



# 58th SWST International Convention Renewable Materials and the Bio-Economy

**June 7-12, 2015**

Jackson Lake Lodge, Grand Teton National Park,  
Jackson, Wyoming



**Tuesday, June 9, 4:15-7:15**

**Poster Session and Student Poster Competition (with Cash Bar and Refreshments)**

**Moderator: Frederick Kamke, Oregon State University, USA**

Title of Presentation	Authors and Affiliations
Assessment of the Physical and Fiber Characteristics of <i>Alstonia boonei</i> for Pulp and Paper Production	Kojo Afrifah, Kwame Nkrumah University of Science and Technology, Ghana
Identification of the "Non-standard" Deformation Behaviour of European Beech and Norway Spruce during the Compression Loading	Martin Brabec, Mendel University in Brno, Czech Republic
Dynamic Mechanical Analysis of Different Wood Species	Nikki Brown, Pennsylvania State University, USA
Characterizing Restoration Materials for Historic Buildings Using the Dynamic Vapor Sorption Technique	Daniel Burnett, Surface Measurement Systems, USA
How Wood Influences Well-being in Indoor Environments: Building Materials, Well-being and Perception of the Indoor Environment	Kristian Bysheim, Norwegian Institute of Wood Technology, Norway
Anatomical Structures of Thermally Compressed Paulownia ( <i>Paulownia spp.</i> ) Wood	Zeki Candan, Istanbul University, Turkey
Dynamic Mechanical Thermal Analysis (DMTA) of Hybrid Biocomposites	Zeki Candan, Istanbul University, Turkey
Thermal Conductivity of Structural Plywood Panels Affected by Some Manufacturing Parameters and Aging Process	Zeki Candan, Istanbul University, Turkey
The Effect of Alkaline Treatment on Tensile Properties of Single Bamboo Fiber	Hong Chen, Nanjing Forestry University, China
Restoring the Mayflower II	Terry Conners, University of Kentucky, USA
Furniture and Lumber Exports in Ghana: A Comparative Study of Some Market Trends	Peter Kessels Dadzie, Kumasi Polytechnic, Ghana

# Poster Presentation



## Title of Presentation

## Authors and Affiliations

**Natural Weathering Performances of Outdoor Ultraviolet Finishing Systems on Tropical Fast Growing Woods**

Wayan Darmawan, Bogor Agricultural University, Indonesia

**Influence of Inherent Yellow-poplar Characteristics on Adhesion Properties Needed for Cross-laminated Timber Panels**

David DeVallance, West Virginia University, USA

**Global Trends in Furniture Production and Trade and the Turkish Furniture Industry**

Tuncer Dilik, Istanbul University, Turkey

**Serviceability Sensitivity Analysis of Wood Floors Using OpenSees**

Arya Ebrahimpour, Idaho State University, USA

**Impact-Deformation Relation of Surface Treated Wood Material**

Emine Seda Erdinler, Istanbul University, Turkey

**The U.S. Hardwood Supply Chain**

Omar Espinoza, University of Minnesota, USA

**Soybean Meal-Based Wood Adhesive Enhanced by Ethylene Glycol Diglycidyl Ether and Diethylenetriamine**

Qiang Gao, Beijing Forestry University, China

**Effect of Silviculture on Loblolly Pine as Bioenergy Feedstock**

Les Groom, USDA Forest Service Southern Station, USA

**Life-cycle GHG Emissions of Electricity from Syngas Produced by Pyrolyzing Woody Biomass**

Hongmei Gu, U.S. Forest Products Laboratory, USA

**Viscoelastic Creep Behavior of Surface and Inner Layer of Sugi and Hinoki Boxed-heart Timber under Various Temperatures**

Andi Hermawan, Kyushu University, Japan

**Preferences for Materials in City Buildings: Does Region of Origin Matter?**

Olav Hoibo, Norwegian University of Life Sciences, Norway

**Modeling and Design of a Disk-Type Furrow Opener's Coupler (Its Mechanical Analysis and Study for No-till Machinery) (Combination and Bertini)**

