

**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**

**8:00–8:30 Registration and Coffee**

**8:30-8:35 Welcome**

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

**8:35-8:45 Introduction by the Moderator**

--*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**

**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**

--*Tom Byram*, Director, Western Gulf Forest Tree Impr. Program, Texas Forest Service

--*Jennifer H. Myszewski*, Res. Geneticist, Southern Research Station, Saucier, MS

--*David Gwaze*, Resource Scientist, Missouri Dept. of Conservation

--*Bill Lowe*, Director, Western Gulf Forest Tree Impr. Program (retired) and, Zobel Forestry Associates

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

--*I. Duchesne*, Research Scientist

--*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 (*Abies Lasiocarpa* [Hook] Nutt) Stems Using CT Images Obtained From A High X-Ray Energy Industrial CT Scanner**

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

**10:45–11:00 Feasibility Study of Determination of Standing Tree Density Using X-ray Scanning Techniques**

--S.Y. Zhang, Senior Scientist & Group Leader  
Forintek Canada Corp., Sainte-Foy, Quebec, Canada  
--Z. Q. Hou, Chinese Academy of Forestry, Beijing  
--L. J. Hu, 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, Université Laval  
--S.Y. Zhang, Senior Scientist & Group Leader, Forintek Canada Corp., Sainte-Foy, Quebec,  
--J. Begin, Professor, Université Laval; Quebec City, Quebec,  
--E Swift, Atlantic Forestry Centre, Fredericton, NB, Canada

**Awards Presentation, Annual Business Meeting, and Lunch**

**Awards:**

**George Marra Awards**

2004-5 Committee - Chair: Alan Preston, Elemer Lang, Jerry Winandy, Phil Steele, Ex-officio: Geza Ifju and Doug Gardner. Alan Preston presented the following awards:

1st Place: Kate E. Semple, Ross B. Cunningham, and Philip D. Evans, "Manufacture of wood-cement composites from Acacia Mangium: Mechanistic study of compounds improving the compatibility of acacia mangium heartwood with Portland cement", in 36(2).

Honorable Mention: Chi-Leung So, Stan T. Lebow, Leslie H. Groom, and Timothy G. Rials, "The application of near infrared (NIR) spectroscopy to inorganic preservative-treated wood", in 36(3).

Honorable Mention: Siqun Wang, Paul M. Winistorfer, and Timothy M. Young, "Fundamentals of vertical density profile formation in wood composites. Part III. MDF density formation during hot pressing", 36(1)

Honorable Mention: Balazs G. Zombori, Frederick A. Kamke, and Layne T. Watson, "Sensitivity analysis of internal mat environment during hot pressing", in 36(2)

**Fellow Award** – Presented by Bob Rice

The following were there to receive the award:

J. David Barrett  
A. William Boehner  
Frank C. Beall  
Robert W. Erickson  
Geza Ifju  
Fred A. Kamke  
Helmuth Resch  
Howard N. Rosen

These people weren't able to attend the meeting, but their plaque was mailed to them.

Everett Ellis  
Gilbert Comstock  
John G. Haygreen  
Robert J. Hoyle, Jr.  
Duane Lyon  
Thomas M. Maloney  
E. Allen McGinnes  
Arno P. Schniewind  
Christen Skaar  
Otto Suchsland  
Fred W. Taylor  
Wil Cote  
Robert Kennedy  
William T. Nearn  
Richard J. Thomas  
Warren S. Thompson  
Jim Wilson

**Distinguished Service Award** – Presented by Bob Rice

This year's Award was presented to Howard N. Rosen. His presentation will be on the website and printed in the October 2005 issue of Wood and Fiber Science.

Minutes of the 2004 Annual Meeting – These were printed in the July-August 2004 Newsletter. A motion was made, seconded and passed to accept these minutes.

**President's Remarks**

Audrey reminded people of the Student Poster Competition being held today in conjunction with the Technical Forum/Poster Session from 4:00 to 5:30. Awards would be presented at 5:15 p.m.

She also recognized and thanked the committee chair and the board, especially Jim Armstrong for his work on the Accreditation Committee and Mike Wolcott for his work on the Research Initiatives Committee. Audrey also requested people's support as members of the committees.

Audrey announced and presented the new promotional materials we have for sale and presented the Executive Director with a plaque of appreciation, a bottle of wine, a new deluxe SWST briefcase, and a gift certificate for a spa.

