



TECHNICAL PROGRAM (SUBJECT TO CHANGE)

(Please Note: All Presentations will be approx. 20 minutes and some sessions will end early. All Sessions will start on time.)

Wednesday, June 10
3:30pm-5:00pm

1.1: Biocomposites from Non-Woody Plants

Session Chair: **Nicole Stark**, *USDA Forest Products Lab, USA*

“The Effects of Cissus Populnea Gum and Rubber Latex on Physico-Mechanical Properties of Cement-Bonded Rattan Composites”

Abel Olorunnisola, *University of Ibadan, Nigeria*

“Pulp Blending Potential of Hibiscus Cannabinus and Pineapple Leaf Fibre”

Olajumoke Fagbemi, *Federal Institute of Industrial Research, Oshodi, Nigeria*

“Studies on Suitability of Water Hyacinth in the Production of Cement Bonded Fiberboard”

Ajayi Babatunde, *Federal University of Technology, Akure, Nigeria*

“Evaluation of the Dimensional Stability of Cement Bonded Particle Board from Coconut Husk”

Olajide Adejoba, *Forestry Research Institute of Nigeria*

2.1: Regional Trade and Resources

Session Chair: **Joy Das**, *Louisiana Forest Products Development Center/LSU, USA*

“Assessing the Cost, Life Cycle and Logistics of Supplying Wood in Tennessee”

Dalia Abbas, *Tennessee State University, USA*

“Changes in the Balance of Trade of U.S. Hardwood Products”

Richard Vlosky, *Louisiana Forest Products Development Center/LSU, USA*

On Behalf Of: **William Luppold**, *USDA Forest Service, USA*

“Demand and Cost Analysis: An Econometric Application on the Forest Products Industries of Alabama, 1996-2012”

Hakan Uslu, *Auburn University, USA*

“Timber Availability, Prices, and Market Trends in the U.S. South”

Jacek Siry, *University of Georgia, USA*

Co-Authors: **Tom Harris**, *University of Georgia*, **Jonathan Smith**, *Timber Mart-South Editor*

“A Temporal Comparison of the Primary and Secondary Wood Products Sectors in Louisiana”

Richard Vlosky, *Louisiana Forest Products Development Center/LSU, USA*

3.1: Bio-based Feedstock, Fuel and Products - Part I

Session Chair: **Cindy Chen**, *University of Washington, USA*

“Environmental Impacts of Imported Versus Locally Produced Pellets for Residential Heating in SE Alaska.”

Maureen Puettmann, *WoodLife Environmental Consultants LLC, USA*

“Assessment of Noise and Dust Level Generated in Wood Industries in Kwara State, Nigeria”

Kehinde Olonisakin, *Federal University of Technology, Akure, Nigeria*

“Life-Cycle Assessment of Woody Biomass Based Jet-Fuel: A Comparative Analysis”

Indroneil Ganguly, *University of Washington, USA*

“Pyrolysis of Lignocellulosic Biomass from Appalachian Region”

Oluwatosin Oginni, *West Virginia University, USA*

Thursday, June 11

8:30am-10:00am

1.2: Applications in Adhesives and Polymers

Session Chair: **Brian Via**, *Auburn University, USA*

“Adhesive Properties of Water Washed Cottonseed Meal on Poplar, Douglas Fir, Walnut, and White Oak”

Zhongqi He, *USDA-ARS, USA*

“Oak-wood-modification with PEG and PEG-functional silane”

Tillmann Meints, *Kompetenzzentrum Holz GmbH, Austria*

“Laminated wood products from green-glued *Eucalyptus grandis*”

Brand Wessels, *University of Stellenbosch, South Africa*

Co-Authors: **Marco Pröller**, *Salzburg University of Applied Sciences, Austria*; **Marius C. Barbu**, *University of „Transilvania“ Brasov, Romania*

“Use of Renewable Materials in the Forest Products Industry”

Linda Kim-Habermehl, *United Soybean Board, USA*

2.2: Marketing Wood Products

Session Chair: **Maria Fernanda Laguarda**, *University of Minnesota, USA*

“Marketing of Thermally Modified Wood”

Maria Fernanda Laguarda Mallo, *University of Minnesota, USA*

“Development of Information System for Wood-Based Industries in Ekiti State, Nigeria.”

