SWST Newsletter ~ October 2008 ~



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Notes from the Editor



A reminder that the 2008 SWST Annual Meeting will be November 10-12th in Chile. Register online <u>http://www.swst.org/meetings/AM08/registration.html</u>

Please send items for the December SWST Newsletter to me by the end of November. <u>AdamTaylor@utk.edu</u>

SWST 51ST INTERNATIONAL CONVENTION CONCEPCIÓN, CHILE

Register Online Now at http://www.swst.org/meetings/AM08/registration.html

The first SWST international meeting outside of North America will be held on November 10-12, 2008 in Concepción, Chile at the Universidad del Bío-Bío, a cosponsor and co-organizer of the meeting. <u>Click here</u> to see other sponsors.

There will be four sessions during the first two days dealing with (1) Timber Engineering, (2) Global Trade in Forest Products, (3) Wood Quality: Challenges in the 21st Century, and (4) Advanced Processing of Timber in the 21st Century. Each session has a North American and South American Co-Chair. The last day of the Convention will be a day-long tour of the area and the forest products industry, beginning with a visit to Nueva Aldea.

EXPOCORMA has meetings November 11-15, but is a separate convention. See <u>4th International Meeting on Forestry, Wood Products, Pulp and Paper</u>. For more information on the SWST meeting: <u>http://www.swst.org/meetings/AM08/about.html</u>

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WORKSHOP: SELLING GREEN TO SURVIVE THE HOUSING DOWNTURN AND BEYOND

November 21, 2008

Who should attend?

- Retail and wholesale building products distributors.
- Builders interested in issues surrounding green building.

• Manufacturers concerned about promoting their products as sustainable and environmentally responsible.

• People interested in green marketing and wondering how to get started.

What

FPMDI presents this workshop with presentations by leading nationwide experts in the area of green building. Dr. Jim Bowyer has presented to audiences across the U.S. and internationally on topics related to sustainable development and green building. Dr. Jeff Howe brings considerable industry experience as current President and CEO of the Fullerton Companies and as past CEO of Colonial Craft and through entrepreneurial expertise gained

as an industry consultant and founder of Dovetail Partners, Inc.. Steve Bratkovich brings 32 years of experience in forestry and forest products in Ohio and Minnesota.

Why

Current conditions in the housing and forest products sectors are bleak. However, recovery will come eventually, and when it does, it is likely that the housing market will be different than today as consumers and the business climate change. It is also likely that building materials suppliers will need to adjust practices to succeed in the new environment. Successful companies will be those that identify new opportunities and act accordingly. One change that is currently underway is a shift toward green in commercial, industrial, and residential buildings. This program will examine current trends, identify emerging opportunities, and examine potential strategies for thriving in a future defined by greater attention to environmental impacts.

To register, contact Susan Seltz University of Minnesota 2004 Folwell Avenue, St. Paul, MN 55108 Telephone: 612/624-1293 Fax: 612/625-6286 seltz043@umn.edu

Conference Location

Radisson Hotel and Convention Center 3131 Campus Drive Plymouth, Minnesota Reservations: 888-201-1728 Hotel: 763-559-6600 Fax: 763-559-7516 http://www.radisson.com

FPMDI Website:

http://fpmdi.cfans.umn.edu/ Department of Bioproducts and Biosystems Engineering Website: http://www.bbe.umn.edu/

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4TH EUROPEAN CONFERENCE ON WOOD MODIFICATION

April 27-29 2009, Stockholm, Sweden

Dear Colleague,

You are invited to send in your abstracts for the 4th European Conference on Wood Modification. Information can be found in the Second Announcement (see link below) and also at the web site <u>www.ecwm4.com</u> on which information continuously will be added. Questions can be addressed to <u>info@ecwm4.com</u>.

We appreciate if you would forward this message to your colleagues and friends concerned

within your organisation and elsewhere.

Please click <u>here</u> to read the updated Second Announcement.

With kind regards

Mats Westin Chairman of the local organising committee

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II LATIN AMERICAN WORKSHOP ON NON-DESTRUCTIVE TESTING OF WOOD PRODUCTS

December 2-4 th, 2008. Instituto Tecnológico de Costa Rica San Jose-Costa Rica.

3rd CALL FOR PAPERS

This workshop is devoted to research, development and application of different non-destructive techniques in wood and wood products: Image scanning, sound and ultrasound, acoustic emission, laser, vision, x-rays, microwaves, signal processing and others.

Abstracts of no more than 250 words, written in Word single-spaced with margin of at least 2.5 cm at top and bottom and 3 cm at left and right, Times New Roman 12 ppt (See sample below). The title should write in capitalized letters. It must be submitted until October 10th. 2008.

Note. Complete papers will be received before Octuber 30th. 2006.

Contact/Information

Róger Moya Roque; Email: <u>rmoya@itcr.ac.cr</u>, Phone: +506-2550 2433 Erik Baradit; Email: <u>ebaradit@ubiobio.cl</u>, Phone: +56-41-731313 Fax: +506-2591 3315 Webside: <u>www.itcr.ac.cr/ndtesting</u>

Scientific and Organizing Committee Dr. Röger Moya, Instituto Tecnológico de Costa Rica (Costa Rica) <u>rmoya@itcr.ac.cr</u> Dr. Erik Baradit A., Universidad del Bio Bio (Chile) <u>ebaradit@ubiobio.cl</u> Dr. Roger Hernadez, Universidad de Laval (Canada) Dr. Mario Tomazello F., Universidade de Sao Paulo (Brasil) <u>mtomazel@esalq.usp.br</u> Dr. Gerson Rojas, Universidad del Bio Bio (Chile) <u>grojas@ubiobio.cl</u>

APPLICATION OF COMPUTER SCANNING TOMOGRAPHY FOR WET POCKET DETECTION IN *Gmelina arborea* (Roxb.) DRIED LUMBER

Abstract

Because of the excellent growth rate and productivity, *Gmelina arborea* (Roxb.) is widely used in commercial reforestation of Costa Rica. However, during the lumber drying process, it presents non-uniform values in the final moisture content (MC) of the boards. The low uniformity in final MC is caused by the presence of wet pocket produced for wetwood. This wood is produced during the growing of the tree. During wood drying process, the regions with wet pocket present zones with a high MC, which is hard to detect with traditional methods of MC measurements. The following article shows that it is possible to detect and to set the limits of the presence of wet wood in *Gmelina arborea* using scanning computed tomography (CTscanning), a technique applied in the medical diagnostic of human beings.

A board with wet pocket is shown in the CT-scanning images with clear color and with low values of the Hounsfield Unit (HU) or "CT number". When these values were transformed to wood density, it was determined that wet pocket presents a density of around 190 Kg/m³ higher than normal wood. Also, it was possible to observe growth rings trees CT-scanning images which it important for dendrocronogical researches. The obtained results allowed to show that it is possible to apply this technique in the process of lumber production to detect the zones with high MC in kiln dried *Gmelina arborea* wood.

Keywords: wood, drying wood, non-destructive test, x ray, infection, moisture content

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INTERNATIONAL WOOD COMPOSITES SYMPOSIUM & TECHNICAL WORKSHOP

March 30-April 1, 2009 Seattle, Washington

The 43rd Symposium, organized by Washington State University's Wood Materials & Engineering Laboratory, will be held at the Red Lion Hotel on Fifth Avenue in Seattle, Washington. For more information, visit the website at <u>www.woodsymposium.wsu.edu</u> <<u>http://www.woodsymposium.wsu.edu/</u>>

4TH SYMPOSIUM ON VENEER PROCESSING AND PRODUCTS

May 25. – 27. 2009 (Just after LIGNA FAIR, May18. – 22. 2009 in Hannover) Espoo, Finland

Helsinki University of Technology will host the 4th International Symposium on Veneer Processing and Products (ISVPP). The conference is part of a continuing series of conferences previously held in France (2004), Canada (2006) and China (2007).

The aim of this symposium is to bring together representatives from industry and academia from around the world to discuss key issues and opportunities for the veneer and plywood industry.