### **Executive Director's Report – Vicki Herian**

EXECUTIVE DIRECTOR'S REPORT  
June 19, 2005  
Quebec City, Quebec, Canada

#### **Current Members as of June 1, 2005**

Full members	292	
Student members	56	
Retired members	45	
Affiliate Member	<u>4</u>	
<b>TOTAL</b>		<b>397</b>

USA members	297
Canada members	54
Mexico members	3
Overseas members	43

#### **Members as of June 1, 2004**

Full Members	287	
Student members		58
Retired members		50
Affiliate Member		<u>3</u>
		<b>398</b>

#### **Subscribers as of June 1, 2005**

Subscribers	<b>224</b>
USA	101
Canada	14
Overseas	109

#### **Subscribers as of June 1, 2004**

Subscribers **227**

#### **Delinquent Members**

Delinquent members as of 6/1/05 for 2004 dues – 42 total (22 full, 17 student, 3 retired)

Delinquent subscribers for 2005 as of 6/1/04 – 33 total (12 US, 21 foreign)

Compared to delinquent members as of June 1, 2004 – 42 total (21 full, 16 student, 5 retired)

Compared to delinquent subscribers as of June 1, 2004 - 35 (18 US, 17 foreign)

### **Vanguard Accounts**

The Vanguard accounts were opened on February 3, 1998. The balance is \$49,677.75 on March 31, 2005 (the date of the last statement). The Student poster money was invested in November 1998 with an initial balance of \$4,750.00. The current balance (as of 3/31/05) in that account is \$12,434.59.

### **Checking Account**

The balance in the checking account as of June 1, 2005 is \$166,103.43.

### **Student Poster Competition Fund**

Contributors are: APA-The Engineered Wood Association, Asian Woods Inc., Balazs Zombori, California Cedar Products, Forintek Canada Corporation, Iowa State University, Louisiana State University, Mississippi State University, North Carolina State University, Oregon State University, Pennsylvania State University, Virginia Tech, University of British Columbia, University of Idaho, Washington State University, and Willamette Industries, Inc.

There are 17 participants in the 2005 Competition.

### **Miscellaneous**

All web pages have been updated as of June 2005.

The Committee Handbook for 2004-2005 has been amended with new charges and other additions/corrections. This was emailed to all committee chairs and the board. It is also available on the web.

I continue to send our Newsletter out to members electronically, saving over \$2,400 per year. We currently have only 15 members who have not supplied emails. Our ballots for election and our Annual Convention Program were sent out this year via email also, resulting in over \$1,200 savings for these 2 items alone.

Beginning with the July 2005 issue of Wood and Fiber Science, we will be typesetting and printing the journal at The Sheridan Press in Hanover, Pennsylvania. The Executive Board felt this was a good move economically and look forward to the services Sheridan can offer.

You will also notice a new logo for SWST that will be appearing on the July 2005 issue of the journal and in all future correspondence. We are also going to be offering promotional items for purchase that enhance our image as a Society and tell the world who we are. Look for announcements and sample items at the Annual Convention. The new logo was designed by a graphics artist at Virginia Tech. We have versions of the logo in black/white; green/tan; and tan/black.

Our SWST web pages have been completely redesigned by Beth Smith (wife of Paul Smith). Thanks to her work we have pages that offer a more professional look, ease of use, and the opportunity for expansion. Check the new look at [www.swst.org](http://www.swst.org)

We have an ad hoc committee working on putting all of the past articles of Wood and Fiber Science in pdf format and on CDs. We will then offer this for sale in the future. More news on this as it comes closer to completion.

I met with GAO personnel in April as a follow-up to the request by Senator Lugar and Senator Cochran to “examine issues pertinent to wood utilization research and product development”. This request was a result of our National Needs Policy Statement that was sent to Congress in late 2003. GAO has not yet finalized their report.

Paul Smith and I attended the Agenda 2020 Chief Technical Officers Committee meeting in Washington, DC, on March 8 where we made a presentation for SWST to be accepted on the Committee. We were successful and now are Affiliate Technical members.

### **Auditor’s Report – Cherilyn Hatfield**

At your request, I reviewed the SWST bank statements for the period June 1, 2004 through May 31, 2005. Checks, deposits, VISA and MasterCard charges, interest charges and bank charges were verified against the corresponding statements. No discrepancies were found between the statements and the books in any area. The May 31, 2005 checkbook balance of \$166,103.43 corresponds with the checking balance on the May 31, 2005 balance sheet. The \$62,112.27 total investment in the Vanguard accounts on the balance sheet also matches the totals on the most recent Vanguard statements (3/31/05).

### **Budget**

#### 2006 SWST Budget

<u>Category</u>	<u>Income</u>	<u>Expenses</u>	<u>Net</u>
W&FS	\$127,480	\$ 87,125	\$40,355
Dues	\$ 23,050		\$23,050
Interest	\$ 100		\$ 100
Member Services	\$ 12,430	\$ 26,450	\$(14,020)
Admin Services		\$ 20,550	\$(20,550)
Salary & Taxes		\$ 12,344	\$(12,344)
TOTAL	\$163,060	\$146,469	\$ 16,591

FISCAL STATUS DECEMBER 31, 2004

BALANCE SHEET

Total Assets	\$168,239.07
Total Liabilities	\$ 12,993.51
Total Equity	\$155,245.56
Total Equity & Liabilities	\$168,239.07

INCOME STATEMENT

	<u>2004 Budget</u>	<u>Actual 2004</u>
Total Income	\$154,335.00	\$201,850.12
Total Expenses	<u>\$147,023.00</u>	<u>\$126,575.80</u>
	\$ 7,312.00	\$ 75,274.32

**Wood and Fiber Science – Geza Ifju**

Status of Volume 37:	Total pages	Paid pages	No. of tech. articles
No. 1, January	188	182	14
No. 2, April	177	172	17
No. 3, July	180	172	19
No. 4, October (estimate)	184	162	18
TOTAL:	729	688	68

