

SWST Newsletter

~ April 2010 ~



In This Issue (these are clickable links)

News

[SWST Annual Convention 2010 in Geneva](#)

[SWST 2014 Int'l Convention – Call for Proposals](#)

[End of wood research at CSIRO](#)

[New Wood Products Journal](#)

[New MS program in Wood Science in Hungary](#)

[Changes at the UC Forest Products Lab](#)

[Wood Education Needs Assessment Workshop Report](#)

Meetings

[FPS Annual Meeting](#)

[Processing Conference in Austria](#)

[Wood Properties and Structure in Slovakia](#)

[Modified Wood Conference in Latvia](#)

[Forestry Conference in Serbia](#)

[Free Webinar on Metal Plate-connected Trusses](#)

Positions

[Dean at Auburn](#)

[Wood Engineering Prof in Sweden](#)

SWST

[W&FS Tables of Contents](#)

[CORRIM Special Issue](#)

[42\(2\)](#)

[Notes from Spring Board Meeting](#)

[SWST on Facebook](#)

[Visiting Scientist Report – Barb Lachenbruch](#)

[About SWST](#)

[Visiting Scientist List](#)



Note from the Editor

Please note – The Society's address has changed!

SWST
P.O. Box 6155
Monona, WI 53716-6155
PH: 608-577-1342
Fax: 608-467-8979

Send items for the June newsletter by the end of May – AdamTaylor@utk.edu



Society of Wood Science and Technology (SWST) International Convention • October 11–15, 2010



Co-hosted by United Nations Economic Commission for Europe - Timber Committee (UNECE-TC)



* Role of Wood Science in the Green Building Movement

- Session 1 Markets for use of solid and engineered wood products in green construction
- Session 2 Innovative wood and wood-based materials and their use in sustainable construction
- Session 3 Poster Session/Student Poster Competition/cash bar
- Session 4 Structural design for sustainable construction and disaster mitigation
- Session 5 The role of nanotechnology in green materials and sustainable construction
- Session 6 Building codes and standards - Influence on material use and construction practices
- Session 7 Current challenges in wood science education

Banquet (fee required)

Tour of CERN, EPFL, Sauvabelin Tower (fee required)

- Session 1 Marchés pour l'usage du bois massif et des produits en bois d'ingénierie dans la construction verte
- Session 2 Bois et matériaux à base de bois innovateurs et leur utilisation dans la construction durable
- Session 3 Session d'affiches/Concours d'affiches d'étudiant(es)/Bar aux frais des participants
- Session 4 Conception structurale pour la construction durable et l'atténuation des sinistres
- Session 5 Le rôle de la nanotechnologie dans les matériaux verts et la construction durable
- Session 6 Codes du bâtiment et normes - influence sur l'usage des matériaux et des pratiques de construction
- Session 7 Les défis actuels de la formation en sciences du bois

Banquet (aux frais des participants)

Visite du CERN, de l'EPFL et Tour de Sauvabelin (aux frais des participants)

- Сессия 1 Рынки сбыта цельнодеревянных и специализированных деревянных изделий для применения в экологически чистом строительстве
- Сессия 2 Инновационные материалы и изделия на основе древесины и их использование в экологически устойчивом строительстве
- Сессия 3 Стендовые доклады/студенческий конкурс стендовых докладов/платный бар
- Сессия 4 Проектирование экологически устойчивых сооружений и смягчение опасности стихийных бедствий
- Сессия 5 Роль нанотехнологий в создании экологически чистых материалов и сооружений
- Сессия 6 Строительные нормы и правила – влияние на использование материалов и строительную практику
- Сессия 7 Современные проблемы образования в области лесоведения

Банкет (за дополнительную плату)

Экскурсия в Европейский Центр ядерных исследований (CERN), Федеральную политехническую школу Лозанны (EPFL) и на башню Савабелен, Tour de Sauvabelin (за дополнительную плату)

For more information, contact Victoria L. Herian, SWST, P.O. Box 6155, Monona, Wisconsin USA 53716-6155 USA
Phone 608-577-1342 Fax 608-467-8878 Email vicki@swst.org
Convention webpage: <http://www.swst.org/meetings/AM10>

[<Back>](#)

[<Back>](#)

SWST 2014 INTERNATIONAL CONVENTION - CALL FOR PROPOSALS

SWST is issuing a Call for Proposals for co-hosting our 2014 International Convention. We will be holding it outside of North America and any interested person, company, or university that would like to co-host in their city please submit a proposal and contact Vicki Herian at SWST:

P.O. Box 6155
Monona, WI 53716-6155
PH: 608-577-1342
Fax: 608-467-8979
Email: vicki@swst.org.

[<Back>](#)

CSIRO ENDS FOREST PRODUCTS RESEARCH AFTER ALMOST 100 YEARS OF ENDEAVOUR

Under the guise of “portfolio restructuring”, CSIRO Materials Science and Engineering management has recently sent letters of redundancies to the remaining 28 staff of what was called the Forest Fibre Science Group, the remnants of staff surviving the last big cull of forest products research activities in 2008-9. That cull took place after a decade of struggling and shrinking activities following the merger shake-up of Forestry and Forest products in 1999-2000.

It was a little over 90 years ago that the Institute of Science and Industry, the forerunner of the Council for Scientific and Industrial Research, later called the Commonwealth Scientific and Industrial Research Organisation or CSIRO, established a national forest products laboratory jointly with the Western Australia government. The laboratory was located at the University of Western Australia. Prior to that time forest products research was being carried out in a number of states in Australia, including New South Wales in the Museum of Technology. The CSIRO Division of Forest Products (DFP) came into being as an independent government funded entity in May 1928 with its research activities being undertaken at different locations. Eventually the Division was relocated to a site on the banks of the Yarra River where the once-familiar red brick building was erected.



CSIRO Division of Forest Products, c 1970. The once familiar site is now home to Melbourne's Crown casino complex

The South Melbourne site was deemed to be an ideal location close to transport, government and, most importantly (even then) the forest products industry. Over the years the original 4-storey building acquired another floor and roof-top green houses and, much later, a modern cement block wing.

The early research activities at Yarra Bank Road included preservation, seasoning, wood chemistry, and wood structure, and developed over the years to also include timber physics and timber mechanics (later known as engineering), utilization, and gluing and veneering (forerunner of the timber conversion section). The section names evolved along with the Division's work with research in the late 1960s being organised into sections like Physiology and microstructure, physics, preservation (a name that was retained until the late 1970s when it became Conservation and Biodegradation), engineering, and timber conversion. Along the way pulp and paper research (in the guise of paper science) was added to the portfolio and statistics and photography completed the broad endeavours of what had become a world renowned forest products research laboratory.

The bulk of the work was funded by the government but there was also some support, particularly in the later years of its existence, from the forest products industry (it is tempting to remark, with the benefit of hindsight, that the industry's support for forest products research was too little and too late).

During the 1970s DFP began its slow downward spiral as decision after decision by the hierarchy of CSIRO fragmented its work over the next three decades, re-aligning its activities on a discipline basis rather than an end-user orientation. CSIRO argued that if DFP research was worthwhile from the industry's viewpoint (we had almost ceased to work on purely fundamental issues) then the industry should pay for it! In truth, the forest products industry did little to halt

this slide, even as the mainstream efforts like preservation, seasoning, sawmilling and composite products research were being touted as endeavours for and in collaboration with the industry.

Over the years the Division of Forest Products achieved a remarkable international reputation for excellence in research and industrial innovation; at the height of its activities there were some 300 personnel working on scientific and industrial research, as espoused by CSIRO's charter at the time. The Division's contributions to the basic understanding of forest products and to the operations and processes of the current forest products industries will long remain a testimony to its achievements even after its death!