Themes of the Symposium to include:

- · Raw materials
- · Veneer processing
- · Plywood and LVL manufacturing
- Equipment and resin technologies
- · Product performance and standards
- · Market and trade issues

A formal Call for Papers will be circulated in August 2008. In the meantime, however, those interested in submitting a paper for an oral or poster should contact us.

The symposium will be held in Espoo, Finland between the 25th and 27th May 2009 and will be followed by a post conference mill tour. Further details about the event will be announced shortly.

Secretariat: Prof. Matti Kairi Helsinki University of Technology Department of Forest Products Technology P.O. Box 6400 FI-02015 TKK Tel: + 358 9 451 5654 Fax: +358 9 451 4259 Email: isypp@tkk.fi

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NOVEL FUNGUS HELPS BEETLES TO DIGEST WOOD

University Park, Pa. -- A little known fungus tucked away in the gut of Asian longhorned beetles

helps the insect munch through the hardest of woods according to a team of entomologists and biochemists. Researchers say the discovery could lead to innovative methods of controlling the invasive pest, and potentially offer more efficient ways of breaking down plant biomass for generating biofuels.

Microbes in the gut of insects are known to break down cellulose, but little is known about how, or whether, insects degrade lignin. This natural polymer helps plants stay upright and protects them from most forms of microbial attack.

"Lignin is nature's plastic and any organism that wants to get to the sugars in a plant has to be able to get past this protective barrier," said Ming Tien, study co-author and Penn State professor of biochemistry and molecular biology. "We suspect that the fungus produces enzymes that help the beetles degrade lignin."

Before this report, it was thought that insects are unable to extensively break down lignin, and that they get around the problem either by feasting on wood that has already degraded, or by living close to fungi that can degrade the wood for them.

But this theory fails to explain the ability of insects to feed and grow within healthy living trees.

"How these insects are able to circumvent this plastic wall [lignin] and get at the goodies, the sugars, behind it has remained a mystery," said Tien, who was recruited by Kelli Hoover, coauthor and Penn State associate professor of entomology, and Scott Geib, lead author and Penn State doctoral student in entomology, to tease out an explanation.

The Asian longhorned beetle is one such insect that attacks healthy trees and bores through the hard wood to get at the succulent energy-rich matter inside. In the process, this invasive pest from China grows nearly 300-fold from being about the size of a grain of rice to a few inches in length.

Hoover and her colleagues speculated that the beetle could be harboring a community of microbes in the gut, which helps in breaking down lignin.

The researchers compared the chemical structure of non-degraded wood before and after it had passed through the gut of two wood-eating insects. To measure the degree of change in the lignin, they first fed pin oak wood to Asian longhorned beetles. Next they fed ponderosa pine wood to the Pacific dampwood termite, an insect that typically eats only dead wood.

Chemical analyses of feces from the two bugs indicated that they are able to alter the chemical structure of lignin by selectively adding or removing certain groups of molecules from the polymer.

Such alterations, said Geib, make it easier for the insect to break down wood.

"This fungus has genes that then make enzymes," explained Hoover, whose team's findings appear today (Aug. 18) in the Proceedings of the National Academy of Sciences. "We have been

able to detect messages from the [fungal] DNA, which get translated into enzymes."

While the researchers have identified the fungus residing in the gut of the Asian longhorned beetle, they have yet to find one in the gut of the termite.

"The types of chemical changes we see in the beetle are similar to those seen in the white-rot fungus," said Geib. "Changes that we see in the termite are similar to those in the brown-rot fungus. The chemical changes to the lignin are similar."

However, Geib cautions that while the gut-borne fungus is certainly a key player in degrading wood, it may just be part of a bigger picture.

"It is likely that there is an interaction among enzymes produced by the fungus, hundreds of bacteria within the insect gut, and the insect itself," explained Geib. "It is a consortium that is doing the job."

If researchers manage to identify some of these key microbes, he says it might be possible to selectively target just those bacteria to impair the growth of Asian longhorned beetles, which have the potential to severely damage the lumber and maple syrup industry.

Both Geib and Hoover, who study Asian longhorned beetles, believe they may have stumbled upon a novel evolutionary adaptation in the insect world.

"This type of fungus [in the Asian longhorned beetle] is known to cause disease in plants," said Hoover, whose work is funded by the Alphawood Foundation and the Penn State College of Agricultural Sciences. "But this particular strain appears to be unique. It looks like these insects somehow acquired the fungus to live in their gut and help them break down wood."

She also points out that these fungi are more efficient than their free-ranging counterparts. While those fungi take months, even years, to break down wood, the gut-borne fungi seem to do it much faster.

Researchers say the speedy process could potentially be harnessed to produce biofuel.

"Getting rid of the lignin barrier and making the cellulose more accessible is the most expensive and environmentally unfriendly part of making ethanol from biomass," said Geib. The team's discovery, he added, could lead to the potential development of cheaper and more efficient enzymes for converting wood into ethanol.

Other researchers on the paper include Timothy R. Filley, associate professor, department of earth and atmospheric sciences, Purdue University; Patrick G. Hatcher, the Batten endowed chair in physical sciences and professor of chemistry and biochemistry, and Rachel L. Sleighter, doctoral candidate, both at Old Dominion University; John E. Carlson, professor of molecular genetics, director of Schatz Center for Tree Molecular Genetics, School of Forestry; and Maria del Mar Jimenez-Gasco, assistant professor of plant pathology, both at Penn State.

 Dr. Tien is at (814) 863-1165 or at mxt3@psu.edu

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A SPLINTERED HISTORY OF WOOD

Belt Sander Races, Blind Woodworkers, and Baseball Bats By Spike Carlsen

In a world without wood, we might not be here at all. Without wood, we wouldn't have had the fire, heat, and shelter that allowed us to expand into the colder regions of the planet. If civilization somehow did develop, our daily lives still would be vastly different: there would be no violins, baseball bats, chopsticks, or wine corks. The book you are now holding wouldn't exist.

At the same time, many of us are removed from the world where wood is shaped and celebrated every day. That world is inhabited by a unique assortment of eccentric craftsmen and passionate enthusiasts who have created some of the world's most beloved musical instruments, feared weapons, dazzling architecture, sacred relics, and bizarre forms of transportation. In A Splintered History of Wood, Spike Carlsen has uncovered the most outlandish characters and examples, from world-champion chainsaw carvers to blind woodworkers, the Miraculous Staircase to the Lindbergh kidnapping case, and many more, in a passionate and personal exploration of nature's greatest gift.

Cost is \$24.95

To order, go to

http://www.asplinteredhistoryofwood.com/index-a.html

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DR. HENRY QUESADA-PINEDA JOINS VIRGINIA TECH

Dr. Henry Quesada-Pineda has joined the department of wood science and forest products in the College of Natural Resources as an Assistant Professor. Dr. Quesada-Pineda's primary interest is in manufacturing and business process. He has a special interest in developing an active and dynamic engagement program with the wood products industry in Virginia and the region in order for the industry to achieve global competitiveness. Dr Quesada-Pineda has focused his research efforts for the last five years in understanding the effect of lean thinking on supply chain management and its impact on the whole business model of small and medium enterprises as well as large corporations. He has also a special interest in modern manufacturing systems based on CAD/CAM/CAE, robotics and ERP technologies.



Dr. Quesada-Pineda received his BS degree in Industrial Engineering from the Costa Rica Institute of Technology, and his M.Sc. and Ph.D. degrees both from Purdue University in Wood Products Technology. Before coming to Virginia Tech he was an Associate Professor at the Costa Rica Institute of Technology where he worked at the School of Industrial Production Engineering for ten 10 years. Dr. Quesada-Pineda's extension and research programs will focus on redefining new business models for local wood products industries in order for them to remain and achieve higher levels of competitiveness. He will teach an undergraduate course in forest products business management.

