



## 48th Annual Convention Society of Wood Science and Technology

June 19, 2005

Delta Quebec Hotel  
Quebec City, Quebec, Canada

### Session I: Nanotechnology for the Forest Products Industry Duquesne Room

**8:00–8:30 Registration & Coffee**

**8:30–8:35 “Welcome”**

*Paul M. Smith*, Professor, Penn State Univ.,  
Univ. Park, PA and President, SWST

**8:35–8:45 “Introductory Remarks”**

*Michael P. Wolcott*, Chair, SWST Research  
Initiatives Committee, and Professor, WSU,  
Pullman, WA

**8:45–9:15 “Update on the National  
Nanotechnology Initiative - for the  
Forest Products Industry.”**

—*Theodore H. Wegner*, Assistant Director,  
Forest Products Lab, Madison, WI  
—*Phil Jones*, Imerys (supplier to the coatings  
industry), Atlanta, GA

**9:15–9:45 “The Research Fit of  
Nanotechnology Within the AF&PA’s  
Agenda 2020”**

*Lori A. Perine*, Executive Director for Agenda  
2020, AF&PA, Washington, DC

**9:45–10:15 “Opportunities for  
Collaboration Between PPERA &  
SWST on a Nanotechnology Research  
Agenda for the Forest Industry”**

*Harry Cullinan*, Head, Pulp & Paper Education  
and Research Alliance, and Prof. & Dept.  
Head, Pulp & Paper Center, Auburn, Univ.,  
Auburn, AL

**10:15–10:45 “Bio-based Nanocomposites:  
Challenges and Opportunities”**

*John Simonsen*, Prof., Oregon State Univ.,  
Corvallis, OR

**10:45–11:15 “Nanotechnology and Wood  
Composites – Impact and  
Opportunity”**

*Timothy G. Rials*, Prof. & Director, Forest  
Products Center, Univ. of TN, Knoxville, TN.

**11:15–11:30 “The Research Initiatives  
Committee: Organizing SWST  
Toward a Vision in Nanotechnology  
Research Funding”**

*Michael P. Wolcott*, Chair, SWST Research  
Initiatives Committee, and Professor, WSU,  
Pullman, WA

### Session II: Understanding Standing Timber Properties to Improve Wood Quality Lauzon Room

**8:30–9:00 “Impact of Silvicultural Practices  
on Wood Quality of Southern Pine”**

—*Alexander Clark III*, Research Scientist,  
Southern Research Station, Athens, GA  
—*Richard F. Daniels*, Professor, Univ. of  
Georgia, Athens, GA

**9:00–9:30 “Near Infrared Spectroscopy for  
the Rapid Assessment of Wood  
Properties”**

—*Laurence Schimleck*, Assistant Professor,  
Univ. of Georgia, Athens, GA  
—*Chi-Leung So*, Postdoctoral Scientist,  
Louisiana State Univ, Baton Rouge, LA  
—*D. Jones*, Ph.D. Candidate, University of  
Georgia, Athens, GA

—*Leslie Groom*, Project Leader, Southern Research Station, Pineville, LA  
—*Richard F. Daniels*, Professor, University of Georgia, Athens, GA  
—*Alexander Clark III*, Research Scientist, Southern Research Station, Athens, GA  
—*G. Peter*, Associate Professor, University of Florida, Gainesville, FL  
—*Todd Shupe*, Associate Professor, Louisiana State University, Baton Rouge, LA

**9:30–10:00 “Impact of Stand Density Management on Stem Quality, Wood Characteristics and Lumber Bending Properties in the S-P-F Species in Eastern Canada”**

*S.Y. Zhang*, Senior Scientist & Group Leader, Forintek Canada Corp., Sainte-Foy, Quebec, Canada