Harry Greaves. March 2010

[<Back>](#)

Call for Papers

International Wood Products Journal

Edited by Gervais Sawyer
gervais.sawyer@blueyonder.co.uk

Scope

International Wood Products Journal (formerly *The Journal of the Institute of Wood Science*) publishes peer reviewed contributions on all aspects of wood science, technology and engineering, its processing and applications. The aim of the journal is to advance and encourage the scientific, technical, practical and general knowledge of timber- and wood-based products.

Invitation to submit:

The submission of original research papers, reviews and case studies is welcomed on any topic within this scope. However the journal has particular interest in the following aspects of wood science, engineering and technology, its processing and applications:

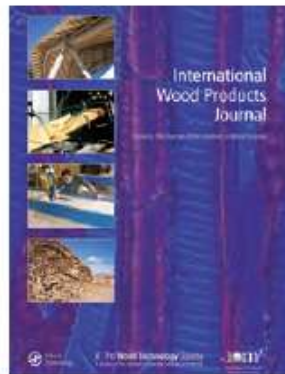
- Mechanical and physical properties of wood
- Drying
- Preservation, including insect and fungal response
- Processing and machining
- Products and applications
- Recycling
- Structural applications, including design and construction
- Testing and characterisation

The journal publishes original research papers (guide length 3500 words), reviews (4000-6000 words) and short communications (1000-1500 words and max. four figures or tables). All contributions are peer reviewed before publication.

Contributions to the journal should be submitted online at
<http://iwp.edmgr.com>

View the Instructions for Authors via the journal home page at
www.maney.co.uk/journals/iwp

Contact Mark Hull, Managing Editor (m.hull@maney.co.uk) for more information



www.maney.co.uk

www.iwsc.org.uk

www.iom3.org



Maney Publishing
Research • Knowledge • Innovation



The Wood Technology Society
A Division of the Institute of Materials, Minerals and Mining



**The Institute of Materials,
Minerals and Mining**



University of West Hungary Faculty of Wood Sciences

Come to study wood science and technology in English at the University of West Hungary, Faculty of Wood Sciences!

The goals of the master course and competences to be learned:



Professional training in wood processing and utilization. Achieving a high level theoretical knowledge and practical skills in the technical, environmental and financial aspects of wood utilization and processing. Attaining a level of theoretical understanding that, along with the vocational training, enables the graduate to assume an active role in future technical developments, and to further his or her education by entering a PhD. program.

Competences to be obtained in the masters' course:

- career-related theoretical and practical skills and their application in laboratory work and design.
- systematic understanding and competence concerning materials, technology and products
- management skills and the ability to promote successful teamwork
- user-level knowledge concerning computer-based communication and analysis
- a basic understanding of issues of environment protection, quality management, consumer protection, manufacturer responsibilities, occupational safety and health, technical, economic, legal requirements, and ethics.
- acquaintance with the general analysis and problem-solving techniques required for scientific research.
- the management of the available technological, economic and human resources in a complex way
- performing all kinds of engineering tasks related to wood processing and utilization at a high level of proficiency.
- self-education and development, extending and expanding their knowledge and skills.

Name of the diploma: Master of Science degree

Language of instruction: English



University of West Hungary Faculty of Wood Sciences

Admission criteria:

- Good command of English
- Secondary school graduation certificate
- BSc. degree in a wood or wood fiber-related field

Tuition fee: 3000 USD/semester.

accommodation in student hostel:

- approx. 180 USD/month
 - Meals at University Canteen: approx. 300 USD/month
 - Other costs (books, traffic): 100 USD/month
 - All the necessary prerequisite documents for application which are not written in Hungarian or English has to be translated by Országos Fordító és Fordításhitelesítő Iroda Zrt. (OFFI Rt)
<http://www.offi.hu/>
- After enrollment the candidates have to pass an oral examination of spoken English also.



Application procedure:

- submission of the application form (downloadable from the website www.nyime.hu) of a copy of applicants' passport and a Curriculum Vitae with a recent photo, to the email address of program coordinator, payment of tuition fee, right after receiving a positive answer of admission.

Contact person (program coordinator):

Dr. Csilla CSIHA, e-mail: cscsiha@fmk.nyime.hu
Phone: (36-99) 518-180, fax: (36-99) 518-231

Length of the study programme: 4 semesters

Number of credits required for the Masters degree: 120.

Basic science classes:

- Applied mathematics
- Wood chemistry
- Physics for engineers
- Dynamics
- Electronics
- Finance
- Management
- Ethics for engineers



Core professional classes:

- Utilisation of wood
- Machine elements and design



University of West Hungary Faculty of Wood Sciences

- Wood preservation and wooden constructions
- Theory of wood cutting
- Wood water relations
- Building constructions

Specialized professional classes:

- Wood based panels
- Inorganic bonded composites
- Anisotropic elastic and strength theories of wood and wood-based composites
- Finite element method
- Product development
- Automation
- Quality management
- Applied wood anatomy
- Bonding and surface treatment of wood
- Modification of wood
- Market research
- Building energetics
- Timber in architecture 1-2
- Labor safety - safety technique
- Logistics
- Methods of industrial measuring
- Applied wood anatomy
- Environment protection



One more reason to study with us is our nice traditions, as old as our University. The main characteristics of the so-called "Selmecbánya traditions", in addition to local specialities, are general humane values: solidarity, a sense of responsibility, unselfishness, discipline, and student-like cheerfulness.



Come to study with us!



University of West Hungary

Faculty of Wood Sciences
Launches courses for free in fall
semester 2009

In order to offer an insight into our experiences in recent research, science and high quality education we decided to offer courses for free in fall semester 2009 for foreign students interested to gain professional and scientific

knowledge in field of Wood Science and Technology. The courses chosen are a selection of the specialized professional classes offered at Master of Science degree, and for those interested in completing their studies, can be fully incorporated in the MSc study program.

Courses available for free in fall 2009:

- Wood Modification
- Inorganic Bonded Composites
- Wood Chemistry
- Product Design Methodology
- Timber Architecture I.
- Bonding and Surface Treatment of Wood
- Nondestructive Testing of Wood
- Hardwood Seminar
- Independent Studies

Come to study with us!

Pursuing studies abroad is always a challenge and an adventure at the same time. It is an experience that may have a determining impact on a student's professional life and career as well as in their friendships and in general, the human relations they develop and expand.

In today's knowledge-based society studying abroad is a good chance to improve knowledge and to gain new experience and information.

In the global competition young people's future prospects are enhanced by studying abroad as the working environment is becoming increasingly international and companies demand intercultural skills and competence.

Student traditions – our specialities

If you choose University of West Hungary, Faculty of Wood Science you become part of long tradition students conserve till today since the foundation of the University in 1735. The manifold traditions of our students mainly consist of extracurricular activities. These traditions, brought here, among many other treasures, by the College that moved from Selmecbanya to Sopron in 1918 and '19, are mixtures of German student customs, guild traditions and the heritage of Selmecbanya living. The main stations of the two-month-long procedure of introduction new students – so called "balek's" into traditions are welcoming students, organising *balek* "training" and funny *balek* exams.

One of its most important goal and feature is amusement in a pleasant atmosphere, expressing student solidarity. Later on they organise themselves upon common interests in several clubs with the main characteristic that older students take care and follow the development of their "balek's" till they join the University and in many cases even after.