Manuscripts in the process including those going into the October issue:

Under review	29
Out to authors for revision	23
Accepted for publication	32
Rejected	4
Withdrawn	1
TOTAL in the process	89

The goal for the year has been to publish at least 600 page charge paying pages which we will have exceeded by almost 15%. SWST charges \$135/page for non-members and \$100/page for members. If an average charge of \$110 is assumed, Wood and Fiber Science will generate approximately \$75,000 from page charges alone. The revenue from the 224 subscribers at \$250 each would be \$56,000. However, there are at this time 33 delinquent subscribers reducing that revenue to only about \$48,000. The total revenue



from page charges and subscriptions will be approximately \$123,000. It should be understood that this is revenue only from which one has to subtract the expenses which are available from the Executive Director's report.

In general, Wood and Fiber Science is in reasonably good shape. Of the 32 papers already accepted for publication minus the 18 ready to go to the October issue will leave 14 manuscripts in the process to go into the January, 2006 issue. Certainly the 29 manuscripts under review and the 23 out to authors for revision will generate plenty of papers for the future issues. I will distribute to the Board members the table of contents for the July issue and the list of articles ready to go into the October issue.

Carol, Vicki and I are working on changing the inside back cover of W&FS to reflect the Board's decision to accept all manuscripts in electronic form and other necessary changes.. Below are Carol's comments:

## **COMMENTS REGARDING THE INSIDE BACK COVER**

### **EDITORIAL POLICY**

This section looks OK to me, although I have a question about the last sentence of the first paragraph saying that the manuscript must not be published again in any form. What about those who plan to post it on a website?

### **FORM OF MANUSCRIPTS**

Your new wording says "Submit the manuscript in electronic form in an editable format (preferably Microsoft Word). A second file in Adobe Acrobat (PDF) format should also be included for use in distribution to the reviewers. Quadruplicates of paper manuscripts will be accepted in special cases where authors do not have the software available to provide the two electronic formats. A suggested limit for the text is 5000 word equivalents. SI units should be used." THEN I WOULD SAY: "*Webster's Third New International Dictionary* and *The Chicago Manual of Style, Fifteenth Edition* are useful guides for matters of form, style, and spelling. Sequence of material: Title page, abstract, keywords, text, acknowledgments, references, tables, figures legends, and figures" NOTE THAT I HAVE ADDED acknowledgments after text and before references since most people put them there and that seems to work best. I mentioned that the CBE Style Manual has been superceded by something called Scientific Style and Format. It is a British publication and I have not found it anywhere in Seattle, but may order through the University Book Store to see if it is of any use.

TITLE PAGE, ABSTRACT, AND KEYWORDS sections look OK to me. SHOULD WE PERHAPS LIMIT THE NUMBER OF KEYWORDS? Some people go on and on. We could say "List beneath abstract 6 or 8 keywords or phrases relating to major methods or result of study."

TEXT. Should we drop the reference here to acknowledgments since we mention it above under Sequence of material? And the only other sentence here refers to figures and tables and that should go below under the section TABLES AND FIGURES.

REFERENCES. This section is OK as far as it goes. See my comment at the very end about this.

FOOTNOTES looks OK

EQUATIONS looks OK, unless we want to add something about use of italics or bold face where wanted. Some mathematical journals require authors to use colored pencils to distinguish the difference. I will contact Heather Bair at Sheridan to see if composers have any trouble understanding authors' equations.

TABLES AND FIGURES. This is OK, although we should put here the sentence that currently occurs under TEXT, namely "Make certain that each figure and table is referred to, in order, in the text" And perhaps add, "Indicate a preference for single or double column, if desired." Some of this copy implies hard copy, does it not? And sometimes figures may be clearer if submitted that way?

PAGE CHARGES is OK.

SUBMISSION OF MANUSCRIPTS. The last sentence may no longer be appropriate for submission of manuscripts but would still apply to return of proofs. We might say "Return proofs promptly, using air mail, if appropriate."

## **Committee Reports**

### **Accreditation – Jim Armstrong, Chair**

#### ***Committee Members***

Jim Armstrong (Chair), Bob Bush, Myron Kelly, Tom McLain, Audrey Zink-Sharp, Steve Shook, Rubin Shmulsky, Todd Shupe, Jerry Winandy (*ex officio*)

#### ***Reaccreditation of Programs***

Three programs are scheduled for reaccreditation this year. Site visits have been conducted for all and Visiting Team reports have been submitted to the Committee on Accreditation for two. The Committee will discuss recommended actions on these two programs at its meeting on June 18.

### **Virginia Tech**

Virginia Tech requests reaccreditation of the B.S. in Wood Science and Forest Products, including all of the options within the degree program:

- Adhesion Science
- Manufacturing Systems
- Marketing and Management

- Non-timber Forest Products
- Packaging Science
- Wood Structures and Materials (pending approval by University governance spring 2005)

A site visit was held February 13-16, 2005. Doug Gardner and Steve Shook represented SWST on the visiting team. The Committee on Accreditation received the Visiting Team report.