Areas of Expertise

- Manufacturing and Business Process Management Lean Supply Chain Management
- Manufacturing Process Automation Innovation and Technology Management

Dr. Quesada may be reached at: Henry Quesada-Pineda, Assistant Professor Department of Wood Science and Forest Products Brooks Forest Product Center (0503) • 1650 Ramble Road Email: <u>Quesada@vt.edu</u> • Phone 231-7107 (Brooks Center front desk) • Fax 231-8176

WOOD & BIOFIBER PLASTIC COMPOSITES CONFERENCE & CELLULOSE NANOCOMPOSITES SYMPOSIUM

We are inviting formal or poster presentations and commercial exhibits for the 10th International Conference on Wood & Biofiber Plastic Composites and Cellulose Nanocomposites Symposium, May 11-13, 2009, Madison, Wisconsin, USA. If you'd like to submit a formal or poster presentation, or request information on the conference or exhibit space, click on the picture below or visit the Forest Products Society at http://www.forestprod.org/confcomposites09.html.

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GRA AT UMASS

A full-time **Graduate Research Assistantship is available** for research studies in strength modeling of Structural Composite Lumber starting February 2009. The successful candidate will be paid a yearly stipend of \$15k, receive tuition and associated fee waivers as well as U.S. heath insurance.

Applicants should be highly motivated and have a **baccalaureate degree in wood mechanics**, **wood science or engineering**, preferably with a background in finite element analysis and/or constitutive material modeling.

Information on the project may be found at: http://www.nsf.gov/awardsearch/showAward.do?AwardNumber=0826265

Interested persons, please email transcripts, a personal statement and Curriculum Vitae to:

Peggi L. Clouston Ph.D. M.A.Sc.(Eng) P.Eng Associate Professor Department of Natural Resources Conservation University of Massachusetts 160 Holdsworth Way Amherst, MA, 01003-9285 clouston@nrc.umass.edu

Tel. (413) 545-1884 Fax (413) 545-4358 <u>http://nrc.umass.edu/index.php/people/faculty/clouston-peggi-l</u> <u>http://www.umass.edu/architecture/faculty_staff/peggi_clouston.htm</u>

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M.S. OR PH.D. GRADUATE RESEARCH ASSISTANT WOOD COMPOSITE PRODUCTS.

A M.S. or Ph.D. level research assistantship in Wood composite products is available in the School of Forestry at Auburn University. Students who may be graduating in the spring of 2009 will still be considered if the position is available. The student will gain an understanding between wood quality and manufacturing parameters to composite performance. Near infrared spectroscopy will also be used to rapidly scan composite properties.

Prospective candidates should have a solid background in Wood Science, BioComposites, Biosystems Engineering, Civil Engineering, Materials Science/Engineering., or other relevant programs. Forestry candidates with the right background may also be considered. Candidates will have the opportunity to work closely with industry/manufacturing to solve research problems. Assistantships are at the annual rate of \$15,540 (M.S.) and \$18,840 (Ph.D.), with tuition fees waived.

For application procedures please visit the AU Graduate School. For detailed information on specific requirements for the School of Forestry and Wildlife Sciences please see the SFWS Graduate Program Office information.

For more information please contact Dr. Brian Via, 3301 School of Forestry and Wildlife Sciences, Auburn University, Auburn, AL 36849; 334-844-1088 (office); 334-844-1084 (fax); or <u>bkv0003@auburn.edu</u>.

Brian K. Via Assistant Professor Wood Composite Products School of Forestry & Wildlife Sciences 3301 Forestry & Wildlife Sciences Building Auburn, Alabama 36849 Office Phone: 334-844-1088

POSITION ANNOUNCEMENT: EXECUTIVE VICE PRESIDENT Forest Products Society, a member-supported technical organization

The Forest Products Society, based in Madison, WI, seeks a creative leader and innovative manager as its Executive Vice President. The successful applicant serves as the executive director of the organization and must have the knowledge, skills, abilities, and experience to lead a diverse professional staff, to implement the vision and mission of the Society, and to provide guidance to the Board of Directors.

Qualifications:

Strong critical thinking, project planning, problem-solving, with innovative and modern marketing skills and experience

Strong interpersonal, communication, and networking skills

Strong performance management skills to hire, train and mentor a diverse staff

Strong financial acumen to sustain and grow a non-profit technical organization

Experience in negotiating agreements for and executing financially successful conferences and publications contracts

Ability to forge and strengthen strategic partnerships with other organizations An understanding of research in the field of forest products; and, knowledge of the fields of forest products and wood science including trade associations, organizations, university programs, and federal laboratories is preferred

Experience working with volunteers in a nonprofit organization is preferred Baccalaureate degree in a related technical field is required, advance degree is preferred

Compensation and Benefits:

Salary is commensurate with the qualifications and experience of the successful candidate and is competitive with similar positions in the region. Benefits include health, dental and life insurance, and pension plan.

How to Apply:

Applicants must submit a resume, a separate statement (not to exceed two pages) that reflects the qualifications listed in this announcement, and three professional references. Applications may be submitted electronically to EVPSearch@forestprod.org or mailed to EVP Search Committee, 2801 Marshall Court, Madison, WI 53705. Applications will be accepted until a candidate is selected. Review of applications will begin on October 20, 2008.

About the Forest Products Society:

The Forest Products Society (FPS) is a 501(c) (3) organization whose purpose is to foster global innovation and research in the environmentally sound processing and use of wood and fiber resources. This is accomplished by disseminating information and providing forums for networking and the exchange of knowledge. The Society has 1500 members and a staff of eight. Revenue comes primarily from membership dues, publication sales, and conference fees.

The Society publishes Four journals: Forest Products Journal (10 issues per year), International Journal of Forest Engineering (semi-annual), Journal of Forest Products Business Research (periodic e-journal), and Wood Design Focus (quarterly) A monthly membership newsletter Numerous special publications including books, manuals, and conference proceedings

The society also holds an annual three-day international conference and coordinates a number of international and regional conferences. More information can be found at <u>www.forestprod.org</u>.

For More Information: Direct inquiries about the position or the organization to H. Michael Barnes, Search Committee Chair, at <u>mbarnes@cfr.msstate.edu</u>

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SWST POSITION ON USE OF WOODY BIOMASS1 FOR BIOENERGY

A Position Paper Submitted by the Policy and Critical Issues Committee – September 2008

The Issue

Moving towards a non-fossil energy resource is likely to be one of the most important issues of the 21^{st} century. About 85% of the global energy needs are currently produced from dwindling fossil fuel resources and the production and consumption of these fuels emits about 6.3 billion metric tons of carbon (carbon dioxide equivalent) into the atmosphere per year, adding significantly to global warming. The issue is particularly important in the United States, a major energy consumer that uses about 105 quadrillion BTU's (quads) per year (110.8 x 10^7 MJ) or 25% of all the energy generated in the world. The worldwide demand for energy continues to grow at a rate of about two percent per year. The rapidly expanding and developing economies of India and China and to a lesser extent many other developing countries guarantee that the global energy consumption will continue to grow at a greater rate than the US (2.6% vs. 0.8%).2 These facts lead to the conclusion that the search for alternative energy resources will continue far into the future.

Woody biomass has some distinct advantages as an alternative energy feedstock. Not only is wood a renewable resource, but also replacing fossil-based energy resources with biomass-based energy resources will reduce the CO_2 component of greenhouse gas as long as plant growth can keep up with the increasing rates of biomass decomposition. Thus increasing the proportion of global energy produced from biomass can aid in bringing the global carbon flux into equilibrium and help ensure that energy needs are met in the global economy.

1 Woody biomass utilization is defined as the conversion of smaller trees, limbs, tops, needles, and other woody parts from the forest, small diameter logs, and industrial and municipal wood wastes to a variety of bio-based products including a variety of solid wood products, as well as biofuels and chemicals.

² International Energy Outlook 2007. US Dept. of Energy. Energy Information Administration. Report DOE/EIA-0484.

Wood Scientists, with their specific knowledge of wood properties and conversion technology are uniquely positioned to be leaders in the emerging bioenergy technology and policy efforts. SWST needs a policy that encourages research into woody biomass utilization.

Background

Wood has always been an important energy feedstock. Not only does a ton (907 kg) of bone dry woody biomass produce about 13.8 million Btu (14,600 MJ) of usable energy in a commercial boiler, but also wood has the advantage of being renewable and carbon neutral. Woody biomass is expected to become an even more competitive feedstock for energy products as global concerns related to green house gas emissions and fossil fuel availability increase. At present, about 3% of the US energy and 12% of global energy is produced from woody biomass. Recent estimates suggest that the US energy production from current levels of available woody biomass could be increased to about 6% of the demand using existing technology and perhaps as high as 10% with significant improvements in the biomass handling infrastructure, and conversion technology and efficiency3.