[<Back>](#)

A NEW LIFE FOR THE “HIGH BAY” AT THE UC FOREST PRODUCTS LABORATORY

Submitted by Steve Quarles

Construction of the University of California Forest Products Laboratory was started in spring of 1953 and completed in early 1955. Several other buildings were added during the years that followed. When the Lab was closed several years ago, management of the building was kept by the College of Natural Resources. About a year ago much of the space in the lab was transferred for use by the Richmond Field Station administrative staff. While some of the building is still used by Cooperative Extension academics and staff, and faculty in the College of Natural Resources, another part of the original lab space has recently changed hands. Those SWST members that have visited the Lab may remember the “high bay” area. This month it officially became the home of UC Agriculture and Natural Resources Publications. We were able to keep one dry kiln, some ovens, and the Baldwin testing machines. The rest of the space is now occupied by the publications you can find in the UC ANR Catalog. A few photographs may jog your memory.







[<Back>](#)

**NATIONAL FOREST PRODUCTS UNDERGRADUATE EDUCATION
VISIONING AND NEEDS ASSESSMENT**

- DRAFT DOCUMENT -

Workshop Report

Forest Products Department, Mississippi State University

December 3-4, 2009

National Forest Products Undergraduate Education

Visioning and Needs Assessment Workshop Report

Workshop Summary

Objective

The *Visioning and Needs Assessment Workshop Focusing on National Forest Products Undergraduate Education* brought together recognized professional personnel of the forest products discipline from industry, government, non-governmental associations, and academia to identify needs and future directions for undergraduate education at the national level. Outcomes included the following:

1. *Evaluate* current and future needs for forest products undergraduate curricula and education strategies
2. *Identify* key issues, purpose, goals and objectives of future education content and delivery
3. *Develop* the elements of a baseline document for forest products-related undergraduate education
4. *Determine* the collective action steps and paths for moving forward to implement the education strategies

Participants See background details pp.18-22

- ❑ Dr. Terry L. Amburgey, Professor Emeritus, Forest Products Department, Mississippi State University.
- ❑ Dr. James (Jim) Armstrong, Associate Director, Division of Forestry and Natural Resources, West Virginia University
- ❑ David Barge, President of Barge Forest Products Co. & Barge Timberland Management, Inc.
- ❑ Dr. Donald Bender, Civil Engineering Professor/Director, Composite Materials/Engineering Center, Washington State University
- ❑ Brian Brashaw, Director, Wood Materials/Manufacturing, Natural Resources Research Institute, University of MN Duluth
- ❑ Dr. Catalino Blanche, National Program Leader, USDA National Institute of Food and Agriculture in Washington, DC
- ❑ Robert Browder, Chairman, Forest Products Society, Southeast Section
- ❑ Dr. Susan Diehl, Professor, Department of Forest Products, Mississippi State University
- ❑ Eric Gee, Director Director, Expo and Forest Resources for the Southern Forest Products Association, Kenner, Louisiana
- ❑ Dr. Laurie Grace, Professor, Department of Forest Products, Mississippi State University
- ❑ Dr. Thomas Gorman, Professor and Head of the Forest Products Department, University of Idaho
- ❑ Dr. Mirja Hanson, Principal, MP Hanson Associates, Inc., Minnesota (workshop facilitator)
- ❑ Dr. David Jones, Assistant Extension Professor, Forest Products, Mississippi State University
- ❑ Dr. Steve Kelley, Professor and Department Head, Department of Wood and Paper Science, North Carolina State University
- ❑ Dr. Shane Kitchens, Assistant Professor in the Forest Products Department, Mississippi State University

- ❑ Scott Lockyear, Technical Director, WoodWorks Southeast, Tennessee
- ❑ Bill Martin, Director, Franklin Furniture Institute, Mississippi State University
- ❑ Colin McCown, Executive Vice President, American Wood Protection Association in Birmingham, Alabama
- ❑ Hunter McShan, President, McShan Lumber Company, Alabama
- ❑ Dr. World Nieh, Forest Products National Program Leader, U.S. Forest Service, Washington D.C.
- ❑ Glynn Pittman, Resource and Operations Manager, McFarland Cascade's Southern Operation at Electric Mills, Mississippi
- ❑ Dr. Rubin Shmulsky, Forest Products Department Head and Professor, Mississippi State University.
- ❑ Dr. Robert Smith, Professor, Wood Science/Forest Products; Associate Dean, College of Natural Resources, Virginia Tech
- ❑ David Smith, Professor, Department of Wood Science and Engineering, Forestry College, Oregon State University
- ❑ Dr. Paul Smith, Professor of Forest Products Marketing, Penn State University

Participant introductions at the start of the workshop revealed a shared urgency and desire to work on how forest products professionals are recruited, educated and engaged in the industry. The following is a representative summary of workshop expectations:

- ❑ The workshop comes at a critical time and resonates with the thinking of many stakeholders across the country
 - ✦ This is timely activity and tremendous opportunity to bring together similar thinking and activity around the country
 - ✦ The industry is interested in the role it can play to educate future professionals
 - ✦ This effort can support ongoing SWST work to develop curriculum revisions
 - ✦ This activity that relates to similar efforts in many universities and at the federal government level
 - ✦ There is deep concern for the future of a \$17 billion industry; what we do here impacts the industry/economy of many states
 - ✦ We should not “waste a good crisis” and be proactive to respond to the needs of the forest products industry
 - ✦ We are the right group to initiate the work and grateful for the participation of everyone here
- ❑ The industry needs a new “breed” of professionals
 - ✦ We are not meeting the needs of the industry at the moment
 - ✦ There is a need to assure that those coming out of forest products succeed in the business world.
 - ✦ Current forest products graduates have strong technical skills but lack other skills to work in the small business environment
 - ✦ We need to identify the what future professionals need because there will always be jobs
 - ✦ We need educated students who are well-traveled and have entrepreneurship capacities

- The education institutions recognize the need to change recruitment and education for the next generation
 - ✦ Universities and educators are deeply interested continuing to be a relevant player in a critical, changing industry
 - ✦ We need to look at major changes in how we recruit students (and their families) and get out of our educational “silos”
 - ✦ Many educators have been vocal and committed to education reform and the need to “re-package” education

Process and Results

Current STATUS: What is the state of professional education and work in the forest products field?

The workshop began with a discussion of key trends and changes in educating and engaging professionals in the industry.

The session identified challenges and advantages related to the following key trends in the industry and education:

Industry Trends

- A. Increasing role of public policy in the marketplace due to growing pressure on public resources
- B. Sustainability thinking and “green” strategies have become mainstream priorities in the private and consumer sectors
- C. The industry is experiencing major shifts due to globalization, technology, competition and changing demand for wood
- D. The unfavorable image of the industry needs to be improved in order to attract next generation of professionals

Education Trends

- A. Skill sets of graduating professionals are not aligned with the needs of industry employers and partners
- B. University silos, tuitions, rules and faculty incentives complicate efforts to respond to student and industry needs
- C. Need to overcome traditional recruiting barriers and industry image to attract future students in new ways from new pools
- D. Education strategies need to adapt to the preferences and needs of millennial generation students and professionals

Future NEEDS: What expertise and competencies do professionals need to have in 5-10 years?

After assessing the current situation, participants used their experience, insights and intuition to discern the knowledge, skills, education and competences that future professionals need to have in order to meet the needs of current and future employers:

- A. Education for industry professionals: A shift away from monolithic organizations needing people with mainly technical skills to people with strong and wide-ranging general skills, core technical knowledge and a dedicated interest in forestry. Employers can hire people with highly specialized, technical skills on an as-needed basis.
- B. Education for a broader audience: Provide professionals in other disciplines with the critical and basic wood products knowledge to work in the industry by offering :

Priority DIRECTIONS: What is needed to attract, educate and prepare professionals in the next 5-10 years?

Once the status and goals were established, participants worked in small groups and full group plenaries to identify the action needed to provide the forest products industry with well-educated and qualified professionals in the coming decades. They identified the following six priority directions and developed suggested steps and timelines for implementation:

Direction A: *Transform industry image*

Engage in marketing and branding to promote the forest products industry as green, global, innovative and significant. Proactively improve the industry image, defend markets and attract a new generation of professionals.