### University of Idaho

The University of Idaho requests reaccreditation of three options within the Department of Forest Products.

- Forest Products Business Management
- Wood Construction and Design
- Forest Operations

A site visit was held April 18-20, 2005. Robert Bush, Todd Shupe and Jim Armstrong comprised the visiting team. The Committee on Accreditation received the Visiting Team report.

### North Carolina State

The North Carolina State University requests reaccreditation of two options within the Wood Products curriculum.

- Manufacturing
- Business Management

A site visit was held April 18-20, 2005. Tom McLain and Ruben Shmulsky represented SWST on the visiting team. The Visiting Team's report has not been received from SAF.

## **ANNUAL REPORTS**

Annual reports were received from all programs not undergoing reaccreditation visits in 2005:

- Mississippi State University
- Oregon State University
- Penn State University
- SUNY – College of Environmental Science & Forestry
- University of Maine
- University of Minnesota
- West Virginia University

The Committee on Accreditation has approved the reports and, following the Annual Meeting, the Committee Chair will notify the program heads by letter. Letters will address those concerns expressed by the Committee.

#### RECOMMENDED CHANGES TO THE ACCREDITATION HANDBOOK

The Committee has carried out extensive correspondence over the past several months concerning the new Accreditation Standards, problems encountered in adapting to the standards, and desired improvements in the accreditation process. Most of the issues discussed pertain to the Committee's procedures and will be addressed within the Committee. The Committee will propose specific changes to the SWST Accreditation Handbook to the Board following the Committee meeting on June 18.

**Education Committee – No report.** There are 17 participants in this year's Student Poster Competition,

**George Marra Committee** – Awards were presented earlier.

#### **International Relations**

**From:** Pascal Kamdem [mailto:kamdem@msu.edu]

**Sent:** Monday, June 13, 2005 9:42 AM

**To:** Morrell, Jeff

**Subject:** Re: SWST Reports – International Relations Committee

Jeff,

I sent several e-mails to affiliate members but no response so far only one from China. I guess we will have report from China only ( Cao Jinzheng).

China's Sixth national survey of forest resources

Dr. Jinzhen Cao

Beijing Forestry University, Beijing, China

Every five years, the National Forestry Administration of China will carry out an overall survey on forest resources in China. The forest area, the total amount, composition, quality, and distribution of forests, production & consumption of timbers, and also the ecological influence of forests are all the subjects of the survey. Recently, the result of the sixth national survey of forest resources (from 1999 to 2003) was issued. According to this survey, the [forest coverage rate](#) increased from 16.55% in 5<sup>th</sup> survey to 18.21%; the forest area in China was 175 million hectares, which is also higher compared with the data from the 5<sup>th</sup> survey (159 million hectares). The area of both natural forests and plantation forests increased, from 112 million hectares to 122 million hectares for natural forests and from 47 million hectares to 53 million hectares for plantation forests. The plantation forests are mostly small-diameter trees, so the volume of timbers from the plantation forests is only 1.51 billion m<sup>3</sup>, which is much less than 10.95 billion m<sup>3</sup> from

natural forests. The officer from the National Forestry Administration of China pointed that the lack in total amount of forests, especially divided by population, uneven distribution of forests, and the low quality of timbers from plantation forests are three major problems for China forest resources.

### **Membership**

There were 69 applicants from September 2004 through June 2005. Sixty-one were approved, 3 were not approved, 5 are still pending. Those not approved: 1 was looking for a graduate school, 1 not applying for membership, 1 application was basically nonsense. The 5 pending applications, more information has been requested.

The committee is also developing a members' survey to determine the level of interest for current and possible services provided by SWST. The survey will be electronically distributed and will be similar to the survey conducted by Paul Smith several years back for past presidents.

**Newsletter** – Rado made a request that people continue to send news articles to him.

### **Past Presidents' Council**

The Distinguished Service Award winner this year is Howard Rosen. Fellow award recipients were previously listed.

### **Policy and Critical Issues – Steve Shaler**

The special charge for this past year was to identify a mechanism for input into the USDA NRI program (see attached pages from the handbook specific to the committee). Ad-hoc committee activities last year did result in discussions with Chavanda and language modifications being suggested for both the BioProducts and Nanotechnology RFP's that went out last fall. Mike has also since chaired/led the Research Committee and developed a Research Blog pertaining to these two areas which can be found on the SWST homepage.

There has also been activity in the Nanotechnology area with Ted Wegner from the FPL and Paul Jones from IMERYYS leading an effort to create a \$45-\$60 million per annum program in Nanotechnology in the Forest Products Industry involving NSF, USDA/NRI, AF&PA, and others. SWST is directly involved in that effort (Tim Rials especially) along with PPERA (I think) - which is the consortium of the 10 schools in the US which have Pulp & Paper programs (Auburn, SUNY, Maine, Western Michigan, Minnesota, and 5 others that escape me for the moment).