Alo Akintunde, *College of Education, Ikere, Nigeria*

3.2: Bio-based Products and Power

Session Chair: **Anand Mishra**, *Louisiana Forest Products Development Center/LSU, USA*

“Determining and Testing the Optimized Strategy of Woody Biomass Feedstock Storage”
Yingqian Lin, *Michigan State University, USA*

“Monitoring Woody Biomass Chips Quality Change During Field Storage in Michigan”
Yingqian Lin, *Michigan State University, USA*

“Industrial Feedstock Grade Veneer Production and Use for Bio-Based Products and Biofuel Feedstocks”
James Dooley, *Forest Concepts, LLC, USA*

4.1: Non-Destructive Testing

Session Chair: **Ed Thomas**, *USDA Forest Products Lab, USA*

“Modulus of Elasticity Assessment of Loblolly Pine Standing Trees using Acoustic Equipment”
George Cheng, *Auburn University, USA*

“Screening Disease Tolerant Pinus Taeda (Loblolly Pine) Families for Chemistry, Stiffness and Bioenergy using NIR and FTIR”
Gifty Acquah, *Auburn University, USA*

“Detecting Tree Characteristics While Harvesting: An Acoustic Stem Diameter Sensor”
Timothy McDonald, *Auburn University, USA*

“Nondestructive Evaluation of the Wood Properties of Loblolly Pine Grown in Southern Brazil”
Jorge Luis Monteiro de Matos, *Federal University of Parana, Brazil*

10:30am-12:00pm

1.3: Biobased Epoxy: Adhesives and Resins

Session Chair: **Maria Auad**, *Auburn University, USA*

“Bio-Based Thermosetting Epoxy Resins”
Maria Auad, *Auburn University, USA*

“Pyrolysis and Liquefied Biomass-Based-Bio-Oil Cross linked with Epoxy for Wood Composites”
Brian Via, *Auburn University, USA*

“Commercial Evaluation of Novel Soy Based Resin”
Dilpreet Bajwa, *North Dakota State University, USA*

2.3: Economics and Policy

Session Chair: **Richard Vlosky**, *Louisiana Forest Products Development Center/LSU, USA*

“An Analysis of Wood Trade Patterns and Bilateral-Trade Agreements in India”

Joy Das, *Louisiana Forest Products Development Center/LSU, USA*

“Regulatory Leakage: Timber Legality Policies and Diversion in the Asian Wood Products Industry”

Benjamin Roe, *University of Washington, CINTRAFOR, USA*

“Using the Return-at-Risk Method to Evaluate Biomass-based Electricity Investment in India”

Anand Mishra, *Louisiana Forest Products Development Center/LSU, USA*

3.3: Bio-based Feedstock, Fuel and Products - Part II

Session Chair: **Oluwatosin Oginni**, *West Virginia University*

“Woody Biomass Feedstock Harvesting from a Hybrid Poplar Plantation in Escanaba Michigan: A Case Study”

Zach Carter, *Michigan State University, USA*

“Willingness to Supply Biomass for Electricity Generation in Rural Uttarkhand, India”

Anand Mishra, *Louisiana Forest Products Development Center/LSU, USA*

4.2: Wood Moisture Relations

Session Chair: **Joseph Dahlen**, *University of Georgia, USA*

“Measuring Wood Moisture Content in Wet-Decks using Time-Domain Reflectometry”

Joe Dahlen, *University of Georgia, USA*

“Predicting Basic, Oven-dried and Green densities using Log Diameter, Chemistry, and Ultrasonic Velocity of Juvenile Wood”

Charles Essien, *Auburn University, USA*

“Investigation of Water States in Southern Pine Wood by Nuclear Magnetic Resonance Technique”

Leandro Passarini, *USDA Forest Products Lab, USA*

1:30pm-3:00pm

1.4: Cellulose Biocomposites: Reinforcing the Future

Session Chair: **George Cheng**, *Auburn University, USA*

“Microfibrillated Cellulose Reinforcement in Phenol Formaldehyde Wood Adhesive”

William Hand, *Auburn University, USA*

“Identification of Non-Native Cellulose in Cellulose-Based Composites”

Akwasi Asamoah, *University of Exeter, UK*

“Biodegradable Composites from Wax and Surfactant Encapsulated Microcrystalline Cellulose and Poly(lactic acid)”

George Cheng, *Auburn University, USA*

2.4: Trade and Certification

Session Chair: **Timothy Young**, *University of Tennessee, Center for Renewable Carbon, USA*

“An Examination of Worldwide Hardwood Lumber Production, Trade”

Richard Vlosky, *Louisiana Forest Products Development Center/LSU, USA*

On Behalf Of: **William Luppold**, *USDA Forest Service, USA*

“Regional Differences in the Apparently Expanding Hardwood Sawtimber Resource”

Eric McConnell, *North Carolina State University, USA*

On Behalf of: **William Luppold**, *USDA Forest Service, USA*

“Characteristics of Colorado Forestry Contractors and their Role in Forest Health Issues”

Damon Vaughan, *Colorado State University, USA*

“Contributions of Forest-based Revenues to Farm Wealth”