Direction B: *Innovate in student recruitment*

Attract more students to enter the forest products field and education programs that prepare them for successful careers.

Improve recruitment through targeting key audiences and reaching them through multiple means and gateways.

Direction C: *Restructure forest products professional education*

Restructure and revamp the undergraduate forest products curriculum to align with the needs of the emerging forest products industry and its professionals.

Direction D: Expand wood education to non-majors

Appeal to a broader audience and offer wood/forest products education to professionals in other disciplines including teachers, managers, engineers, architects, builders, chemists, arborists and others who are key players in the industry and community.

Direction E: Incorporate real-life experience

Require real-life industry experience within formal studies by expanding and diversifying opportunities for students to acquire expertise through problem-solving and applied learning in public, private and community work situations.

Direction F: Update education and communication methods

Modernize teaching and communication methods in order to appeal to next generation students, hold attention, foster retention produce a better graduate and assure an accessible and effective forest products education for a global industry.

Next STEPS

At the close of the workshop, participants identified follow-up steps to begin moving forward on the priority directions:

1. Write up the results of the workshop
 - Document the group's discussions and recommendations in the report
 - Minimize synthesis so that the information can be used as a resource for writing and packaging as needed
2. Utilize and incorporate workshop ideas in each local institution as needed and appropriate
3. Develop a data base describing all current wood products/forest products-related programs in the country
4. Use the Forest Products Society meeting as a check-in point to continue the dialogue
 - Develop a poster to display at the poster session
 - Write an editorial in Wood and Fiber Science
 - Piggy-back on David Smith's talk and convene a TIG (Technical Interest Group) meeting
5. Continue to work together to increase visibility, partners and resources for the effort
 - Incorporate common messages (vision statement) on each of our websites

- Develop proposals to National Institute of Food and Agriculture (that funds higher education projects) and other federal agencies such as Department of Education, Department of Labor etc.
 - Distribute a white paper to key players including the professional society
 - Seek endorsements from the National Association of University Forest Resources Programs (NAUFRP), USDA etc. to help promote initiatives to Deans and other leaders
 - The group that produced this is a key to its credence
6. Develop metrics and mechanism for tracking progress
- Someone set-up metrics and mechanism
 - Toward common metrics




Current Status

What is the state of professional education and work in the forest products field?


Industry Trends

A. Increasing role of public policy in the marketplace due to growing pressure on public resources

Key CHALLENGES and issues:


-  Enormous pressures on public resources with major regional differences in the nation and the world
-  Public policies vs. market forces are increasingly driving industry and business strategies
-  Policy instability makes for an increasingly unpredictable business environment

Key ADVANTAGES and opportunities:

-  Climate change, carbon awareness and management, environmental sustainability are focus issues

B. Sustainability thinking and “green” strategies have become mainstream priorities in the private and consumer sectors

Key CHALLENGES and issues:

-  There is a major trend toward green building design and materials

- Industrial ecology and/or lifecycle assessment and management are an important concept in all industries

Key ADVANTAGES and opportunities:

- Our industry is still based on an inherent green material
- Wood is a true bio-material – the “original” sustainable green resource
- Woody bio-materials are a source of renewable energy

C. The industry is experiencing major shifts due to globalization, technology, competition and changing demand for wood

Key CHALLENGES and issues:

- Large manufacturing companies are no longer primary employers for forest products professionals
- Globalization of the supply chain, manufacturing and material sourcing
- Competing uses for wood for fuel, fiber, etc. which impacts the pulp and paper industry first.
- Technological advances replacing people in all stages of the production continuum
- Slow pace of industry adaptation and adaption as a result of a resistance to change
- Stifled by a traditional mindset that considers wood a commodity vs. a specialty product

Key ADVANTAGES and opportunities:

- Wood and wood fiber is being used in diversifying and unconventional applications such as bullet proofing military vehicles/armor, serving as a flu vaccine agent, etc.

D. The unfavorable image of the industry needs to be improved in order to attract next generation of professionals

Key CHALLENGES and issues:

- Industry attractiveness has decreased overall
- We have not done a good job of marketing our industry to the public; it is perceived as wearing a “black hat”
- People don’t know about wood; many can’t get past the industry as the “tree-cutters”
- We have not done ourselves any favors over the years by not addressing public encounters with the industry. Industry related facilities and activities tend to involve unpleasant sights, sounds, smells and toxins
- Other interest groups have successfully put out messages that are not favorable to the industry
- The industry is fragmented with a range of products, applications and specialty areas. This makes it difficult to conduct joint marketing and messaging efforts
- Industry has not invested money to work on the image of the industry

- ❏ Need to expand the education degree focus from “wood products” to something more inclusive such as “wood; however even “wood” may also be dirty word or sound too simplistic; should we rename it “renewable bio-material?”
- ❏ Current and future generations of professionals do not desire to work in manufacturing job settings

Key ADVANTAGES and opportunities:

- ❏ We have an opportunity to show wood in new ways and application such as Habitat housing initiatives
- ❏ There is sound, ecological basis for timber-harvesting that needs to be communicated
- ❏ Need to portray wood as the environmental choice. This is not a new idea but a new opportunity to change our image
- ❏ It is fairly easy to change minds through proactive messaging

What is the state of professional education and work in the forest products field?

Education Trends

A. Skill sets of graduating professionals are not aligned with the needs of industry employers and partners

Key CHALLENGES and issues:

- ❏ Natural resources-related graduate students are finding that their degrees do not readily translate to employment
- ❏ Employers tend not to recognize the capabilities of forest products graduates
- ❏ Forest products graduates are lacking critical skills such as accounting/business and ability to work with/manage people
- ❏ Need to get students ready to operate in a constantly changing industry

Key ADVANTAGES and opportunities:

- ❏ Contractors, architects and many other professionals need to know the basics about wood
- ❏ We need to break down silos and increase inter-disciplinary education

B. University silos, tuitions, rules and faculty incentives complicate efforts to respond to student and industry needs

Key CHALLENGES and issues:

- 🖥️ University schools, departments and programs operate in silos (“connected only by sewer pipes”)
- 🖥️ University hires faculty based more on technical/content expertise rather than ability to teach
- 🖥️ Rising tuitions of land grant universities are pricing out the working class students that they were designed to serve
- 🖥️ University rules and procedures are driven by competition for credit hour based funding and this tends to discourage non-traditional students
- 🖥️ GPA barrier to student admission to programs

Key ADVANTAGES and opportunities:

- 🖥️ Forestry programs have been changing more toward ecology and away from industrial forestry
- 🖥️ There is an opportunity and urgency to connect silos within education and the industry as a whole
- 🖥️ Possibility of educating a wider array of students – those going into the industry as well as those in other professions that work with forest products-related fields and organizations

C. Need to overcome traditional recruiting barriers and industry image to attract future students in new ways from new pools

Key CHALLENGES and issues:

- 🖥️ Decreased attractiveness of the industry poses a challenge to recruiting
- 🖥️ Academic sector related to natural resources is fragmented in the same way that the wood product industry is
- 🖥️ Each natural resources discipline seeks to portray theirs as “better” than others
- 🖥️ Internal competition for students within universities
- 🖥️ College recruiters are the first to be laid off during budget cuts

Key ADVANTAGES and opportunities:

- 🖥️ Attracting female students would be smart for their own sake and because the men tend to follow
- 🖥️ Need to actively identify and *recruit* candidates, especially in a land grant institution
- 🖥️ Need to identify people that could be “foresters by accident;” like some of us in this workshop room, they enter the field as a result of convincing and encouragement by mentors or recruiters
- 🖥️ Need a fresh, new look at who would be *inclined* to enter the industry and go after them actively

- 🖥️ Opportunity to attract new students by linking more proactively with community colleges that are experiencing increased enrollments during the current economic climate

What is the state of professional education and work in the forest products field?