### **Publication Policy – Robert Beauregard**

#### **Committee Members**

Tor Schultz (chair), Phil Steele, Bob Youngs, Azzeddine Oudjehane, Paul Cooper, John Phelps, Geza Ifju (WFS Editor), Rado Gazo (Newsletter Editor), Robert Beauregard (Board liaison)

## **Consideration of electronic publication of Wood and Fiber journal**

Over 2004-2005, the Publications Committee and the Board of the SWST discussed the opportunity of bringing the Wood and Fiber Science journal online. This would allow a substantial cost reduction and probably facilitate easy access. Some of the Board members had worries about how the intellectual property of the Society can be protected.

It was agreed that one way to learn more about it would be to survey some university libraries to see how they purchase and use online journals. We know many scientific journals today are available through online subscriptions. We wanted to know more about it. What are the options? What about being exclusively online or offering the option of online or paper subscription? How is the intellectual property of the journal protected and managed? Librarians from several universities were contacted which yielded valuable information.

### **University librarian's perspective on e-Publication:**

On-line publishing is a good idea. It is generally best/preferred by most users. Going on-line will ensure broader diffusion and higher citation index. It would be good to have the two options (electronic and paper) for some society members might be more comfortable with paper.

However, many items are to be considered.

- Will this be completely electronic? Or both electronic/paper. If so, one price, or lower price for electronic, higher price for paper? Current issues only, or back issues?
- Very concerned about access in 20 years down-the-line. Who will guarantee back issues are fully archived?
- Try and get more indexing services (such as Web of Science; NERAC; Scholar Google, etc) to cover your journal (Wood & Fiber Science). This will increase usage. Where is it already indexed?
- Who will archive; store and maintain data? Putting on a CD and mailing out to subscribers/society members is a VERY BAD idea. In 10 years data may not be retrievable (MSU library are having that problem right now.).
- How will folks get issues?
- Need license agreement for people who order a reprint of one article.
- Need to ensure that your society protects copyright.
- Suggest a period of most recent issues where fee must be paid, then older issues freely available. Say, 2 years. This is often found to be a good service and may generate interest. Most potential users now want electronic access.

There are many ways to go on-line. One must distinguish between Journals being published as part of broad scientific publication businesses (i.e. Elsevier, Springer Verlag, etc) and smaller independent Journals. Large scientific publication companies tend to be very well organized with permanently established full-service web based servers. These nowadays tend to be more often exclusively on-line. They can assure the long term availability and archive maintenance of the publications. Small independent Journals more often tend to go both ways, paper and on-line. This provides university libraries with more assurance about the long-term availability of the publications. If the independent organization ends up its operations, the paper publications remain available at the libraries. Small journals offering both versions often force their subscribers to buy the paper version (at full price) in order to have access to the electronic version (which then comes at smaller fee).

When libraries subscribe to on-line journals, usually students and scholars search for papers (through the library web link) in indexed databases and when they hit one paper they are interested in, and wish to download the complete article, copyright is managed and secured through the secured web access provided by libraries to university members who are granted access the whole content of the library. Downloading a full paper through this procedure becomes similar to photocopying an article from a journal at the library. The same rights are protected through the same agreements (as with paper publications) but using a different technology. A right of access to the information is gained for the academic community through the library subscribing to the journal.

Librarians suggest to start off slowly.

- See what members think, through survey.
- Start with an on-line prototype – see how it goes.
- Check with other small journals.

### **Issues to be resolved if we wish to go on-line:**

Based on this librarian quick survey, here are some of the issues SWST should look at or resolve:

- Should we offer both paper and on-line? This would not reduce our publications cost. If we wish to go exclusively on-line, we would probably have to syndicate in a broader science diffusion organization.
- How much should we charge? This question has multiple aspects depending on going exclusively on-line or both paper/on-line. Answering this question would require more in-depth knowledge of the costs associated with electronic publication.
- What type of infrastructure, technology and expertise should we have to do this? Who should be in charge of doing it?

### **Next steps we could go through in order to make progress:**

- Check with small on-line journals for answers to these questions (cost of going on-line; infrastructure, technology, expertise required).
- Based on this additional info, draft a proposal of Wood and Fiber Science on-line.
- Survey SWST members about this proposal (this could include doing an on-line prototype journal in order to help members figure what it would mean).

Committee Chair Tor Schults

Board Liaison Robert Beauregard

Robert Beauregard will continue to explore the possibilities of electronic publishing, contact Sheridan Press and their affiliates. He should include a question on electronic publishing in the survey the Membership Committee is working on.

### **Research Initiatives – Mike Wolcott, Chair**

This year's activities have concentrated on securing SWST's role in the (1) emerging Nanotechnology for Forest Products area and (2) developing Bioproducts initiative through the US Department of Energy and AF&PA. In addition, the committee has been active at engaging and communicating to the research community by repeated newsletter articles and the development of the weblog: [swst.research.wsu.edu](http://swst.research.wsu.edu).