Useful energy is extracted from biomass through many processes that may have application in different locations with different needs. The combustion process produces useful energy for heat or to power steam-driven generators that produce electricity. Alternative pathways involve an intermediate step to produce a liquid or gaseous fuel that will later be used in a combustion process to deliver the energy to an end use. These alternative pathways include both biochemical and thermochemical methods of breaking down wood into constituents that can produce a variety of liquid fuels such as ethanol, butanol, diesel, and bio-oil and gaseous fuels such as producer gas, synthesis gas, methane, and hydrogen. Many of these products themselves can be the feedstock for higher value bio-products with additional processing. One example is the Fisher-Tropsch process, a well known industry method of catalytic conversion of a synthesis gas into liquid hydrocarbon transportation fuels such as synthetic diesel or ethanol.

Nordic countries are ahead of the US in collecting and using biomass for energy however the substantial underutilization in the US provides a major new opportunity for development. While the increased use of woody biomass as a feedstock for bioenergy may place greater demands on other wood markets, it will also open up new opportunities. The search for finding the best uses for all wood products and their resources will become increasingly important and will create new opportunities for studying wood properties, genetic improvement, species selection, tree/biomass plantations, collection methods and processing technologies.

Impediments to Progress

Whether the increase in the use of wood for bioenergy, biofuels, and biobased products is rapid or sluggish depends on some artificial and institutional deterrents as well as economics and environmental concerns. Some important deterrents to growth in use of wood for bioenergy, biofuels and biobased products are:

Cost of procuring and processing woody biomass feedstock is high

³ Biomass as Feedstock for a Bioenergy and Bioproducts Industry: The Technical Feasibility of a Billion-Ton Supply. US April 2005. Dept. of Energy. Oak Ridge National Laboratory.

Harvesting, transporting, processing, and marketing woody biomass requires new infrastructure Available supply is often distant from the customer

Concerns about supply sustainability discourage investment

Lack of understanding the environmental benefits of wood, especially mitigation of carbon emissions

Marketing of bioenergy, biofuels and biobased products insufficient to generate new demand Reluctance of the energy industry to invest in facilities based on nontraditional fuel sources. Each of these impediments is also an opportunity for fostering research that will advance science-based decisions needed to move into a non fossil-based energy society.

Specific Actions to Encourage Bioenergy Development

Growing public interest in developing non-fossil fuel based energy policies is providing new opportunities to support research and development of a viable, sustainable, and competitive bioenergy industry. For example the US Energy Policy Act of 2005, provides authorization for grants to owners or operators of facilities that use biomass as a raw material to produce electricity, sensible heat or transportation fuels, and for research opportunities to improve the use of, or add value to, biomass. Research focused on selecting the best feedstock, improving energy conversion efficiency, finding new conversion pathways and reducing the processing costs will continue to increase the production efficiencies of biomass-based energy products. The science and technology needed to advance the utilization of woody biomass for bioenergy when combined with public commitment will result in an increase the energy independence of nations and will have positive global environmental benefits.

Our society now needs to take an advocacy position on the effective use of woody biomass if energy independence and climate mitigation objectives are to be achieved. SWST should take a leadership role in encouraging the development of novel energy generation processes from woody biomass. Specific recommendations include:

Support financial incentives that encourage the commercial use of woody biomass for bioenergy, such as price support for ethanol produced from biomass

Support an increase in government and private funding of woody biomass research Encourage collaborative research and education projects that focuses on woody biomass based products

Encourage identification of sustainable biomass supplies from public and private forests Encourage innovative research on the use of woody biomass as a feedstock for value-added products

Educate the public, private enterprise, and the policy makers on the value of managing a sustainable woody biomass resource for products beneficial to societies needs

POSITION STATEMENT

Woody biomass will play a substantial role in a global energy future. SWST supports the increased utilization of biomass for energy production. Members of SWST have unique expertise in the utilization and processing of woody biomass. SWST and its members can help to support the development of woody biomass-based energy systems and to develop advocacy positions to this end by building a science-based argument in support of woody biomass for bioenergy. Wood scientists will advocate for the best uses of the expertise of the wood science community to continue the research into feedstock properties and technology development.

NOTES ON THE SEPT. 24, 2008 SWST BOARD MEETING

- The 2008-2009 Committee Handbook is being finalized with committee members and new charges
- Minutes of June 2008 Meeting A motion was made, seconded and passed to accept the minutes of the June 2008 board meeting as written.
- Accreditation Committee: An accreditation visit is planned for U. Bio Bio in Chile, in November. The visiting team is Jim Funck, Barbara Lachenbruch and Ramon Echenique-Manrique. WVU accreditation visit is being planned for spring 2009. Rubin Shmulsky and Jim Armstrong have authored an editorial on accreditation for Wood and Fiber Science to be published in 40(4). A motion was passed to update the curriculum standard to incorporate greater flexibility among programs is ongoing.
- Education Committee: Published recent graduate student theses and dissertation titles on the SWST web site (<u>http://www.swst.org/WFSThesisTitles.html</u>) and in Wood & Fiber Science. To date, 20 titles have been listed on the web site. Instructions for submitting titles may be found on the web site at <u>http://www.swst.org/thesis.html</u> and in the August Newsletter. We currently have the International Wood Science and Technology Contact List on our Wiki site. The Committee will be reorganized to make it more functional.
- Marra Award Committee: The current committee is Chair, Tom Eberhardt, Vice-Chair Steve Kelley, Kurt Bigbee and John Phelps. Steve Kelley will be chair for 2009 Volume 41. Vikram Yadama is looking for sponsorship of this award.
- Membership Committee: The membership enrollment is still ongoing. Total members are 436.
- Past Presidents' Council is working on soliciting nominations for DSA and Fellows for 2009. They currently have completed applications on hand.
- Policy and Critical Issues Committee: The Policy Statement on Use of Woody Biomass for Bioenergy has been approved by the board. It will be posted online for member comment. Two new statements will be explored for next year "Advantages of using lignocellulosic biomass rather than food products for bioenergy" and "Need for hazardous fuels reduction on public lands".
- Publication Policy Committee: The committee provided an analysis of impact factor for W&FS and recommended site license fees. They also worked with the editor on policy on editorials and book reviews.
- Visiting Scientist Program Committee: The committee recommended to the Board that some of the VSP money be used to fund student travel grants to the International Convention in Chile. Eight students will receive funding. The visiting scientist list of participants has been updated.
- Wood and Fiber Science: 40(4) is ready to be published. The average time to publication for this issue is 7 months. Due to a fully electronic process now, that time could even be reduced. Frank currently has 16 papers in process. We are producing a special CORRIM issue next year and Frank Beall is working with 2 individuals to do the

editing.