Eric McConnell, *North Carolina State University, USA*

3.4: Biomass Chemistry

Session Chair: **Hui Pan**, *Louisiana Forest Products Development Center/LSU, USA*

“Conversion of Aqueous Fraction Bio-oil Sugars to 5-methylhydroxyfurfural (HMF) and Furfural by Using H-form Zeolite/Metal Chlorides Catalyst System”

El Barbary Hassan, *Mississippi State University, USA*

“The Effect of Temperature on Biomass Properties During Steam Explosion Treatment”

Wei Jiang, *Qingdao University, China*

“Combustion properties of Briquettes Produced from Maize Cob of Different Particle Sizes”

Adekunle Adetogun, *Department of Forestry and Wildlife Management, Federal University of Agriculture, Abeokuta, Ogun State, Nigeria*

“Environmental Assessment of Mild Bisulfite (MBS) Pretreatment of Forest Residues into Fermentable Sugars for Biofuel Production”

Ikechukwu Nwaneshiudu, *University of Washington, USA*

“The Novel Role of Organosolv Lignins in Enhancing Enzymatic Hydrolysis of Lignocellulosic Biomass”

Yang Huang, *Auburn University, USA*

4.3: Wood Chemistry and Beyond

Session Chair: **Thomas Eberhardt**, *USDA Forest Products Lab, USA*

“Impacts of Long-Term Elevated CO₂ Concentrations on Bark Chemistry and Utilization: A Case Study with Sweetgum Inner and Outer Bark Tissues”

Thomas Eberhardt, *USDA Forest Products Lab, USA*

“A Comparative Study on the Chemical Components, Microstructure and Mechanical Property of Cell Wall of Populus Deltoides and its Hybrid Poplar”

Yurong Wang, *University of Tennessee, Center for Renewable Carbon, USA*

“Source and variation of Hydroxyl Groups in Liquefaction Oil of Loblolly Pine Produced at Different Temperatures”

Yusuf Celikbag, *Auburn University, USA*

“Applying Near Infrared Spectroscopy for Comprehensive Study of Hardwood Content and Monosaccharide Ratio”

Chengfeng Zhou, *Auburn University, USA*

3:30pm-5:00pm

1.5: Biobased Fibers and Polymers

Session Chair: **Marius Barbu**, *Salzburg University of Applied Sciences, Austria*

“Assessment of Physical and Mechanical Properties of Plastic Composite Produced from Oil Palm Pressed Fruit Fiber (PFF)”

Ajayi Babatunde, *Federal University of Technology, Akure, Nigeria*

“Synthesis and Performance of Pyrolysis Oil – Formaldehyde Adhesive from *Pinus Caribaea* (Morelet) as Particle Board Binder”

Yetunde Bolarinwa, *Federal College of Forestry, Nigeria*

2.5: Life Cycle Assessment

Session Chair: **Dalia Abbas**, *Tennessee State University, USA*

“LCAs and EDPs: What Are They and Why Should We Care”

Maureen Puettmann, *WoodLife Environmental Consultants LLC, USA*

“Life Cycle Inventory Update for OSB and Plywood”

Adam Taylor, *University of Tennessee, USA*

“Net Change in CO₂ Emissions Due to Increased Wood use for Non-Residential Construction in the U.S.”

Prakash Nepal, *US Forest Service, USA*

“Modeling the Relationship between Environmental Perspectives and Usage of Green Products among U.S. Homebuilders using Structural Equation Model”

Cindy Chen, *CINTRAFOR, University of Washington, USA*

3.5: Building Materials and Properties

Session Chair: **Niels de Hoop**, Louisiana Forest Products Development Center/LSU, USA

“New Ways in Composite Design - Introducing Round Wood for Modern Bridge and Truss Structures”

Kay-Uwe Schober, Mainz University of Applied Sciences, Germany

“Water Vapor Movement in the Walls & Rim Cavity of Wood Frame Walls in Michigan Case Study Homes”

Brian Lieburn, Dow Building Solutions, USA

“Production and Evaluation of Strength and Dimensional Properties of Bamboo-Cement board for Use as Low-Cost Building Component”

Adeyinka, Saheed Adesope, Forestry Research Institute of Nigeria

4.4: Physical Properties of Wood

Session Chair: **Leandro Passarini**, Forest Products Laboratory, USA

“Lumber Strength and Stiffness Properties from Intensively Managed Loblolly Pine Plantations”

Joe Dahlen, University of Georgia, USA

“Color Differences Between Young and Old-Growth Acacia Koa Based on Colorimetric and Visual Assessments”

Thomas Eberhardt, USDA Forest Products Lab, USA

On Behalf Of: **Jan Wiedenbeck**, USDA Forest Service, USA

“An Analysis of the Differences Among Log Scaling Methods and Actual Log Volume”