## Nanotechnology

The newly formed Steering Committee for Nanotechnology in the Forest Products Industry has been developing a roadmap for our professions involvement in this new research area. Tim Rials (UTK) and Ted Wegner (USFPL) represent the Committee on this new activity. Successes of the group include:

1. Development of a Research Roadmap
2. Roadmap featured by National Nanotechnology Initiative website
3. Site visit to RPI Nanotechnology Center

## Bioproducts

The Department of Energy's Office of Industrial Technology administers the Industry of the Future program. Participation by the Forest Products Industry is coordinated through the AF&PA and realized in the Agenda 2020 program. Historically, university programs have had representation on the AF&PA committee for this program. But only schools having Pulp and Paper programs were represented. This year SWST has gained a seat on this committee to represent academic programs focusing on solid wood and composite activities. Paul Smith (PSU) is the Committee's representative on this board.

## Weblog for the SWST Research Initiatives Committee

The SWST Research Initiatives Committee launched a weblog (or blog for short) in April to assist in communicating research issues affecting our scientific community. Currently, the blog has been focused on efforts regarding the emerging issues of Nanotechnology, Biobased Products and Bioenergy. However, we are interested in conveying any pertinent research efforts to the membership as they emerge.

A weblog (or blog for short) is simply an interactive webpage that allows a group of people to share, contribute, and discuss relevant information. We chose this forum to communicate research issues to the SWST community because it will allow us to collectively share developments in research initiatives while archiving this conversation for continued reference. Unlike the Society's webpage, this forum will allow the membership to interact through discussions. In addition, the site will automatically email new posting to those who choose this function.

Current Status of the blog is good. We have nearly 60 members from 5 countries over North America and Europe. Postings on the site have been active, totaling 24 by this writing and averaging over three per week. The hit rate is over 350 reads per posting, seven times the membership. Since many folks are simply. So this is obviously reaching a large part of the membership, many of whom are not registering as members to the site.

The readership is expected to grow once the blog reaches the major search engines like Google, which typically scan public sites once every 60 days. Future Directions for the blog include the addition of editorial pieces, interviews with relevant researchers, and posting of topic presentations. In particular, we would like to stimulate online discussions by solicit comments from the blog members regarding topics of interest. If you have



relevant information or an interest in writing opinions or news postings, please contact one of the committee members listed under the ABOUT this site link on the homepage.

### **Visiting Scientist Program – Hongmei Gu, Chair**

- In January 2005, all the potential scientists on the visiting scientist committee list were contacted by the e-mail, and asked to update their information on the list and nominating persons who might be interested but not on the current potential list. Then it was updated according to the response. The e-mail was also sent to the SWST full-members list to solicit more participation within the society.
- In March 2005, the contact list for department heads/deans/directors from schools, institutes or organizations who are interested in participating in the program was updated.
- In March 2005, an e-mail to invite the participation of the interested schools, institutes and government was sent to the heads of these organizations.
- The deadline for submitting the visiting scientist travel grant is postponed to April 15<sup>th</sup>.
- In May, we received a request from Dr. Eva Haviarova (Purdue University) for travel funding to Costa Rica on 04/27—05/04, 2005. The committee approved her proposal and fund her \$950 for travel expenses.

Jerry Winandy, board liaison for this committee, made a call to the membership to become more involved in the Visiting Scientist Program both from a hosting institution and scientist standpoint.

### **Old Business**

Paul Smith presented Audrey Zink-Sharp with a President's plaque for her service the past year.

### **Teller's Report**

Vice President:  
Jim Armstrong

Directors:  
Don Bender  
Alain Cloutier

Total Ballots received – 120  
Counted by Vicki Herian

### **New Business**

Doug Gardner announced next year's Annual Convention at Newport Beach, California, and asked that ideas for technical session topics be sent to him.

Meeting was adjourned at 12:45 p.m.

### **Session III: Wood Physics and Drying Fundamentals**

#### **1:00 Introduction by the Moderator:**

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

#### **1:00–1: 20 Microwave Heating in a Pressurized Chamber,**

--*John F. Hunt*, Research Mechanical Engineer, PE

--*Hongmei Gu*, Post. Doc. Research Associate

--*Philip J. Walsh*, General Engineer

--*Jerrold E. Winandy*, Project Leader, Forest Products Lab., Madison, WI

#### **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

#### **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 Force 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*, Université Laval, Dept. des Sciences du Bois et de la Forêt, Quebec, Canada

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

--*Francois Leger*, Forintek Canada Corp., Quebec, Canada; *Patrick Tousignant*, CGI, Quebec, Canada; *Mouloud Amazouz*, Canmet Energy Technology Centre, Varennes, QC, Canada

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

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

--*William T. Simpson*, Forest Products Lab, Madison, WI

--*Crystal Pilon*, Michigan Technological University, Houghton, MI and Forest Products Laboratory, Madison, WI

**Session IV: Wood Modification**

**1:00–1:05 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

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

--*Carsten Mai* and *Holger Miltz*, 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**

--*Matts Westin* and *Magnus Walinder*, Tratek, Sweden

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

--*Armando MacDonald* and *Smith Sundar*, University of Idaho, Moscow, ID

**3:55–4:00 Concluding Remarks**

**TECHNICAL FORUM (POSTER) PRESENTATIONS**

**WOOD MODIFICATION**

**Quality Control of Thermally Modified Balsam Fir**

*Virginie St-Onge*, M.S. Candidate, Wood Science, and *Yves Fortin*, Prof., Dept. of Wood & Forest Science, Université Laval, Québec City, QC, Canada; and *Carl Tremblay*, Research Scientist, Value-Added Products, Forintek Canada Corp., Ste-Foy, QC, Canada