- Executive Director's Report: Full members 300, Student members 78, Retired members 40, Developing full 9, Developing student 9, total 436. Total subscribers 204. The balance in the checking account as of September 24, 2008 is \$64,162.69. The balance in the CD's is \$56,930.55 and the balance in Savings is \$60,425.48. The Vanguard accounts were opened on February 3, 1998. The balance is \$110,321.44 on June 30, 2008. The Student poster competition fund current balance (as of 6/30/08) is \$15,769.90. Contributors to the Student Poster Fund are: APA-The Engineered Wood Association, Asian Woods Inc., Balazs Zombori, California Cedar Products, Entwood LLC, Forintek Canada Corporation, Iowa State University, Louisiana Forest Products Development Center, Mississippi State University, North Carolina State University, Oregon State University, Pennsylvania State University, State University of New York (SUNY) ESF, Virginia Tech, University of British Columbia, University of Idaho, Washington State University, and Willamette Industries, Inc. There are 11 participants in the 2008 Competition. We continue to show a credit to our W&FS online provider, selling more papers than it costs to maintain them. The following page charges are still due: 36(1) Chonbuk National University \$1080; 37(3) Institut fur Werkstoff im Bauwesen \$1660; 39(2) USDA FS \$1212; 40(3) Norwegian University \$1620; 40(4) 8 of the 13 papers are paid.
- 2008 International Convention: Plans continue and registrations are coming in. We currently have 98 paid registrants. In addition we've received \$5750 in sponsorships. Vicki will be sending an email to participants 1 week before the meeting, detailing specifics about arrival in the country that might be helpful. New programs for poster and oral presentations are online at http://www.swst.org/meetings/AM08/program.html The proceedings will be available in the registration bags on a flash drive, and also after the conference will be available on the webpage.
- NRNA Workshop Follow-up: A summary report will be sent to all attendees for comment. Coordination with ASCE will continue.
- 2009 International Convention: This will be held in Boise, Idaho on Wednesday, June 24 immediately following the FPS Convention. The topic is "The Greening of the Wood Products Industry Why Wood Is Good". The program will be sent out to members soon, so be watching for it.
- 2010 and 2012 International Conventions: The 2010 International Convention will be held in Geneva, Switzerland in cooperation with United Nations Economic Commission for Europe Timber Committee. It will be held in October, with the date to be released soon. The 2012 International Convention will be held in Beijing, China in cooperation with the Chinese Society for Wood Industry. Details are being worked out.
- 2011 International Convention will be held in Portland, Oregon, on the Wednesday immediately following the FPS meeting.

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PUBLICATION OF THESIS AND DISSERTATION TITLES

As a service to all SWST members (and other readers), within the next several issues of Wood

and Fiber Science, we will begin publishing titles submitted to us by graduate students who have completed their programs. In many cases, this information is not readily available outside of the particular university. Often the information is published substantially later or in some cases, not at all.

A prescribed format for submissions by students is given on the SWST web page (http://www.swst.org/thesis.html) Also on the web page are links to the relevant universities (<u>http://www.swst.org/schooldirectory.html</u>). If your university isn't listed and you would like it to be, please contact Vicki Herian (<u>vicki@swst.org</u>). Students should submit their "title" to the Editor, Wood and Fiber Science (<u>frank.beall@nature.berkeley.edu</u>).

The abstract should be preceded by the citation in this format:

Beall FC 1968 Thermal degradation of wood and wood components. PhD dissertation. SUNY College of Forestry, Syracuse, NY (advisers: C Skaar and JA Meyer). 240 pp. [If the thesis or dissertation is available electronically, please add the URL]

The abstract should be the student's unless there is some compelling reason that it needs to be edited by the submitter; if so, the name of the "editor" should be added at the end.

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NEW OFFICERS ON SWST BOARD

Congratulations to Vik Yadama and Robert Bush on their election as Directors on the SWST Executive Board.

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WOOD AND FIBER SCIENCE REPORT

We are in the process of actions to make the journal more accessible to the membership, reduce publication time, and provide early notification of pending publications. This is a direct consequence of moving closer to doing everything electronically. As an SWST member, you can now use the SWST web page to access current and all back issues, and do keyword or author searches for any volumes or years. During 2008, the time to publication (from receipt to hard copy) will have been reduced from 14 to about 8 months, with a target of 6 months in 2009. Our next planned step is to go to electronic "prepublication" so that as soon as a galley is approved, it will be posted in our "members only" section of the web page. For some authors, this could mean a 3 to 4 month advance publication date, further reducing the time to publication. We will also be sending out an email to members and subscribers with a "table of contents alert" that lists the titles for an issue about one month in advance of publication. This can be very helpful to an author having a manuscript in preparation in an area related to an upcoming publication.

Another plan is to list citations of theses and dissertations in the journal, and post the abstract on a WIKI site that is accessible from the SWST web page. This will provide advance information of research activities that may not be published for quite a while (if ever, in some cases). Again, this will alert the membership to current research.

We have greatly reduced our manuscript backlog, so this is now a good time to submit manuscripts and have them published fairly quickly. All manuscripts should be submitted through Editorial Manager, using the link on the SWST web page. The web page also has substantial information on formatting and style. In addition to full-length research articles, we are looking for short contributions that we could expedite to publication. They would go through the same peer-review process, but with special guidelines for the reviewers so that they understand the difference from the normal manuscripts.

In the July 2008 issue we published our first book reviews in a number of years, but we need more suggestions of new books for review. If you have a book in mind, please email me the title, and, if possible, a URL link.

•Publication Report

As reported previously, below is information that has been traditionally reported for single issues, but (will be) shown over a one-year period to give you a better view of changes.

Issue	39/4 (Oct)	40/1 (Jan)	40/2 (Apr)	40/3 (Jul)	40/4 (Oct)
Articles	13	14	16	16	18
Pages	177	132	163	168	
Ave time pub (mo)	14	13	14	11	9
Med time pub (mo)		9.5	12	8	7

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ABOUT SWST

The SWST Newsletter is published six times a year by the Society of Wood Science and Technology, One Gifford Pinchot Drive, Madison, WI 53705, USA. Items for the Newsletter may be sent to Adam Taylor, at: <u>AdamTaylor@utk.edu</u>

The Society of Wood Science and Technology is a technical and professional organization for scientists and engineers working in academia, government, consulting and the forest-products industries and is dedicated to providing education and expertise regarding better ways to use and produce wood products. Tel: (608) 231-9347 Fax: (608) 231-9592 E-mail: <u>vherian@fs.fed.us</u> Web site: <u>http://www.swst.org</u>

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Wood and Fiber Science	
Editor:	Frank Beall
Editorial Assistant:	Carol B. Ovens
SWST Newsletter Editor	Adam Taylor



2008

LIST OF POTENTIAL SWST VISITING SCIENTISTS

ACDA, MENANDRO N., University of the Philippines Los Banos, Dept. of Forest Products and Paper Science, College, Laguna, Philippines 4031 (+63 49 536 3432) (FAX +63 49 536 3206) email: mnacda@yahoo.com

Specialty: Termite biology and control.

Will Discuss Formally and Informally: Above specialty.

ANDERSON, MATTHEW, Wood Advisory Services, Inc. 3700 RT. 44, Suite 102, Millbrook, NY 12545 (845-677-3091) (FAX 845-677-6547) email: matt@woodadvisory.com **Specialty:** Wood science consulting and applied research.

Will Discuss Formally and Informally: Assessment of wood frame buildings (destructive and nondestructive); Evaluations of marine and foundation pilings; Investigation of construction related deficiences; Microbiological evalutions (wood fungi, mold, bacteria).

ARMSTRONG, JAMES P., Associate Professor, West Virginia University, P.O. Box 6125, Morgantown, WV 26506-6125 (304-293-2941, ext. 2486) (FAX 304-293-2441) email: jarmstro@wvu.edu

Specialty: Wood anatomy and physical properties; Contemporary issues in forest resources and the wood products industry.

Will Discuss Formally: Various topics related to forest resources in U.S. history (see: http://www.wdsc.caf.wvu.edu/otherwebs/wdsc_100.htm.); Eco-terrorism--Its causes and impacts. **Will Discuss Informally:** Any of the above; Education in WS&F; The enrollment problem in WS&T.

BARNES, H. MICHAEL, Thompson Professor of Wood Science and Technology, Forest Products Laboratory, Mississippi State University, Box 9820, Mississippi State, MS 39762-9820 (662-325-3056) (FAX 662-325-8126) email: mbarnes@cfr.msstate.edu **Specialty:** Wood deterioration and preservation.

Will Discuss Formally and Informally: Wood science education.

Will Discuss Informally: Same as above.

BEALL, FRANK C., University of California Berkeley, College of Natural Resources, 1301 South 46th Street, Richmond, CA 94804 (510-665-3536) (FAX 510-665-3427) email: frank.beall@nature.berkeley.edu

Specialty: Nondestructive evaluation of wood and wood-based materials. **Will Discuss Formally:** Ultrasonics for NDE; Future of NDE; Use of project value assessment to evaluate the value of a research project; Program at UCFPL.

Will Discuss Informally: All of the above plus most topics in wood physics; Research management; Organization of research papers; The patent process.