Payam Hooshmand, Sharif University of Technology, Iran

**Optimization of Energy Required and Energy Analysis for Rice Production Using Data Envelopment Analysis Approach**

Payam Hooshmand, Sharif University of Technology, Iran

**Lateral Load Path Analysis: Practical Modeling Methods for Light-Frame Structures**

Thanh Huynh, Oregon State University, USA

**Versatile Strategies for the Modification and Functionalization of the Wood Structure**

Tobias Keplinger, ETH Zurich, Switzerland

**Natural Durability of Yellow-hearted Red Pine (*Hwangjangmok*)**

Namhun Kim, Kangwon National University, Korea

**Effect of CNC Application Parameters on Wooden Surface Quality**

Kucuk Huseyin Koc, Istanbul University, Turkey

# Poster Presentation



Title of Presentation	Authors and Affiliations
COST Action FP1407 - Understanding Wood Modification through an Integrated Scientific and Environmental Impact Approach	Andreja Kutnar, University of Primorska, Slovenia
Sustainability, Environmental Impact and LCA in Build Environment in Slovenia and Sweden	Andreja Kutnar, University of Primorska, Slovenia
Sustainable Built Environment in Canada and Europe	Andreja Kutnar, University of Primorska, Slovenia
Examination of Water Phase Transitions in Black Spruce by Magnetic Resonance and Magnetic Resonance Imaging	Clevan Lamason, University of New Brunswick, Canada
Carbon Policy Failures and the Opportunity for Better Uses of Wood	Bruce Lippke, University of Washington, USA
Investigation of Hardwood Cross-laminated Timber Design	Joseph Loferski, Virginia Tech, USA
Durability Assessment of Bamboo Slats	Byrne Miyamoto, Oregon State University, USA
The Effect of Urea-formaldehyde Resin Adhesive on the Pyrolysis Mechanism of Poplar Particleboard with DAEM	Jun Mu, Beijing Forestry University, China
CLT Served Any Way You Want It: An Overview of 19 Plants Toured in 2012-2014	Lech Muszynski, Oregon State University, USA
Characteristics of Densified Sengon Wood ( <i>Paraserianthes falcataria</i> (L) Nielsen) by Compregnation Process	Dodi Nandika, Bogor Agricultural University, Indonesia
Local Production of Particle Board Using Ficus (SPP) Wood and Epoxy Resin Adhesive	Robert Okwori, Federal University of Technology, Nigeria
The Relationship between Fibre Characteristics and Strength Properties of Three Lesser Utilized Ghanaian Hardwood Species	Gladys Quartey, Takoradi Polytechnic, Ghana
Assessing Geographic Information Systems (GIS) Use in Marketing Applications: A Case of Study in the Wood Products Industry	Henry Quesada-Pineda, Virginia Tech, USA
Firm Performance in the Swedish Industry for Off-Site Produced Wooden Single-Family Houses	Tobias Schauerte, Linnaeus University, Sweden
From Single-Family Houses to Multi-Family Houses - Resistance to Change and Perceived Hinders	Tobias Schauerte, Linnaeus University, Sweden
Owning or Renting? Investigating Consumer Perceptions on Different Apartment Types in Wooden Multistory Houses in Sweden	Tobias Schauerte, Linnaeus University, Sweden
Hybrid Oriented Strand Boards made from Moso Bamboo ( <i>Phyllostachys pubescens</i> Mazel) and Aspen ( <i>Populus tremuloides</i> Michx.): Bamboo Surfaces, Aspen Core	Katherine Semple, University of British Columbia, Canada

# Poster Presentation



## Title of Presentation

## Authors and Affiliations

**Effects of Different Types of Housing Environment on Physiological Response**

Shasha Song, Beijing Forestry University, China

**Bamboo for Furniture and Housing in Ghana: The Certification and Standard Issues**

Stephen Tekpetey, Forestry Research Institute of Ghana, Ghana

**Identifying Stakeholder Interests and Concerns in the New Hardwood-based Bioeconomy**

Patricia Townsend, Washington State University, USA

**Impacts on the Wood Properties under Changing Conditions of Environment and Industry**

Johann Trischler, Linnaeus University, Sweden

**Comparing Load Carrying Capacity of Different Joinery Systems for Remanufacturing of Wooden Furniture and Recycling its Parts**

