRELT', FORAC, Université Laval, QC, Canada; Yves Dessureault, Director, Technology Networks Development, Industrial Research Center of Québec (CRIQ), QC, Canada

Collaborative Wood Transportation with the Virtual Transportation Manager

Philippe Marier, Research Professional, FORAC Research Consortium and Interuniversity Research Center on Enterprise, Logistics and Transportation, U. Laval, QC, Canada; Jean-François Audy, Ph.D. Student, FORAC Research Consortium and Interuniversity Research Center on Enterprise, Logistics and Transportation, U. Laval, QC, Canada; Sophie D'Amours, Ph.D., Prof., CIRRELT', FORAC, U. Laval, QC, Canada; Catherine Gingras, Researcher, FPInnovations-FERIC, QC, Canada

Optimisation of Activities Throughout Wood Supply Chain

Arto Usenius, VTT Technical Research Centre of Finland, Finland; Antti Heikkilä, Researcher, VTT Technical Research Centre of Finland, Finland; Tiecheng Song, Researcher, VTT Technical Research Centre of Finland, Finland

Hardwood Lumber Supply Chain – Current Status and Market Opportunities

Urs Buehlmann, Associate Professor, Department of Wood Science and Forest Products, Virginia Tech, Blacksburg, VA, USA; Matthew Bumgardner, Forest Products Technologist, USDA Forest Service, Princeton, WV, USA; Al Schuler, Research Forester, USDA Forest Service, Princeton, WV, USA; Mark Barford, President, National Hardwood Lumber Association (NHLA), Memphis, TN, USA

3:15 pm – 3:30 pm Coffee break

3:30 pm – 5:15 pm RESPONSIBLE BUSINESS PRACTICES

Moderator: Carl-Éric Guertin, Manager Communication and Responsible Business at Q-WEB, QC, Canada

CORPORATE SOCIAL RESPONSIBILITY IN THE HARDWOOD MARKET: a case-study on the Italian wood working industry internationalization process

Keynote: Davide Pettenella, Associate Professor, University of Padova, Italy

Hardwood Pallet Production and Recycling

Philip Araman, Scientist, USDA Forest Service Southern Research Station, Blacksburg, VA, USA; Robert Bush, Prof., Virginia Tech, Blacksburg, VA, USA

Business Diversity and Sustainability Reporting as Proactive Agents for Sustainable Forestry

Reine Karlsson, Prof. of Ecodesign, University of Kalmar, Sweden; Inger Norell, Ph.D. Student, Department of Architecture, KTH - Royal Institute of Technology

Innovative Eco Barrels: Development of Industrial production

Frédéric Simon, Innovation Manager, CTBA Timber Engineering Unit, Pôle Industries Bois Construction, Bordeaux, France; Jean-Denis Lanvin, Head of Raw Materials Mechanical Lab, CTBA Timber Engineering Unit, Bordeaux, France; Frédéric Jobbe-Duval, President, ECB Eurocintrage, Cheraute, France, Jean Christophe Crachereau; Chambre d'agriculture Gironde, Blanquefort, France

6:00 pm – 11:00 pm Event dinner

POSTER SESSION

September 24

5:30 pm – 7:00 pm

Cocktail and Poster Session

FINISHING

X-Rays Densitometry and Uniformity Index of Eucalyptus

Bibiana Arango Alzate, Research Prof. at Pontificia Bolivariana University, Medellin, Colombia

Influence of Substrate Characteristics on the Coating Damages

Rosa Pérez, Head of Raw Materials Department, AIDIMA - Furniture, Wood and Packaging Technology Institute, Valencia, Spain; **Francisco Juan**, Technician of Raw Materials Department; **Nuria Domínguez**, Technician of Raw Materials Department; AIDIMA – Furniture, Wood and Packaging Technology Institute, Valencia, Spain

OPTIMIZATION AND PROCESS

How to Reach Primary Hardwood Producers with New Information

Philip Araman, Scientist, USDA Forest Service Southern Research Station, Blacksburg, VA, USA; **Robert L. Smith**, Prof., Virginia Tech, Blacksburg, VA, USA; **Matthew Winn**, Technician, USDA FS Southern Research Station, Blacksburg, VA, USA

A Computerized Training Tool for Hardwood Lumber Grading and Flitch Processing

Philip Araman, Scientist, USDA Forest Service Southern Research Station, Blacksburg, VA, USA; **A. Jefferson Palmer**, Computer Programmer, USDA FS Northern Research Station, Princeton, WV; **Matthew F. Winn**, Technician, USDA FS Southern Research Station, Blacksburg, VA; **D. Earl Kline**, Prof., Virginia Tech, Blacksburg, VA