BOWYER, JIM L., Director, Responsible Materials Program, Dovetail Partners, Inc.,

528 Hennepin Avenue, Suite 202, Minneapolis, MN 55403 and Professor Emeritus,

Department of Bioproducts and Biosystems Engineering, University of Minnesota,

St. Paul, MN (651-490-7688) (FAX 612-333-0432)

email: jimbowyer@comcast.net

Specialty: Responsible consumption, environmental implications of biomaterials and bioenergy production and use.

Will Discuss Formally: Environmental aspects of forestry, timber harvest and wood use; Environmental life cycle assessment; green building programs; U.S. environmental policy; Responsible consumption; The role of wood in the growing bio-energy industry; environmental education of children; The tropical deforestation problem.

Will Discuss Informally: Almost anything.

BUSH, ROBERT, Professor, Dept. of Wood Science and Forest Products, Virginia Tech, Blacksburg, VA 20461-0503 (540-231-8834) (FAX 540-231-8868) email: rbush@vt.edu **Specialty:** Forest products marketing and management

Will Discuss Formally: The marketing of forest products in the U.S.; Strategic decision-making in wood-based industries; New forest products marketing research in the U.S. and the United Kingdom. **Will Discuss Informally:** The above topics in addition to research to help improve student recruitment in Wood Science.

BRYANT, BEN S., 4102-51st Ave., NE, Seattle, WA 98105 (206-522-6273) (FAX 206-522-6273) email: fibrobb@hotmail.com

Specialty: How we can use the 5 elements of wood science (the mechanical, physical, chemical and biological properties of wood and wood structure and anatomy) to solve problems in wood technology and critically analyze new products as well as new building systems.

Will Discuss Formally: in two or more illustrated seminars—for grad students and faculty preferably—with handouts and outlines. These will emphasize the importance of understanding wood anatomy and structure (including the submicroscopic nature of the cell wall).

Will Discuss Informally: Will ask students to try to critically analyze, in light of the above, at least 6 "new products" of my own invention and explain why more of them failed than succeeded to reach commercialization. (I'll show samples of these and/or photographs and diagrams re how I used an understanding of wood science to develop these products. We will also discuss the reasons for failure and/or success of inventions coming from federal laboratories, academic laboratories and industry research departments (including machinery and resin suppliers), and summarize what general lessons can be learned from these case histories.

CHEN, ZHANGJING, DR., 506 Alleghany Street, Blacksburg, VA 24060 (540-231-4962)
(FAX 540-231-8868) email: chengo@vt.edu
Specialty: Wood drying.
Will Discuss Formally and Informally: Above specialty.

CHOW, POO, 2406 Burlison Drive, Urbana, IL 61801 (217-333-6670) (FAX 217-244-3219)
email: pchow@uiuc.edu
Specialty: Physical, mechanical and chemical properties of wood-based materials.
Will Discuss Formally: Hardwood composites; Durability of wood for structural uses.
Will Discuss Informally: Durability of wood-base materials; Utilization of non-wood plant fiber.

COOPER, PAUL, Associate Professor, Forestry Department, University of Toronto, 33 Willcocks Street, Toronto, Ontario, CANADA M5S 3B3 email: p.cooper@utoronto.ca **Specialty:** Wood deterioration and protection.

Will Discuss Formally: Interaction with chemicals with the wood cell wall; CCA fixation; Environmental impacts of treated wood over the full life cycle; Recycling/reuse of treated wood. **Will Discuss Informally:** Collaborative research; Graduate student recruitment; Teaching methods.

CUTTER, BRUCE, Associate Professor, University of Missouri, 124 A-BNR, Columbia, MO 65211 (573-882-5191) (FAX 573-884-2636) email: cutterb@missouri.edu **Specialty:** Tree growth, wood quality.

Will Discuss Formally: Eastern red cedar as a biogeochemical monitor; General tree growth; Wood quality; Agroforestry.

Will Discuss Informally: Eastern red cedar as a biogeochemical monitor; General tree growth; Wood quality; Behavior of wood in fire situations.

DeBONIS, A. L., President, Wood Advisory Services, Inc., P.O. Box 1322, Millbrook, NY 12545 (914-677-3091) (FAX 914-677-6547) email: ald@woodadvisory.com **Specialty:** Wood engineering.

Will Discuss Formally and Informally: Design properties of lumber; Grading of structural lumber (visual and/or MSR); Reliability-based design; The role of consultants in the forest products field; Heavy timbers in residential and commercial construction; Hardwood structural lumber.

DOLAN, J. DANIEL, Dr., Professor, Washington State University, P.O. Box 642910,
Pullman, WA 99164-2910 (509-335-7849) (FAX 509-335-7632) email: jddolan@wsu.edu
Specialty: Timber engineering; Structural performance; Wood mechanics; Connections.
Will Discuss Formally and Informally: All specialties.

FLYNN, KEVIN, Flynn & Associates, Wood Science & Technology, P.O. Box 805, El Cerrito, CA 94530 (510-758-4686) (FAX 510-758-4893) email: k_flynn@sbcglobal.net

Specialty: Wood performance; Problem analysis.Will Discuss Formally: Durability; Degradation; Protection.Will Discuss Informally: Any related issues.

FUNCK, JAMES W., Manager, Lumber & Wood Science, Weyerhaeuser Company, WTC 2B2, P.O. Box 9777, Federal Way, WA 98063-9777 (253-924-6826) (FAX 253-924-4239) email: jim.funck@weyerhaeuser.com

Specialty: Optical and dielectric scanning for surface defects and roughness; Process modeling and simulation (lumber and plywood); Process control.

Will Discuss Formally: Above listed specialties.

Will Discuss Informally: Above listed specialties; Education - graduate and undergraduate.

GARDNER, DOUGLAS J., University of Maine, 208 AEWC Building, Orono, ME 04469 (207-581-2846) (FAX 207-581-2074) email: douglas.gardner@umit.maine.edu **Specialty:** Wood adhesion; Wood composites.

Will Discuss Formally: Wood adhesion; Wood surface chemistry; Wood/plastic composites. **Will Discuss Informally:** Anything.

GLASSER, WOLFGANG G., Professor of Wood Chemistry, Virginia Polytechnic Institute and State University, Department of Wood Science & Forest Products, 210 Cheatham Hall, Blacksburg, VA 24061 (540-231-4403) (FAX 540-231-7664) email: wglasser@vt.edu **Specialty:** Polymer and materials science aspects of forest products; Biobased materials from wood; Steam explosion.

Will Discuss Formally: Structure--property relationships of cellulose, xylan and lignin and their derivatives; Cellulosic thermoplastic polymers and composites; Lignin chemistry.Will Discuss Informally: The Carbohydrate Economy: Technical, economic social .

GOODELL, BARRY, Ph.D., University of Maine, Wood Science and Technology Dept., 5755 Nutting

Hall, Orono, ME 04469-5755 (207-581-2888) email: goodell@umit.maine.edu

Specialty: Biodeterioration; Bioprocessing and bioconversion of wood.; Nanotechnology: Producing carbon nanotubes from wood; Biocomposites and plolymer matrix composites: ComPRIS. **Will Discuss Formally:** Any of the above topics as well as an overview of Wood Utilization Research (WUR) Center activities at the University of Maine or nationally.

Will Discuss Informally: Any of the above. See http://woodscience.umaine.edu/goodell/ for more information on my research, or http://www.woodutilization.org for information on WUR.

GUPTA, RAKESH., Oregon State University, Department of Wood Science & Engineering, 114 RH, Corvallis, OR 97331 (541-737-4223) (FAX 541-737-3305) email: rakesh.gupta@oregonstate.edu

Specialty: Wood engineering/Mechanics; Mechanical properties/behavior of wood.

Will Discuss Formally: Above listed specialities.

Will Discuss Informally: Above listed specialities.

IFJU, GEZA, Department of Wood Science & Forest Products, Virginia Polytechnic and State University, 210 Cheatham Hall, Blacksburg, VA 24060-0323 (540-231-8215) (FAX 540-231-8868) email: ifju@vt.edu
Specialty: Quantitative wood anatomy; Structure-property relationships.
Will Discuss Formally and Informally: Above specialty.