Education Trends: Continued

D. Education strategies need to adapt to the preferences and needs of millennial generation students and professionals

Key CHALLENGES and issues:

- 🖥️ New generation of students prefer computer screens to live professors
- 🖥️ The millennial generation is different from previous student populations in skills, preferences and propensities. They
 - ...are tech savvy and have an electronic “gene” but may not know how to use it fully as a professional tool
 - ...have an instantaneous expectation for information
 - ...are team-oriented
 - ...need affirmation and reinforcement
 - ...have different motivations for work - a desire to serve and change the world vs. making money and profits
 - ...are inclined to be entrepreneurs without full understanding of the work involved
 - ...are not accustomed to taking individual responsibility
 - ...have minimal experience working things through to an end result or product
 - ...may not experienced a sense of accomplishment as a result of hard work and critical/innovative thinking

Key ADVANTAGES and opportunities:

- 🖥️ Huge urgency and opportunity to embrace and utilize technology-based education delivery methods
- 🖥️ Industry globalization provides an opportunity to build curricula that includes internships as a way to “see the world”

Future Needs

What are the needs, requirements and demands of employers now and in the coming decades in the private, public, Nongovernmental and other sectors in 5-10 years?

I. Education for industry professionals: A shift away from monolithic organizations needing people with mainly technical skills to people with strong and wide-ranging general skills, core technical knowledge and a dedicated interest in forestry. Employers can hire people with highly specialized, technical skills on an as-needed basis.

General Knowledge and Skills

A. Business administration skills

- People skills for working effectively with diverse audiences including white/blue collar and various backgrounds
- Business management skills in accounting, sales and marketing – an understanding of what makes wood sell
- Public policy and regulatory knowledge that affects the local, national and global industry and marketplace
- International operations, manufacturing, supply chain and marketing perspectives

B. Communication skills

- Writing skills for business communication
- Verbal presentation skills and the ability to make convincing reports and proposals in sales and marketing
- Interpersonal skills for communicating in small groups and the public
- Technological communication skills and knowledge

C. Leadership skills

- Critical, innovative thinking and problem-solving skills
- Entrepreneurial thinking and practices
- Project management skills
- Continuous quality improvement mindset and practices such as lean manufacturing, industrial ecology, etc.

Forest Products knowledge and skills

D. Foundation in wood science technology related to MATERIALS

- Fundamentals of wood condensed into fewer classes
- Core wood science and materials science

E. Applied production technology related to MANUFACTURING

- Processing, manufacturing, kiln burning, etc.
- Industrial process engineering, industrial ecology and “green” production technologies
- Selectively chosen key applications in primary and secondary industries
- Regional consideration in prioritizing the applied technologies to include in the curriculum

F. Wood utilization technology related to USES AND PRODUCTS

- Product lifecycles
- Sustainable wood construction and “green” building including impacts of carbon management
- Inter-disciplinary aspects of product design and use

G. Hands on job skills and experience

- Internships and coops
- Experiential knowledge as a part of formal education
- Service-based learning

II. Education for a broader audience: Provide professionals in other disciplines with the critical and basic wood products knowledge to work in the industry by offering:

- Program minors in wood products and industry
- Certificate programs
- Technical electives

Priority Directions

What is needed to attract, educate and prepare professionals in the next 5-10 years?

Direction A: Transform industry image

Engage in marketing and branding to promote the forest products industry as green, global, innovative and significant. Proactively improve the industry image, defend markets and attract a new generation of professionals.

Direction B: Innovate in student recruitment

Attract more students to enter the forest products field and education programs that prepare them for successful careers.

Improve recruitment through targeting key audiences and reaching them through multiple means

and gateways.

Direction C: Restructure forest products professional education

Restructure and revamp the undergraduate forest products curriculum to align with the needs of the emerging forest products industry and its professionals.

Direction D: Expand wood education to non-majors

Appeal to a broader audience and offer wood/forest products education to professionals in other disciplines including teachers, managers, engineers, architects, builders, chemists, arborists and others who are key players in the industry and community.

Direction E: Incorporate real-life experience

Require real-life industry experience within formal studies by expanding and diversifying opportunities for students to acquire expertise through problem-solving and applied learning in public, private and community work situations.

Direction F: Update education and communication methods

Modernize teaching and communication methods in order to appeal to next generation students, hold attention, foster retention produce a better graduate and assure an accessible and effective forest products education for a global industry.

Priority Directions

What is needed to attract, educate and prepare professionals in the next 5-10 years?



Direction A: Transform industry image

Engage in marketing and branding to promote the forest products industry as green, global, innovative and significant. Proactively counter negative messages to shift the industry image defend markets and attract a new generation of professionals:

- A. Re-brand to promote an environmentally friendly industry
 - Shift the perception of the industry from “black to white hat”
 - Frame the industry as one that “addresses” the climate change rather than simply “coping” with it
- B. Communicate the “cool factor” and invite millennials to be part of a critical, innovative industry
 - Appeal to bright new minds and present the industry as “the place to be” for a

rewarding career

- Show young people that wood is green, makes the world better and involves a cool “biomaterial” science
- Identify types of “future” jobs and invite students to join the industry in helping to solve major global problems
- Highlight international opportunities and play up new discoveries

C. Improve education packaging and delivery

- “Green-up” the curriculum and re-package programs to be accessible and appealing
- Target best teaching faculty in entry level courses to show students how cool biomaterial science can be

ACTION STEPS: What are suggested steps for initiating or implementing this direction?

1. Conduct joint marketing and messaging among universities, private sector and public agencies

- Assess messaging barriers
- Identify messages that communicate the benefits of wood and address public misperceptions
 - Activate *Wood is Good/Wood is Wonderful* campaigns to address misconceptions;
 - Communicate regarding carbon in houses and the grade stamp message about the percentage of carbon
 - Use a positive vision about wood, photosynthesis in planetary sustainability as a “hook” to attract
(See Appendix A for a working vision statement of the workshop by Dr.Nieh)

- Consolidate talking points and “one-liners” and distribute widely
- Use our websites to communicate a green message in a repetitive, sustained manner
- Publish in non-technical language and media

2. Work with industry to mobilize Point of Sale (POS)/Point of Purchase (POP) advertising

3. Share a research and information repository

- Collect, create and distribute sources and links
- Provide hyperlinks to key sites and sources for research and information such as carbon sequestration research, Woodworks.org, industry marketing research, university programs, etc.

4. Incorporate classroom messages

- Preach beyond the choir of committed majors
- Show and tell about the wood/forest products field and what are the benefits for the students
- Communicate through extension programs to the audiences/communities they serve
- Serve as guest lecturers; Work with receptive faculty in other schools and departments

to present wood-related lectures	
5. Share teaching and learning modules (SWST)	
MODELS considered or to be considered:	
<input type="checkbox"/> Possible \$20 million campaign for lumber manufacturers and importers <input type="checkbox"/> A marketing effort of a California Forestry Program and/or California Forestry Association <input type="checkbox"/> University of MN experience with branding <input type="checkbox"/> Weyerhaeuser/Yellow Fellow advertising that was been good but not sustained enough to be effective <input type="checkbox"/> Smokey the Bear was our best and worst image campaign <input type="checkbox"/> <i>Wood Magic</i> curriculum has been a success in schools and affecting the images of K-12 students	
TIMELINE: What is the suggested short and longer-term timing for actions?	
In 6-12 months: <input type="checkbox"/> Websites to increase a green message <input type="checkbox"/> Consolidate one-liners <input type="checkbox"/> Shared research repository <input type="checkbox"/> Classroom messages and guest lectures	In 1-3 years: <input type="checkbox"/> Shared teaching and learning modules (SWST)

What is needed to attract, educate and prepare professionals in the next 5-10 years?