**Physical Properties of Thermally Modified Balsam Fir and Jack Pine**

*Carl Tremblay* and *Torsten Lihra*, Research Scientists, Value-Added Products, Forintek Canada Corp., Ste-Foy, QC, Canada

### **Impact of Wood Modification Processes on the Properties of Five Different Canadian Wood Species**

*Hui Wan* and *Trosten Lihra*, Research Scientists, *Xiangming Wang* and *S.Y. (Tony) Zhang*, Senior Scientists and Group Leaders, *Martin Feng*, Research Scientist, and *Yaolin Zhang*, Post-Doctoral Research Fellow, Forintek Canada Corp., Ste-Foy, QC, Canada

### **Densification of Aspen Wood with Methyl Methacrylate and Styrene Monomers**

*Abdelkader Chaala*, Research Scientist, SEREX, Amqui, QC, Canada; *Tony Chabot*, Maintenance Superintendent, Kruger Scierie Parent, Parent, QC, Canada; and *Julie Lesard*, M.S. Research Professional, SEREX, Amqui, QC, Canada

### **Conversion of Bark Tree Species into Bakelite-Like Thermosetting Materials by Phenolation of Them**

*Mustafa Akyüz*, Forest Industry Engineer and Dir., and *Ayşegül Bahýn*, Eastern Blacksea Forestry Research Inst., Trabzon, Turkey; and *Hakký Alma* and *Ýbrahim Bektaş*, Associate Professors, Dept. of Industrial Engineering of Forestry, Univ. of Sutçu ÝmamK.Maraş, Turkey

## **WOOD PHYSICS & MOISTURE RELATIONS**

### **Moisture Migration Between the Interfaces of Dried Red Oak Samples**

*Minghui Zhang*, Grad. Research Assistant, *Rado Gazo*, Associate Prof., and *Daniel L. Cassens*, Prof., Dept. of Forestry & Natural Resources, Purdue Univ., West Lafayette, IN

### **Explanation of the Process of Water Vapor Adsorption in Wood**

*Minghui Zhang*, Grad. Research Assistant, *Rado Gazo*, Associate Prof., and *Daniel L. Cassens*, Prof., Dept. of Forestry & Natural Resources, Purdue Univ., West Lafayette, IN

### **Influence of Wood Structure on Moisture Desorption of Five Tropical Hardwoods**

*Giana Almeida*, Ph.D. Student, *Roger E. Hernández*, Prof., and *Michele Pontin*, M.S. Student, Dept. of Wood & Forest Science, Université Laval, Québec City, QC, Canada

### **Effects of Equilibrium Moisture Content and Temperature on Mechanical Properties of Black Spruce Wood (*Picea mariana*)**

*Mariella de la Cruz*, M.S. Student, and *Yves Fortin* and *Roger E. Hernández*, Professors Dept. of Wood & Forest Science, Université Laval, Québec City, QC, Canada

## **WOOD QUALITY & ANATOMY**

### **Variation in Growth, Juvenile Wood Density, and Color of *Calycophyllum spruceanum* Benth. from the Peruvian Amazon**

*Carmen Sotelo*, Ph.D. Student, and *Roger E. Hernández*, Prof., Dept. of Wood & Forest Science, Université Laval, Québec City, QC, Canada; *Jean Beaulieu*, Canadian Forest Service; and *John Weber*, ICRAF

**Bulk Density, Moisture Content, and Specific Gravity of Loblolly Pine Tree Length Pulpwood Logs in Southern Arkansas**

David W. Patterson, Prof., and Paul F. Doruska, Associate Prof., Arkansas Forest Resources Center, Univ. of Arkansas-Monticello, Monticello, AR

**Biodiversity in Tropical Moist Forests: A Study of Sustainable Use of Non-Wood Forest Products in Western Nepal: Monitoring and Evaluation of Ecological and Socioeconomic Variables**

Pradeep Singh Suwal and Arati Basner, Researchers, Plants Preservation & Research Center, Kathmandu, Nepal

**Properties of Three Plantation Species: Affecting Solid Wood Bending**

Elvina O. Bondad, Science Research Specialist II, and Emmanuel D. Bello, Dir., Forest Products Research & Development Inst., Laguna, Philippines

**Inducement of Almaciga (*Agathis philippinensis* (Warb.)) Resin Production Through Ethrel Application**

Arsenio B. Ella, Scientist III, and Mario Ramos, Science Research Specialist II, Forest Products Research & Development Inst., Laguna, Philippines

**Wood Characteristics of Black Spruce Trees at Different Stand Density and Sampling Height**

Jérôme Alteyrac, Ph.D. Candidate, and Alain Cloutier, Prof., Dept. of Wood & Forest Science, Université Laval, Québec City, QC, Canada; S.Y. (Tony) Zhang, Senior Research Scientist and Group Leader, Forintek Canada Corp., Ste-Foy, QC, Canada; Jean-Claude Ruel, Prof., Dept. of Wood & Forest Science, Université Laval, Québec City, QC, Canada; and Chhun-Huor Ung, Research Scientist, Natural Resources Canada, Canadian Forest Service, Ste-Foy, QC, Canada