JAGELS, RICHARD, Professor, Department of Forest Ecosystem Science, University of Maine, 5755 Nutting Hall, Orono, ME 04469 (207-581-2884) (FAX 207-581-2889)
email: Richard.Jagels@maine.edu
Specialty: Wood structure; Wood quality.
Will Discuss Formally: Morphometric analysis applied to wood structure and wood quality studies; Wood analysis of wetsite archaeological finds.
Will Discuss Informally: Environmental influences on wood production and wood quality; Conservation of waterlogged wood; Technology transfer; Health hazards of wood.

JELLISON, JODY, Professor of Biology, University of Maine, 313 Hitchner Hall,
Orono, ME 04469 (207-581-2995) (FAX 207-581-2969) email: jellison@umit.maine.edu
Specialty: Biodegradation of wood; Fungal metabolism.
Will Discuss Formally: Biological degradation of wood.
Will Discuss Informally: Interdisciplinary studies.

KAMKE, FREDERICK A., Endowed Chair-JELD-WEN, Oregon State University, Dept. Wood Science & Engineering, 104 Richardson Hall, Corvallis, OR 97331 (541-737-8422) (FAX 541-737-3385) email: fred.kamke@oregonstate.edu **Specialty:** Wood physics and composites.

Will Discuss Formally: Rotary dryers; Heat and mass transfer during flakeboard manufacture; Viscoelastic behavior of wood.

Will Discuss Informally: Heat and mass transfer in wood and wood products

KIM, MOON J., Department of Forest Products, Mississippi State University, Mississippi State, MS 39762-9820 (662-325-3109) (FAX 662-325-8126)
email: mkim@cfr.msstate.edu
Specialty: Wood Adhesives; UF resins; PF resins, PRF resins.
Will Discuss Formally and Informally: Above specialty.

KLINE, D. EARL, Assistant Professor, Virginia Polytechnic Institute and State University, Department of Wood Science and Forest Products, 210 Cheatham Hall, Blacksburg, VA 24061-0323 (540-231-8841) (FAX 540-231-8868) email: kline@vt.edu
Specialty: Industrial systems engineering of wood products processing and manufacturing;

Operations research; Process control and automation.

Will Discuss Formally: Computer simulation and optimization methods; Machine vision applications in wood products processing; Artificial Intelligence applications in wood science. **Will Discuss Informally:** Any of the above; Computer spreadsheet development for quality control and process control; Computer programming.

LACHENBRUCH, BARBARA, Associate Professor, Oregon State University, Dept. of Forest Products, 118 Richardson Hall, Corvallis, OR 97331 (541-737-4213) (FAX 541-737-3385) email: barb.lachenbruch@oregonstate.edu

Specialty: Wood quality/silviculture interactions; Tree physiology.

Will Discuss Formally: Effects of tree biology on wood quality; Tree water relations and biomechanics as related to xylem structure.

Will Discuss Informally: Dual-career, women and family issues in grad school and academics.

LAMB, FRED M., Fred Lamb Consulting, Inc., 325 Tomahawk Drive, Christiansburg, VA 24073 (540-231-7256) (FAX 540-231-8868) email: fml195@vt.edu

Specialty: Wood processing; Furniture manufacturing processes.

Will Discuss Formally: Furniture manufacturing technology; Industrial noise; Wood machining (Theory and Industrial Practices); Technology transfer (Theoretical Models and Current Practices).Will Discuss Informally: Same as above; Lumber drying and wood deterioration.

LITTLE, ROBERT L., Armstrong Wood Products, 498 Salt Street, Winston-Salem, NC 27101 (336-406-1746) (FAX 336-703-1808) email: r_little@bellsouth.net Specialty: Drying of hardwood lumber.

Will Discuss Formally: Automated control of hardwood dry kilns, Control of corrosion in dry kiln buildings, General drying practices for hardwood lumber, and Kiln design considerations. **Will Discuss Informally:** General wood technology.

LOFERSKI, JOSEPH R., Associate Professor, Virginia Polytechnic Institute and State University, Department of Wood Science and Forest Products, Brooks Forest Products Center, Blacksburg, VA 24061-0503 (540-231-4405) (FAX 540-231-8868) email: jloferski@vt.edu

Specialty: Wood engineering, Design of wood structures, Long-term performance of buildings, Historic buildings

Will Discuss Formally or Informally: Preservation of historic wood structures; Long-term performance of wood structures; Building systems; Deterioration of wood building materials.

MALONEY, THOMAS M., Retired, Washington State University, Pullman, WA 99164-1806 (509-335-4916) (FAX 509-335-5077) email: tmaloney@pullman.com Specialty: Composition and composite wood products.

Will Discuss Formally and Informally: Any aspect of particleboard, flakeboard, fiberboard, and composites; The board industry in other parts of the world.

MARRA, ALAN, Professor (retired, University of Massachusetts), 444 Old Montague Road, Amherst, MA 01002 (413-549-6910).

Specialty: Wood gluing; Reconstituted products.

Will Discuss Formally: Wood technology in the forest enterprise; Technology in the glue line. **Will Discuss Informally:** R&D in WS&T; Fiddling with education.

McLAIN, THOMAS E., Professor of Timber Engineering and Department Head, Oregon State University, 119 Richardson Hall, Corvallis, OR 97331-5751 (541-737-4257)

(FAX 541-737-3385) email: Thomas.McLain.oregonstate.edu

Specialty: Engineering properties of wood and wood-based materials; Design of wood structures; Structural mechanical connections; Role of wood in modern society; Forest products/wood science academic, extension and research program administration.

Will Discuss Formally: Why Wood Engineering? The role of wood in modern society; Integrating extension in research and teaching; Pacific Northwest forest conflicts.

Will Discuss Informally: Above topics and most anything else.

MORRELL, JEFFREY J., Professor, Department of Forest Products, 230 Richardson Hall, Oregon State University, Corvallis, OR 97331-5751 (541-737-4222) (FAX 541-737-3385) email: Jeff.Morrell@oregonstate.edu

Specialty: Wood microbiology; Biodeterioration; Preservation.

Will Discuss Formally: Remedial control of decay in wood structures; Proper use of wood in adverse environments; OSU's cooperative pole research program.

Will Discuss Informally: Biodeterioration and biological interactions; Treatability of refractory wood species.

O'HALLORAN, MICHAEL R., President, Western Wood Products Association, 522 SW 5th Street, Suite 500, Portland, OR 97204-2122 (503-224-3930) (FAX 503-224-3934) email: mohalloran@wwpa.org

Specialty: Wood engineering, mechanics, wood structures, codes, standards, research management. **Will Discuss Formally:** Structural panel industry (Plywood, OSB, waferboard) status, markets, uses, standards, engineering design, LRFD design; Glued laminated timber; Structural composite lumber. **Will Discuss Informally:** Trade associations; Structural panel topics; International markets; above topics.

PARIDAH, MD. TAHIR., Associate Professor Dr., Universiti Putra Malaysia, Institute of Tropical Forestry and Forest Products, Serdang, Selangor, MALAYSIA 43400 (608-89472186) (FAX 608-89472180) email: parida_introb@yahoo.com

Specialty: Bonding of tropical wood and non-wood materials; Kenaf as raw material for composite products.

Will Discuss Formally: On MOU between UPM and host University: 1) establish student exchange program; 2) R&D collaboration..

Will Discuss Informally: Post graduate studies at UPM.

SHALER, STEPHEN, Professor, University of Maine, 5755 Nutting Hall, Orono, ME 04469-5755 (207-581-2886) (FAX 207-581-2875) email: Steve.Shaler@umit.maine.edu **Specialty:** Wood mechanics and composites.

Will Discuss Formally: Wood fiber properties; Computer and imaging applications; Experimental mechanics.

Will Discuss Informally: Hybrid wood composites.

SHI, SHELDON QIANG, Mississippi State University, Forest Products Department, Box 9820, Mississippi State, MS 39762-9820 (662-325-3110) (FAX 662-325-8126)

email: sshi@cfr.msstate.edu

Specialty: Wood (Wood-plastics) composites, wood adhesion, moisture related properties of wood and wood composites.

Will Discuss Formally: Recycling of polymer fluff in wood composites; Contact angle determination of particles.