<u>Direction B: Innovate in student recruitment</u>
<p>Attract more students to enter the forest products field and education programs that prepare them for successful jobs and careers. Improve recruitment through targeting key audiences and reaching them through multiple means and gateways:</p> <p>A. <u>Enhance recruitment and communication</u> strategies</p> <ul style="list-style-type: none"> <input type="checkbox"/> Identify barriers to recruitment <input type="checkbox"/> Pool resources nationwide to conduct a FP/WST recruiting campaign <p>B. Fish in the right <u>ponds</u> – traditional and non-traditional</p> <ul style="list-style-type: none"> <input type="checkbox"/> Identify non-traditional students such as undeclared majors and those who have dropped out of engineering or other majors <input type="checkbox"/> Attract students from industry by offering a possible distance MS in Wood Science and other certificate programs <input type="checkbox"/> Penetrate other disciplines with faculty in order to create future opportunities and build on expertise <input type="checkbox"/> Facilitate admission and transfer pathways for non-traditional students

- C. Utilize high schools and junior/community colleges as gateways
 - Use junior colleges as gateways to new students and initiate a 2+2 program with community and junior colleges
 - Extend the *Wood Magic* program to high schools, follow-up on attendees, develop a data base and offer *Wood Magic 2*
- D. Recruit millennials through their peers, families and networking media
 - Use peer recruiting “role ” to catalyze students talking to other students
 - Have recruitment directors target the family
 - Use communication methods used by millennials – Face book, YouTube, Twitter etc.
 - Deliver messages in short bursts to potential students and communicate details to their parents
- E. Measure recruitment success in order to justify university investment in a time of fiscal constraints

ACTION STEPS: What are suggested steps for initiating or implementing this direction?

- 1. Cast a wide net and fish in the right ponds**
 - Work at each participating university to target traditional and non-traditional students
 - Keep it flexible to fit SWST accreditation and programs
 - Seek out collaborative faculty
- 2. Initiate nationwide recruiting that targets**
 - 3. High school students
 - 2. Community college/junior college students
 - 1. On-campus transfers – (the easiest target; the “low hanging fruit”)
- 3. Mobilize recruiting through peers and “gate-keepers”**
 - Seek peer recruiters to reach people through Facebook and other social networking means
 - Target minority groups
 - Target community college/junior college for immediate results
 - Work with extension faculty to stop in and meet community/junior college contacts as they travel the state
 - Provide gatekeepers with a simple brochure they can give interested students regarding the transfer process steps
- 4. Set up common images and messages on our websites**

MODELS considered or to be considered:

- Oregon model for informing department “gatekeepers” about advising transfer students
- Learn from any universities that have changed recruiting practices

<input type="checkbox"/> View a stand-out website that utilizes peer/campus recruiting targeting undeclared majors (WVU, VT ?) <input type="checkbox"/> <i>Wood Week</i> event on campus each year at <input type="checkbox"/> Consider the Armed Forces recruiting as a model	
TIMELINE: What is the <u>suggested short and longer-term timing</u> for actions?	
In 6-12 months: <input type="checkbox"/> Identify partners and lead organizations <input type="checkbox"/> Identify costs and raise funds <input type="checkbox"/> Pilot at PSU, WVU, and other locations <input type="checkbox"/> Talk with freshman advisors, the gate-keepers in recruitment <input type="checkbox"/> Evaluate community college/junior college curricula	In 1-3 years: <input type="checkbox"/> Seek assistance from a professional marketing firm to create materials such as DVDs etc. <input type="checkbox"/> Track results! Decide what are the metrics for assessing and monitoring recruitment action progress

What is needed to attract, educate and prepare professionals in the next 5-10 years?

<u>Direction C:</u> Restructure forest products professional education
<p>Restructure and revamp the undergraduate forest products curriculum to make it align with the needs of the emerging wood/forest products professionals and industry.</p> <p>A. Develop <u>new degree options</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Increase program flexibility for undergrads <input type="checkbox"/> Create a dual-track forestry degree - SAF and SWST <input type="checkbox"/> “IST” vs. “ER” (scientist vs. manager) university-specific strategies <input type="checkbox"/> Determine applications by local and regional program needs <p>B. Integrate classes to <u>incorporate people skills and business education</u> into every course</p> <ul style="list-style-type: none"> <input type="checkbox"/> Consolidate technical curriculum and expand soft skills <input type="checkbox"/> Offer more general education courses such as business concepts, service and entrepreneurial skills <input type="checkbox"/> Keep basic material knowledge <ul style="list-style-type: none"> Include conversion and use of wood products Build wood from basic wood sciences – anatomy and physical; chemical and mechanical properties <input type="checkbox"/> Include industrial ecology in/and forestry <p>C. Make degrees <u>as interdisciplinary as possible</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> More inter-disciplinary courses <input type="checkbox"/> Inter-disciplinary studies in natural resources

- Penetrate other disciplines with faculty to provide future opportunities; build on expertise

ACTION STEPS: What are suggested steps for initiating or implementing this direction?

1. Draft and design curriculum changes:

- Maintain core WST**
Anatomical/physical properties
Chemical/mechanical properties
- Add important new components**
Business/law
Industrial engineering
Environment/policy
Accounting/economics
Management/human resources
Communication
- Include optional components**
Regional specialties
- Incorporate sustainability perspectives and concepts**
Building/utilization, architectural design, if appropriate
Industrial ecology – how do you set-up the flow any industrial product from input, throughput to output and show how all the materials transform into products, by-products, wastes etc.
- Assure flexibility in consolidating the curriculum**
Use a more outcome-based vs. prescriptive approach

2. Work with partners in the change process

- Tap into trade association leadership programs (multi-year process) and cross-fertilize with university programs
- Work closely with SWST without feeling intimidated. They are in the process of revising as well.

MODELS considered or to be considered:

- SAF's four main areas with standards

TIMELINE: What is the suggested short and longer-term timing for

actions?	
<p>In 6-12 months:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Have each institution examine current programs and assess the ideas of the workshop in light of what they have now <input type="checkbox"/> Combine efforts to design curriculum models 	<p>In 1-3 years:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Interact with SWST on proposed education/degree guidelines <input type="checkbox"/> Incorporate in programs! <input type="checkbox"/> Continue to refine these components

What is needed to attract, educate and prepare professionals in the next 5-10 years?

<u>Direction D: Expand wood education to non-majors.</u>
<p>Appeal to a broader audience and offer wood/forest products education to professionals in other disciplines including teachers, managers, engineers, architects, builders, chemists, arborists and others who are key players in the industry and community</p> <p>A. Offer more “<u>technical</u>” <u>general education</u>” courses for <u>non-majors</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Many in the industry work in manufacturing, marketing, distributing and selling wood but do not have any idea “what is inside the bark” <input type="checkbox"/> Offer core strengths to other programs and other universities – i.e. building durability at State <input type="checkbox"/> Industrial ecology – forestry <input type="checkbox"/> Package courses to be substantive but enticing <input type="checkbox"/> Teach courses well in order to inspire students <p>B. Increase <u>inter-disciplinary educations</u> and faculty partnerships</p> <ul style="list-style-type: none"> <input type="checkbox"/> Penetrate other disciplines <input type="checkbox"/> Cross-list and dual-list courses <input type="checkbox"/> Explore teaching collaboration to fill gaps – D.E., exchanges, etc. <input type="checkbox"/> Address the challenge of faculty time to create and teach new courses
<p><u>ACTION STEPS:</u> What are <u>suggested steps for initiating or implementing</u> this direction?</p>
<p>1. Develop content that promotes wood understanding and appreciation</p> <ul style="list-style-type: none"> <input type="checkbox"/> Wood is good, Wood is green, Carbon footprint, Course that relate to the role of wood in a given major or field <p>2. Target key audiences</p> <ul style="list-style-type: none"> <input type="checkbox"/> Seek out non-declared majors <input type="checkbox"/> Target students in key majors - MBAs, GB, teachers