Mesut Uysal, Purdue University, USA

**Manufacturing Feasibility and Load Carrying Capacity of CNC-Joinery Systems**

Mesut Uysal, Purdue University, USA

**Impact of Different Recycling Methods on Reconstituted Panel Performance**

Hui Wan, Mississippi State University, USA

**Compressive Failure Characterization of Embossed and TAD Features in Paper Towel**

Guizhou Wang, North Carolina State University, USA

**Effects of Densification on Sugar Extraction from Woody Biomass**

Jingxin Wang, West Virginia University, USA

**Fractionation of the Liquefied Lignocellulosic Biomass for the Production of Platform Chemicals**

Junming Xu, Chinese Academy of Forestry, China

**Effects of Frequency and Processing Time on the Drying of Ultrasound-Assisted Impregnated Wood**

Songlin Yi, Beijing Forestry University, China

**Effects of Boron-Containing Flame Retardants on the Flame Resistance of Bamboo Filament**

Lili Yu, International Centre for Bamboo and Rattan, China

**Effect on Wood Mechanical Characteristics of Chinese Fir with High Temperature Drying Process**

Derong Zhang, Beijing Forestry University, China

# Student Poster Competition



## Title of Presentation

## Authors and Affiliations

Preparation of Strips from *Bambusa Vulgaris* Schrad Culms from Recycled Scaffold for Intermediate Raw Materials Production

Adeyinka Adesope, University of Ibadan, Nigeria

Effectiveness of *Gliricidia Sepium* Heart Wood Extractives as Preservative against Termite Attack

Lawrence Aguda, Forestry Research Institute of Nigeria, Nigeria

Comparative Life Cycle Analysis of Fossil and Bio-based PET Bottles

Luyi Chen, University of Minnesota, USA

Gender Diversity Impacts on Firm Performance in Forest Sector Firms

Kendall Conroy, Oregon State University, USA

Fungal Pretreatment Method Optimization for Small Wood Samples Degraded by *Ceriporiopsis Subvermispora*

Charles Edmunds, North Carolina State University, USA

Synthesis of TEMPO Cellulose Nanofibrils stabilized Copper Nanoparticles and its Release from Antimicrobial Polyvinyl Alcohol Film

Changle Jiang, West Virginia University, USA

Multi-technique Characterization of Douglas-fir Cell Wall Deconstruction during Mechanical Milling Pretreatment

Jinxue Jiang, Washington State University, USA

Optimization Study on Yield of CNC Cutting Wood-based Composite Panels for Upholstery Furniture Frames

Arif Caglar Konukcu, Mississippi State University, USA

Water States in Black Spruce and Aspen During Drying Studied by Time-Domain Magnetic Resonance Devices

Clevan Lamason, University of New Brunswick, Canada

The Effects of Soil Parent Material and Nitrogen Fertilization on Wood Quality of Douglas-fir in the Pacific Northwest

Luyi Li, University of Washington, USA

Soybean Meal-Based Adhesive Enhanced by a Commercial Epoxy Resin and a Post Heat Treatment

Jing Luo, Beijing Forestry University, China

Multi-scale Investigation of Adhesive Bond Durability

Paige McKinley, Oregon State University, USA

Dimensional Optimization of Beetle Kill Pine Interlocking Cross Laminated Timber (ICLT)

Massih Nilforoushan, University of Utah, USA

Effects of Cement Strength Grade and Particle Content on the Compressive Strength of Bamboo-cement Composites

Hamed Olayiwola, University of Ibadan, Nigeria

Moisture Stability of Post-manufacture Thermally Modified Welded Birch (*Betula pendula L.*) Wood

Jussi Ruponen, Aalto University, Finland

Effect of Cross-laminated Timber Floor Diaphragm Orientation on Shear Stiffness and Strength

Kyle Sullivan, Oregon State University, USA

Current Trends in Furniture Trade

Cagatay Tasdemir, Purdue University, USA

Manufacturing and Mechanical Characterization of a 3D Molded Core Strand Panel

Daniel Way, Oregon State University, USA

Self-Activation Process for Biomass Based Activated Carbon

Changlei Xia, University of North Texas, USA

Hybrids of TEMPO Nanofibrillated Cellulose and Copper Nanoparticles Embedded in Polyvinyl Alcohol Films for Antimicrobial Applications

Tuhua Zhong, West Virginia University, USA