Current and Past Hardwood Scanning R&D in Blacksburg, VA

Philip Araman, Scientist, USDA Forest Service Southern Research Station, Blacksburg, VA, USA

Computer Simulation Software for Veneer Processing and Product Development

Chunping Dai, Senior Scientist, FPInnovations-Forintek Division, Canada; **Brad Wang**, Scientist, FPInnovations-Forintek Division, Canada

Color Variability of Paper Birch (*Betula Papyrifera* Marsh.) Wood

Myriam Drouin, CRB, Université Laval, QC, Canada; **Robert Beauregard**, Ph.D., holder of the Industrial Research Chair on Engineered Wood Products for Structural and Appearance Applications (CIBISA); **Isabelle Duchesne**, Scientist, FPInnovations-Forintek Division, Canada

Characterization of White Birch and Sugar Maple Lignin During Wood Drying

Marcia Quaquarelli, Université Laval, Centre de recherche sur le bois, QC, Canada; **Tatjana Stevanovic**, Prof. titulaire, Faculté de Foresterie et de Géomatique, CRB, Université Laval, QC, Canada; **Alain Cloutier**, Prof. titulaire et directeur du Centre de recherche sur le bois, Université Laval, QC, Canada

PRODUCT DEVELOPMENT, PERFORMANCE ASSESSMENT AND TESTING

Characterization of the Drying Behaviour of Some Temperate and Tropical Hardwoods

Ottaviano Allegretti, Researcher CNR – IVALSA, San Michele all'Adige, Italy; Silvia Ferrari, Ph.D, Padova University, Padova, Italy

Wood Machining Properties and Development of Value-Added Products Prototypes from Drimys Winteri

Cecilia Bustos, Assistant Prof. Departamento de Ingeniería en Maderas, Universidad del Bío-Bío, Chile; Marcella Guzmán F., Assistant Prof., Departamento de Ingeniería en Maderas, Universidad del Bío-Bío, Chile; Gonzalo Hernández C., Eng., Instituto Forestal (INFOR), División Industrias, Concepción, Chile; Jorge Cabrera P., Project Leader, Instituto Forestal (INFOR), Valdivia, Chile

Radial Distribution of Extractives in Discoloured and Non-Discoloured Wood of Standing Paper Birch (*Betula papyrifera* Marsh.) trees

Daniel Fuentealba, Centre de recherche sur le bois (CRB), Université Laval, QC, Canada; Alain Cloutier, Prof. titulaire et directeur du Centre de recherche sur le bois, Université Laval, QC, Canada; Tatjana Stevanovic, Prof. titulaire, Faculté de Foresterie et de Géomatique, CRB, Université Laval, QC, Canada; Guillaume Giroud, Université Laval, Centre de recherche sur le bois, QC, Canada.

Hybrid Poplar for High Value Solid Wood Products

Robert Knudson, FPInnovations-Forintek Division, Canada; Rhonda Lindenbach-Gibson, FPInnovations-Forintek Division, Canada; Kurt Chesley, FPInnovations-Forintek Division, Canada; Peter Ens, FPInnovations-Forintek Division, Canada; John Wallace, FPInnovations-Forintek Division, Canada; Derek Williams, FPInnovations-Forintek Division, Canada

Early Detection of Surface Quality of Teak (*Tectona Grandis* L. f.) Through X-Ray Microdensitometry. Test on West African Plantations

Michela Nocetti, Researcher CNR – IVALSA, Sesto Fiorentino, Italy; Nicola Macchioni, Researcher CNR – IVALSA, Sesto Fiorentino, Italy; Philippe Rozenberg, Researcher INRA, Orleans, France

Relationship between Wood Gluability and Surface Composition

Benedetto Pizzo, Researcher CNR – IVALSA, Sesto Fiorentino, Italy; Ilaria Santoni, Researcher CNR – IVALSA, Sesto Fiorentino, Italy

Thermal treatment of hardwood species from Italian plantations: preliminary studies on some effects on technological properties of wood

Sabrina Palanti, CNR – IVALSA, Sesto Fiorentino, Italy; M. Brunetti, CNR – IVALSA, Sesto Fiorentino, Italy, A. Crivellaro, CNR – IVALSA, Sesto Fiorentino, Italy, E. Feci, CNR – IVALSA, Sesto Fiorentino, Italy, B. Pizzo, CNR – IVALSA, Sesto Fiorentino, Italy, I. Santoni, CNR – IVALSA, Sesto Fiorentino, Italy, C. Cremonini, Dip. AGROSELVITER, University of Turin, Italy, R. Zanuttini, Dip. AGROSELVITER, University of Turin, Italy

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