<input type="checkbox"/> Offer professional education for existing industries such as builders, engineers, architects, chemists, arborists etc. <input type="checkbox"/>	
3. Utilize diverse and dynamic approaches	
<input type="checkbox"/> Keep it new and exciting <input type="checkbox"/> Use inter/intra-university distance-learning and online courses <input type="checkbox"/> Utilize existing CEU resources and processes Arrange for CEU credit by state or other appropriate jurisdiction Identify and target the regulatory bodies that conduct and regulate professional education	
<input type="checkbox"/> Develop/use certifications (CISA, etc.) <input type="checkbox"/> Connect with extension programs. Consider extensions courses for high school teachers, perhaps industry sponsored... <input type="checkbox"/> Set-up minors for specific majors such as, educators, business (MBAs), architects etc.	
MODELS considered or to be considered:	
<input type="checkbox"/> Dr. Smith of Oregon State University teaches a general education course on “Forest Resources in U.S. History” that transforms the image of industry	
TIMELINE: What is the <u>suggested short and longer-term timing</u> for actions?	
In 6-12 months: <input type="checkbox"/> Create a central clearinghouse for course content, etc. <input type="checkbox"/> Arrange for CEU credit by state or other appropriate jurisdiction <input type="checkbox"/> Identify and target the regulatory bodies that conduct and regulate professional education <input type="checkbox"/> Explore/initiate wood product-related general education pilots at universities and share best practices <input type="checkbox"/> Explore FP minors geared to specific majors such as educators, business and architects	In 1-3 years: <input type="checkbox"/> Track best practices, enable cross-fertilization, open minds and perhaps gain some students <input type="checkbox"/> Develop and incorporate into regular curriculum (core) <input type="checkbox"/> Develop targeted continuing education courses <input type="checkbox"/> Develop tracking system that evaluates and assesses what works

What is needed to attract, educate and prepare professionals in the next 5-10 years?

Direction E: Incorporate real-life experience

Require real-life industry experience within formal wood/forest products studies by expanding and diversifying opportunities for students to acquire expertise through problem-solving and applied learning in public, private and community work situations.

- A. Include coop and intern programs
 - Replace forestry summer camps with appropriate experiences like coops, industry tours, different summer camps
- B. Develop a capstone interdisciplinary design experience

ACTION STEPS: What are suggested steps for initiating or implementing this direction?

1. Institute internship and coop learning in all sectors

- Formal and informal opportunities
- Internships with businesses
- Internships with state and federal agencies

2. Interact with companies in the classroom

- Service learning opportunities
- Company projects completed in class (E.g. wine barrel project)
- Company teach in classroom

3. Create multi-semester projects span multiple classes and courses

- Capstone experience

4. Develop resources to support internships

- Hard to place; no one is hiring let alone offering internships
- Less/no industry scholarships Seek scholarship funding
- Try smaller but useful support such as putting up some university funds on the table to help pay for expenses, housing. This will get students' attention on campus
- Explore available government internships for minorities

5. Have students work with faculty to mesh classroom learning with real-world issues and applications

MODELS considered or to be considered:

- Benchmark and learn from degree programs in the country that already require coops

with companies or internships	
TIMELINE: What is the <u>suggested short and longer-term timing</u> for actions?	
<p>In 6-12 months:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Review what is being done currently with internships <input type="checkbox"/> Develop examples and guidelines for internships <input type="checkbox"/> Review and refine with companies and organizations <input type="checkbox"/> Seek short-term grants for changes in educational programs from USDA, NSF, etc. 	<p>In 1-3 years:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Establish scholarships for internships <input type="checkbox"/> Set up a national clearinghouse or effort for cooperative/internship programs <input type="checkbox"/> Seek longer-term grants for changes in educational programs from USDA, NSF, etc.

What is needed to attract, educate and prepare professionals in the next 5-10 years?

<u>Direction F:</u> Update education and communication methods
<p>Modernize teaching and communication methods in order to be efficient, appeal to next generation students, produce a better graduate, hold attention, foster retention and assure accessible and effective wood products education for a global industry</p> <p>A. Utilize <u>state-of-the-art technology in marketing, student recruitment and education delivery</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Recognize that the medium is a key to messaging with the millennial generation <input type="checkbox"/> Assure accessible and effective wood products education for a global industry. <p>B. Include <u>hands-on, interactive and experiential learning in the classroom</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Include industry interaction in the classroom settings <input type="checkbox"/> Increase non-lecture, experiential learning <input type="checkbox"/> Consider teaching exchanges between disciplines, departments, universities, academia/industry <input type="checkbox"/> Integrate people, communication and problem-solving into every course plus separate courses on these

- C. Equip educators and administrators with current and future communication and education delivery media
- multi-modal and state-of-art communication and education delivery methods in all directions
 - Many educators do not have the capacity and knowledge to use new methods of education delivery “the white hairs”
 - Support faculty with the information/education technology assistance needed to re-format curriculum and make it appealing to the content and process needs/preferences of current students

ACTION STEPS: What are suggested steps for initiating or implementing this direction?

- 1. Incorporate best and up to date communication methods into the planning for all the proposed directions**
 - Utilize and link websites to mobilize joint marketing, messaging and recruiting
 - Set-up e-clearinghouses to share research and monitor development initiatives
 - Optimize recruiting through the use of on-line approaches and social e- networking means
- 2. Work to develop undergraduate education operates and “lives” in a global, technology-enhanced environment**

MODELS considered or to be considered:

- Most universities provide information technology support services to faculty including “tech boot camps” at some
- Older faculty hiring help from the new generation of students/grad students to convert lectures and lesson plans into updated formats and media

TIMELINE: What is the suggested short and longer-term timing for actions?

In 6-12 months:

- Utilize and link websites to mobilize joint marketing, messaging and recruiting

In 1-3 years:

- Work to develop undergraduate education operates and “lives” in a global,

<ul style="list-style-type: none"> <input type="checkbox"/> Set-up e-clearinghouses to share research and monitor development initiatives <input type="checkbox"/> Optimize recruiting through the use of on-line approaches and social e- networking means 	<p>technology-enhanced environment</p>
---	--

Appendix A: Draft Vision Statement:

A tree is a factory that manufactures
a renewable material from carbon-dioxide and water (greenhouse gases)
with solar energy.

The process stores carbon in trees and products made from wood.

Wood products can potentially displace
high greenhouse gas-emitting materials made from petro-chemicals
(this needs to be clarified further)

Drafted By Dr. World Nieh

Appendix B: Participant Information

Dr. Terry L. Amburgey

Dr. Amburgey is Professor Emeritus in the Forest Products Department at Mississippi State University.

Education:

[North Carolina State University](#) Ph.D., Plant Pathology

[State University of New York, College of Environmental Science and Forestry](#) M.S., Forest Pathology

[State University of New York, College of Environmental Science and Forestry](#) B.S., General Forestry, Cum laude

Research Interests:

Prevention and control of stains in lumber

Prevention and control of decay fungi and insects in wood products

Non-Pressure wood treatment processes

Dr. James (Jim) P. Armstrong

Dr. Armstrong is the Associate Director for Academics in the Division of Forestry and Natural Resources at West Virginia University. Prior to serving in this role, he was Program Coordinator for WVU's Wood Science program for 18 years and served as Interim Division Director for two years. He was President of the Society of Wood Science and Technology in 2007-2008, a past chair of the SWST Committee on Accreditation, and current chair of the SWST Education Committee. Jim has been a faculty member in wood science at WVU for 28 years.