**10:00–10:15 “Genetic Selection for Wood Properties of Standing Trees”**

—*Jennifer H. Myszewski*, Res. Geneticist, Southern Research Station, Saucier, MS  
—*Tom Byram*, Director, Western Gulf Forest Tree Impr. Prog., Texas Forest Service  
—*David Gwaze*, Resource Scientist, Missouri Dept. of Conservation  
—*Bill Lowe*, Director, Western Gulf Forest Tree Impr. Prog., Texas Forest Service

**10:15–10:30 “Impact of Rotation Age on Jack Pine Lumber Grade Yield and Bending Properties”**

—*I. Duchesne*, Research Scientist, Forintek Canada Corp., Sainte-Foy, Quebec, Canada  
—*S.Y. Zhang*, Senior Scientist and Group Leader, Forintek Canada Corp., Sainte-Foy, Quebec, Canada

**10:30–10:45 “Detection and 3-D Visualization of Wetwood in Subalpine Fir Trees Using Industrial X-ray CT Imaging”**

*S. Alkan*, Research Scientist, Forintek Canada Corp., Vancouver, BC, Canada

**10:45–11:00 “A Theoretic Model for Estimating the Longitudinal Elastic Modulus of Softwoods Using Wood Anatomical Parameters”**

*Z. Q. Hou*, Postdoctoral Scientist, Forintek Canada Corp., Sainte-Foy, Quebec, Canada

**11:00–11:15 “Relationship Between Stem Taper, Crown Depth and External Knot Characteristics in Balsam Fir (*Abies balsamea*) from the Maritime Lowlands”**

*D. Turner*, Ph.D. Candidate, University of New Brunswick, Fredericton, NB, Canada

**11:15–11:30 “Impact of Commercial Thinning on Wood Density and Strength in Jack Pine”**

—*R. Schneider*, Ph.D student, Laval University  
—*S.Y. Zhang*, Senior Scientist & Group Leader, Forintek Canada Corp., Sainte-Foy, Quebec,  
—*J. Begin*, Professor, Laval University; Quebec City, Quebec, Canada  
—*E Swift*, Atlantic Forestry Centre, Fredericton, NB, Canada

**Awards, Business Meeting, Lunch**

**Jonquiere Room**

**11:30–1:00**

**Session III: Wood Physics and Drying Fundamentals  
Lauzon Room**

**1:00 Introduction by the Moderator**

*R. W. Rice*, Professor, Univ. of Maine, Orono, ME

**1:00–1:20 Variability in Longitudinal Shrinkage Rates of Southern Pine and Implications for the Development of Warp in Lumber**

*Mark A. Stanish*, Research Eng, Weyerhaeuser R&D, Federal Way, WA

**1:20–1:40 Microwave-based Wood Moisture Sensor for Dry Kilns**

*William Moschler*, Research Instructor, University of Tennessee, Knoxville. TN

**1:40–2:00 XMT Imaging and Digital  
Volume Correlation for  
Characterization of  
Micromechanical Performance in  
Wood-Plastic Composites**

—*Lech Muszynski*, Assistant Professor, Oregon  
State University, Corvallis, OR

—*Brian Bay*, Associate Professor, Dept. of  
Mechanical Engineering, Oregon State  
University, Corvallis, OR.

**2:00–2:20 The Psychrometric Chart—  
Theory and Application**

*Perry N. Peralta*, Associate Professor, Dept. of  
Wood and Paper Science, NC State University,  
Raleigh, NC

**2:20–2:40 Diffusion Characteristics of Red  
Maple Under Microwave Heating**

*Jia Donghua*, University of New Brunswick,  
Fredericton, New Brunswick, Canada

**2:40–3:00 Dimension Stabilization via  
Forced Slab Drying**

*Rubin Shmulsky*, Mississippi State University,  
Mississippi State, MS

**3:00–3:20 Influence of Wood Structure  
on Moisture Desorption and  
Changes in Its Properties Above the  
Fiber Saturation Point**

*Giana Almeida*, Universite Laval, Dept. des  
Sciences du Bois et de la Foret, Quebec,  
Canada