Edward Thomas, USDA Forest Service, USA

“Assessing the Utilization of 4-8 Year-Old Falcata [PARASERIANTHES FALCATARIA (L.) NIELSEN] for Lumber Production”

Marina Alipon, Forest Products Research and Development Institute, Philippines

Friday, June 12
8:30am-10:00am

1.6: New Plastics from Natural Materials

Session Chair: **Zhongqi He**, USDA-ARS Southern Regional Research Center, USA

“Strength and Sorption Properties of Bamboo (Bambusa Vulgaris) Wood-Plastic Composites”

Ajayi Babatunde, Federal University of Technology, Akure, Nigeria

“Bondline Discoloration of PVAc-Glued Wood Assemblies”

Fabio Chiozza, VINAVIL SpA, Italy

“Sustainable Plastic For Future: Poly(lactic) Acid with Epoxidized Jatropha Oil as an Excellent Future Plasticizer”

Siti Hasnah Kamarudin, Universiti Putra, Malaysia

“Thermal and Mechanical Properties of Cellulose Nanofibers Reinforced Polyvinyl Alcohol Composite Films”
Md Nuruddin, Tuskegee University, USA

2.6: Modified Wood

Session Chair: **Maureen Puettmann**, WoodLife Environmental Consultants LLC, USA

“Dynamic Water Vapour Sorption Properties and Dimensional Stability of Thermally and Acid-Treated Scots Pine (Pinus Sylvestris L.)”

Reza Hosseinpourpia, University of Göttingen, Germany

“Destructive and Nondestructive Evaluation of Thermally Modified Laminated Strand Lumber and Laminated Veneer Lumber”

Matthew Aro, University of Minnesota Duluth Natural Resources Research Institute, USA

Co-Authors: **Patrick K. Donahue**, **Brian K. Brashaw**, University of Minnesota Duluth Natural Resources Research Institute, **Xiping Wang**, U.S. Department of Agriculture, Forest Service, Forest Products Laboratory

“Use of Lignosulphonates for the Wood Impregnation”

Eugenia Tudor, Salzburg University of Applied Sciences, Austria

Co-Authors: **Severin Hollerweger**, **Arthur Gstöttner**, **Marius C. Barbu**, **Gianluca Tondi**, Salzburg University of Applied Sciences, Austria

3.6: Cross-Laminated and Thermal Building Materials

Session Chair: **Lori Koch**, American Wood Council, USA

“Light Weight Cross Laminated Massive Wood Panels”

Lukas Delbek and Tobias Ullrich, Salzburg University of Applied Sciences, Austria

Co-Authors: **Marius C. Barbu**, University of „Transilvania“ Brasov, Romania; **Gerhard Felber**, Salzburg University of Applied Sciences, Austria; **Christof Richter**, Binderholz, Tyrol, Austria

“Fire Safety of Tall Wood Buildings in the USA”

David Barber, Arup, USA

10:30am-12:00pm

1.7: Wood and Fiber Composites

Session Chair: **Emmanuel Sackey**, Jeld-Wen Inc., USA

“Annual Plants Fibres for Thermal Insulation Material”

Thomas Schnabel and Katherina Nagl, Salzburg University of Applied Sciences, Austria

Co-Authors: **Peter Wolf**, Upper Austria University of Applied Sciences, Wels, Austria; **Alexander Jäger**, **Marius C. Barbu**, **Huber Hermann**, **Alexander Petutschnigg**, Salzburg University of Applied Sciences, Austria

“Efficient Laccase-Mediator-System for the Production of Wood Fiber Insulation Boards Using the Hot-Air/Hot-Steam Process”

Markus Euring, University of Göttingen, Germany

“Physico-Mechanical Properties of Hollow Pipes Produced from *Acanthaus montanus* Fibre-Reinforced Cement-Bonded Composite”

Abel Olorunnisola, *University of Ibadan, Nigeria*

“Using Fracture Mechanics to Evaluate the Durability of Wood Resins Under Accelerated Aging”

Babak Mirzaei, *Oregon State University*

Co-Authors: **Arijit Sinha, John Nairn**, *Oregon State University*

3.7: Nanotechnology for the 21st Century

Session Chair: **Hui Wan**, *Mississippi State University, USA*

“The Effect of Xanthan Gum on Stability and Thermal Conductivity Enhancement of Nanofluid”

Saba rashidi, *University Putra, Malaysia*

“Ultra-Fine Friction Grinding of Wood Saccharification Residues: Effects of Energy Input on the Structural Characteristics of the Resulted Nanofibers”

Han-Seung Yang, *University of Minnesota, USA*

“What is the Versatility of Nanocellulose in Coatings?”

Akwasi Asamoah, *University of Exeter, UK*