Will Discuss Informally: Moisture related properties of wood composites; Student recruitment issue.

SMITH, BOB, Associate Professor/Extension Specialist, Virginia Tech, 1650 Ramble Road, Mailcode 0503, Blacksburg, VA 24061 (540-231-9759) (FAX 540-231-8868) email: rsmith4@vt.edu

Specialty: Forest products marketing; Professional sales in the forest products industry; Markets for wood in the U.S. infrastructure; Markets and perceptions of timber by engineers. **Will Discuss Formally:** Marketing forest production; Perceptions of wood in the U.S. infrastructure; Educational needs in the forest products industry.

Will Discuss Informally: Timber bridges; Wood science and forest products at VPI; The Center for Forest Products Marketing and Management.

SMITH, W. RAMSAY, Arch Wood Protection, Inc., 3941 Bonsal Road, Conley, GA 30288 (404-362-3970) (FAX 404-363-8585) email: wrsmith@archchemicals.comSpecialty: International trade in forest products; Hardwood exports; Wood quality influences on product acceptance in foreign markets.

Will Discuss Informally: Graduate programs in wood science and in international trade; Views of the future of the forest products industry; other topics as desired.

SMULSKI, STEPHEN, Ph.D., President, Wood Science Specialists, Inc., 453 Wendell Rd., Shutesbury, MA 01072 (413-259-1661) (FAX 413-259-1610) email: woodsci@crocker.com **Specialty:** In-service performance of wood and wood-base products in residential, commercial and industrial construction; Preventing degradation of wood in service.

Will Discuss Formally: Moisture problems and durability of wood-frame houses; Forensic application of wood science and technology

Will Discuss Informally: Consulting opportunities in wood science and technology; Career

opportunities in wood science and technology.

STOKKE, DOUGLAS D., Assistant Professor, Iowa State University, Dept. of Nat. Res. Eco. & Mgt., 339 Science II, Ames, IA 50011-3221 (515-294-2115) (FAX 515-294-2995) email: dstokke@iastate.edu

Specialty: Wood structure and properties, wood quality, light and electron microscopy. **Will Discuss Formally:** Wood micro- and ultrastructure; Applications of microscopy to wood products research; Birdseye maple; Color analyses of wood products; SWST international visitation trip to China.

Will Discuss Informally: Microstructure of wood and polymer composites; Education in wood science and technology.

SUN, DR. RUN-CANG, Bejing Forestry University, College of Material Science and Technology, Beijing, CHINA 100083 email: rcsun3@bjfu.edu.cn

Specialty: Straw/wood fiber chemistry.

Will Discuss Formally and Informally: Utilization of straw fiber as novel materials for industries.

TANG, R. C., Professor, School of Forestry, Auburn University, Auburn, AL 36849-5418 (334-844-1088) (FAX 334-844-4221) email: tangrc@auburn.edu

Specialty: Mechanics and physics of wood and wood composites.

Will Discuss Formally: Long-term performance of wood composite structures; Creep models of wood composites under various environmental conditions; Elastic behavior of wood fibers; Dimensional stability and engineering reliability of wood composite structures; Duration of load behavior of lumber under changing environments; Effect of flake-cutting pattern and resin content on the mechanical and physical properties of flakeboard.

Will Discuss Informally: Undergraduate and graduate programs in forest products and wood science at Auburn; Mathematical models and simulation in forest and wood science.

TEKLEYOHANNES, Anteneh Tesfaye, University of British Columbia, Dept. of Wood Science, 2424 Main Mall, Vancouver, BC, CANADA V6T 1Z4 (604-822-8203) (FAX 604-822-9195) email: anteneht@interchange.ubc.ca

Specialty: Wood products engineering--basic wood processing, Sawmilling; Drying and preservation; Composite materials and furniture.

Will Discuss Formally: Environmental aspects of wood products.

TICHY, ROBERT J., President, TM & I, 27013 Pacific Highway S, #179, Des Moines, WA 98198 (253-529-0900) (FAX 253-529-1326) email: bobtichy@msn.com

Will Discuss Formally: Nonresidential construction; Load and resistance factor design; Structural composites.

Will Discuss Informally: Above topics. Total quality concepts in R&D; Product and market development.

VLOSKY, RICHARD P., Associate Professor, Louisiana State University, LA Forest Products Development Center, School of Renewable Nat. Res., Baton Rouge, LA 70803-6202 (225-578-4527) (FAX 225-578-4251) email: volsky@lsu.edu

Specialty: Marketing; Economic development.

Will Discuss Formally: Marketing; Forest products industry development.

Will Discuss Informally: Comparison of state development efforts.

WANG, XIPING, USDA Forest Service, Forest Products Laboratory, 1 Gifford Pinchot Drive, Madison, WI 53726-2398 (608-231-9461) (FAX 608-231-9508) email: xwang@fs.fed.us Specialty: Nondestructive evaluation (NDE) of wood; NDE of wood structural members/systems; Wood drying.

Will Discuss Formally: NDE of trees, logs, lumber; NDE of structural members/systems. **Will Discuss Informally:** Dry kiln control.

WIEDENBECK, JANICE K., Project Leader, USDA Forest Service, Northeastern Forest Experiment Station, 241 Mercer Springs Road, Princeton, WV 24740 (304-431-2708)

(FAX 304-431-2772) email: jwiedenbeck@fs.fed.us

Specialty: Secondary wood products processing; Manufacturing system simulation modeling; Production control.

Will Discuss Formally: Research pursuits and accomplishments of Princeton WV's work unit "Improved Processing Technology for Hardwoods" including gang-rip-first research and application programs; Rough mill simulation models; Yield improvement research; New hardwood lumber processing systems and technologies, etc.

WINANDY, JERROLD, 9227 Katzenbuechel Road, Mazomanie, WI 53560 (608-231-9316) (FAX 608-231-9582) email: jwinandy@wisc.edu

Specialty: Engineered wood composites; Durability; Composites as tool for sustainable forestry.Will Discuss Formally: Composites; Preservation; Property effects; Enhancing durability.Will Discuss Informally: Standards; Codes; Physical/mechanical properties.

WILCOX, W. WAYNE, 4830 Faber Road, Shingle Springs, CA 95682 (530-677-2280) email: wayne@wwwilcox.biz

Specialty: Wood biodeterioration; Microscopical diagnosis of decay.

Will Discuss Formally: Nature and biology of wood decay; Wood-inhabiting fungi; Decay in wood structures due to design and construction deficiencies; Hawaii and pest control. **Will Discuss Informally:** Teaching wood performance to architecture students.

YAN, NING, Assistant Professor, University of Toronto, Faculty of Forestry, 33 Wilcocks St., Toronto, Ontario CANADA M5S 3B3 (416-946-8070) (FAX 416-978-3834) email: ning.yan@utoronto.ca **Specialty:** Material science.

Will Discuss Formally: Wood composites performance; Adhesive-wood interactions;

Wood/natural fiber plastic composites; Pulp and paper. **Will Discuss Informally:** Durability and weathering of forest products.

YOUNGS, ROBERT L., Professor, Department of Wood Science and Forest Products, VPI & SU, Brooks Forest Products Center, Blacksburg, VA 24061-0503 (540-231-7673)

(FAX 540-231-8868) email: ryoungs@vt.edu

Specialty: International forestry; Wood technology.

Will Discuss Formally: IUFRO and forest products research; Forest products and international development; Drying stresses in wood.

Will Discuss Informally: Any of the above; New developments in forest products; World forestry.

ZERBE, JOHN I., 3310 Heatherdell Lane, Madison, WI 53713 (608-274-0714) email: jzerbe@fs.fed.us

Specialty: Wood as a source of energy and petrochemical substitutes; Use of wood to combat global climate change.

Will Discuss Formally: Conversion of wood to improved fuels; Wood as a raw material for alcohol production; Reduction of atmospheric carbon dioxide through wood utilization by conservation, sequestration and substitution.

Will Discuss Informally: History of the forest resource as a source of fuel; Current thinking on wood as a source of energy; Impact of energy usage on the future of our economy; Impacts of atmospheric carbon dioxide increase.