**3:20–3:40 Package Traceability in a  
Lumber Mill Can Help Improve  
Drying Quality**

*Francois Leger*, Forintek Canada Corp.,  
Quebec, Canada

**3:40–4:00 Acoustic Evaluation of Warp  
Potential in Small Diameter  
Ponderosa Pine Trees**

*Xiping Wang*, Natural Resources Research  
Institute, Univ. of Minnesota-Duluth, Duluth,  
MN and Forest Products Lab, Madison, WI

**Session IV: Wood Modification  
Duquesne Room**

**1:00 Introduction by the Moderator**  
*Dr. Douglas Gardner*, Professor, Univ. of  
Maine, Orono, ME

**1:05–1:55 Wood Modification Keynote**

*Dr. Roger Rowell*, Project Leader and Professor,  
Modified Lignocellulosic Materials, Forest  
Products Lab and University of Wisconsin,  
Madison, WI

**2:00–2:25 New Protection Systems With  
Silicons and Silanes**

*Carsten Mai* and *Holger Militz*, University of  
Gottigen, Germany

**2:30–2:55 Modification of Medium  
Density Fiberboard Furnish:  
Analysis and Products**

*Tom Elder*, USDA Forest Service,  
Pineville, LA

**3:00–3:25 WPCs Made from Modified  
Wood and Bioderived  
Thermoplastics**

*M.E. P. Walinder*, *M. Westin*, SP Swedish  
National Testing and Research Institute

**3:30–3:55 Wood Core Shell Structures  
for Use in Wood Plastic Composites**

*Armando McDonald*, U Idaho, Moscow, ID

**3:55–4:00 Concluding Remarks**

**Technical Forum  
&  
Student Poster Competition**

**Room 200B**

**Quebec City Convention Centre**

**4:00–5:30**

**Joint SWST/FPS Host Reception**

**Foyer**

**Quebec City Convention Centre**

**6:30-8:00**

Accommodations are available at the Delta Quebec Hotel, 690, Boulevard Rene-Levesque Est., Quebec, QC G1R 5A8 Canada, at the conference rate of \$166 Delta room, \$186 Premier Room, and \$216 Signature Club (Concierge Level) (these are all in CAN \$ + tax) prior to May 17, 2005. Reservations may be made by calling 1-888-884-7777 or 418-647-1717. <http://www.deltaquebec.com>

Mention the Forest Products Society to ensure the above room rate.

## About the Society

Founded in 1958, the Society of Wood Science and Technology is an internationally recognized professional society with the following purposes:

- ❖ Develop and maintain the unique body of knowledge distinctive to wood science and technology
- ❖ Encourage the communication and use of this knowledge
- ❖ Promote policies and procedures which assure the wise use of wood and wood-based products
- ❖ Assure high standards for professional performance of wood scientists and technologists
- ❖ Foster educational programs at all levels of Wood Science and Technology and further the quality of such programs
- ❖ Represent the profession in public policy development

**Return by June 1, 2005 to:**

Vicki Herian  
Executive Director  
Society of Wood Science and Technology  
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Madison, WI 53726-2398  
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Fax: 608-231-9592  
Email: vherian@fs.fed.us

**Registration Form  
48<sup>th</sup> SWST Annual Convention  
June 19, 2005  
Delta Quebec Hotel  
Quebec, Canada**

Name \_\_\_\_\_

Title \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State/Province \_\_\_\_\_ Zip \_\_\_\_\_

Telephone (    ) \_\_\_\_\_

Fax (    ) \_\_\_\_\_

Email \_\_\_\_\_

**Registration Costs\***

<b>Before June 1</b>	<b>After June 1</b>
Members: \$160	Members: \$185
Students & Retired: \$50	Students & Retired: \$75
Nonmembers: \$240	Nonmembers: \$265

\*Includes refreshments, lunch, and the evening host reception.

Credit Card  
# \_\_\_\_\_

(VISA or MasterCard only)

Expiration Date \_\_\_\_\_

Signature \_\_\_\_\_

**OR**

Please make check payable to:

Society of Wood Science and Technology