**STUDENT POSTER COMPETITION**

**How Porosity Can Explain Wood Desorption at High Humidities**

Giana Almeida, Ph.D. Candidate, Dept. of Wood & Forest Science, Université Laval, Québec City, QC, Canada

**A Finite Element Model for the Evaluation of MDF Hot Pressing Process**

Marcia Vidal Bastias, Ph.D. Candidate, Dept. of Wood and Forest Science, Université Laval, Québec City, QC, Canada

**Juvenile Wood Impact on the Kiln Drying Characteristics of Pacific Coast Hemlock Square Timbers**

Slobodan Bradic, MS Student, University of British Columbia, Wood Science Dept., Vancouver, BC, Canada

**Mechanism to Improve Toughness and Moisture Resistance of a Typical OSB Resin**

Sudip Chowdhury, Graduate Research Assistant, WMEL, Washington State University, Pullman, WA

**Mortel Intelligence for Latin American ESC-certified Wood Panels in the US and Caribbean Markets**

Pablo Crespell. Ph.D. Candidate, Dept. of Wood Science and Engineering, Oregon State University, Corvallis, OR

**Effects of Abrasive Mineral, Grit Size, and Feed Speed on the Quality of Sanded Surfaces of Sugar Maple Wood**

Luis Fernando de Moura. Ph.D. Candidate, Dept. of Wood and Forest Science, Université Laval, Québec City, QC, Canada

**Penetration of Polyethylene Glycol in Wood Cell Walls**

Dragica Jeremic. Ph.D. Candidate, Faculty of Forestry, University of Toronto, Toronto, Canada

**Impact of Log Ellipticality on Red Oak (*Quercus rubra*) Lumber Grade and Volume Recovery for Current Sawing Practices**

Roncs Ese-Etame. Graduate Research Assistant, Dept. of Wood Science and Forest Products, VPI & SU, Blacksburg, VA

**Quantification of CCA in Wood Using Laser-Induced Breakdown Spectroscopy**

Brad Gething. Ph.D. Candidate, Dept. of Agricultural Science, Penn State University, University Park, PA

**The Application of Refrigerated Air and Cryogenic Treatment Reduces Tool Wear When Machining Medium Density Fiberboard**

Judith Gisp. Graduate Research Assistant, Dept. of Forestry and Natural Resources, Purdue University, West Lafayette, IN

**Mass Customizing US Furniture – Wooden Furniture Dynamics**

Emmanuel Kodzi. Graduate Student, Purdue University, Wood Products Manufacturing Technology, Purdue University, West Lafayette, IN

**Droplet Behavior and Shape Analysis of Wood Adhesives on the Wood Surface**

Sangyeob Lee. Graduate Research Assistant, School of Renewable Natural Resources, Louisiana State University AgCenter, Baton Rouge, LA

**Effectiveness of Nondestructive Evaluation Techniques for Assessing Standing Timber Quality**

Crystal L. Pilon. M.S. Student, School of Forest Resources and Environmental Science, Michigan Technological University, Houghton, MI

**Effect of Solution PH and Ionic Composition on the Solubility of Chromium and Arsenic from CCA-Treated Aspen**

Suzana Radivojevic. Ph.D. Candidate, Faculty of Forestry, University of Toronto, Toronto, ON, Canada

**Evaluation and Improvement of Connection Systems for Prefabricated Wall Panels**  
*Williams Munoz Toro*. Ph.D. Candidate, Dept. of Wood and Forest Science, Université Laval, Québec City, QC, Canada

**Moisture Content Determination in Frozen and Unfrozen Lumber using Ultrasound**  
*Hermanus van Dyk*. Graduate Research Assistant, Department of Wood and Paper Science, North Carolina State University, *Robert Rice*, Professor, Department of Forest Management, University of Maine.

**Water Vapor Sorption in Dried Red Oak Lumber Package Stored in a High Humidity Environment**  
*Minghui Zhang*. Ph.D. Candidate, Dept. of Forestry & Natural Resources, Purdue Univ., West Lafayette, IN

### **Student Poster Competition Winners**

**1<sup>st</sup> place: Moisture Content Determination in Frozen and Unfrozen Lumber using Ultrasound**  
*Hermanus van Dyk*. Graduate Research Assistant, Department of Wood and Paper Science, North Carolina State University, *Robert Rice*, Professor, Department of Forest Management, University of Maine.

**2<sup>nd</sup> place: Effect of Solution PH and Ionic Composition on the Solubility of Chromium and Arsenic from CCA-Treated Aspen**  
*Suzana Radivojevic*. Ph.D. Candidate, Faculty of Forestry, University of Toronto, Toronto, ON, Canada

**3<sup>rd</sup> place: Mechanism to Improve Toughness and Moisture Resistance of a Typical OSB Resin**  
*Sudip Chowdhury*. Graduate Research Assistant, WMEL, Washington State University, Pullman, WA