David Barge

Mr. Barge is President of Barge Forest Products Co. & Barge Timberland Management, Inc. (Family-owned and operated Timberland and Specialty Pine Sawmill Operations). David received a B.S.(1976) from MSU in Forest Management and a M.S. (1977) from MSU in Forest/Business.

Professional Experience:

Kirby Forest Industries, Inc., Silsbee, TX. - Technical Forester, Resources Division, 1978 - 1980

Kirby Forest Industries, Inc., Silsbee, TX - Systems Analyst for Resources and Manufacturing Divisions, Administrative Department, 1981 - 1983

Callon Petroleum Company, Natchez, MS - Senior Programmer/Analyst for Engineering and Acquisition Groups, 1983 - 1986

Barge Forest Products Co. & Barge Timberland Management, Inc., Macon, MS Since 1986(Became President of Barge Forest Products in 1996 and President of Barge Timberland Management, Inc. in 2009.)

Dr. Donald A. Bender

Dr. Bender is Professor of Civil Engineering and Director of the Composite Materials & Engineering Center at Washington State University. He earned B.S. and M.S. degrees from Virginia Tech University and Ph.D. degree from Purdue University. Dr. Bender's research is aimed at more efficient utilization of sustainable materials in building applications. His fundamental work on modeling spatial variability of mechanical properties of wood provided the analytical basis for evaluating the reliability of glued-laminated timbers and wood trusses. He developed design methods for residential decks and post-frame timber structures that have impacted structural engineering practices and been adopted by building codes. His research on nondestructive evaluation techniques has practical value in statistical process control and in situ inspection of wood structures. Dr. Bender is active in development of design and test standards for wood-based materials, continuing education courses to design professionals and code officials, and he is a technical advisor to several companies and industry trade associations. Dr. Bender has authored over 130 technical papers and proceedings, and received six national-level journal article awards. He is a registered professional engineer and holds the Weyerhaeuser Distinguished Professorship at WSU.

Brian Brashaw

Mr. Bradshaw is the Director of the Wood Materials and Manufacturing Program at the Natural Resources Research Institute, University of Minnesota Duluth where he has been employed since 1991. Brian is an accomplished manager of a broad-based research program focused on wood products manufacturing, biomaterials utilization, and nondestructive evaluation technologies. The primary mission of this program is to facilitate economic growth and stability of Minnesota and other Lake States wood product manufacturers. Key strategic partnerships have been established with state agencies, federal laboratories, economic development groups and private industry. He has broad knowledge of the wood products industry in Minnesota, the Lake States and the world. He has developed strategic relationships with wood product manufacturers ranging in size from entrepreneurs to Fortune 500 companies. He is currently serving as the project director for the University of Minnesota Duluth Wood Utilization Research (WUR) Center and has held a number of past and current leadership positions for the Forest Products Society. He is currently serves on the International Advisory Committee for the International Nondestructive Testing and Evaluation of Wood Symposium Series. He has published over 100 journal articles and technical reports.

Research Focus

Current project activities focus on modern manufacturing systems, technology assessment and implementation, and new product development. Specific research focus areas include:
Wood Products Manufacturing (multiple market segments focused on product development, technology implementation and continuous improvement including lean manufacturing)
Biomaterials Utilization and Processing
Nondestructive Evaluation (NDE) Technologies

Appendix B: Participant Information

Dr. Catalino A. Blanche

Dr. Blanche serves as a National Program Leader, USDA National Institute of Food and Agriculture in Washington, DC. He holds a BS degree in Wood Science and Technology, a Master's degree in Agriculture (plant physiology/biochemistry), a second Master's degree in Forest Resources (Ecology/Biometrics) and a PhD in Forestry (tree physiology/crop ecology). He has postdoctoral training in urban forestry and agroforestry. He administers the \$4.7M Wood Utilization Research grant supporting 13 academic institutions working on various areas of wood science and engineering including nana-composites, the \$27.5M Cooperative Forestry Research Grant for all the 50 states including Puerto Rico, Virgin Islands, American Samoa, Guam and 1890 land grant institutions, and about \$3.5M in special research grants each year. He manages the Forestry Research Advisory Council that advises the Secretary of Agriculture relative to federally funded forestry research. He serves as a permanent council member of the National Urban and Community Forestry Advisory Council of the Secretary of Agriculture. He is a member of the Steering Committee for Nanotechnology for the Wood Products Industry. He serves as program director of the following: 1) Wetlands Research (Louisiana State University and Canaan Valley Institute, WV, 2) Competitiveness in Agricultural Products (University of Washington and Washington State University, 3) Sustainable Engineered Materials from Renewable Sources (Virginia Tech), 4) Alternative Fuels Laboratory (North Dakota State

University), 5) Urban Silviculture (Cornell University), and 6) Forestry Research (University of Arkansas). He was one of the 5 architects in designing/packaging the Clinton-Glickman natural resources conservation legacy. He was a former agroforestry program leader of the USDA Agricultural Research Service and a former associate director of the Urban Forestry Program at Southern University. He was a research scientist at Mississippi State University with responsibilities of elucidating the mechanism by which the southern pine beetle kills its host, of investigating the chemistry and accelerated aging process of selected tree seeds and of developing new and effective wood preservatives. Dr. Blanche has 110 scientific publications and book chapters in a variety of areas including: forest products, wood preservation, urban forestry, agroforestry, hydrocarbon emissions, tree seeds, photosynthesis, and bark beetle/host interactions

Robert M. Browder

Mr. Browder graduated from Wingate College in 1973 with an Associate in Science and North Carolina State University in 1976 with a Bachelor of Wood Science and Technology degree. He received a Master of Science in Logistics Management from the Air Force Institute of Technology in 1987. He is also a 1990 graduate of the Naval War College. Mr. Browder is currently certified by the American Society for Quality as a Quality Engineer

In 1994 Mr. Browder joined the Southern Pine Inspection Bureau. He was assigned as a Quality Supervisor in the Northeastern United States and in 1999 he moved to Pensacola, Florida to serve in the position of Technical Program Manager. He assumed the position of Director, Lumber Program and Secretary for the Southern Pine Inspection Bureau in April and May of 2003 respectively.

Mr. Browder is a Chairman of the Southeast Section for the Forest Products Society and is an Alternate on the American Lumber Standard Committee. He is a member of the American Society for Testing and Materials, Society of Wood Science and Technology and a Senior Member of the American Society for Quality.

Dr. Susan Diehl

Dr. Diehl is a Professor in the Department of Forest Products at Mississippi State University. Her research area is centered on the microbial mechanisms of wood deterioration. Courses she has taught include the freshman Wood Technology and Products, Environmental Principles and Topics in Wood Deterioration. She also served as Faculty Advisor to the Forest Products Society Chapter for 10 years.

Eric D. Gee

Mr. Gee is the Director, Expo and Forest Resources for the Southern Forest Products Association in Kenner, LA. Eric is a 1994 graduate of Auburn University with a Bachelor of Science degree in Forest Resources. He began his career as a Woods Supervisor at James M. Vardaman & Company in Jackson, Mississippi. There, his duties included conducting inventory for timber sales, timberland evaluations, and reforestation success. In 1996, Eric was promoted to the position of Branch Manager at Vardaman's Montgomery, Alabama office. There, his duties were

more focused on obtaining the necessary forestry work to sustain the branch office; providing consulting forestry services to private landowners. Eric moved to New Orleans in 1997 to join the Southern Forest Products Association (SFPA) in the position of Marketing Manager, providing Southern Pine lumber technical and promotional programs focusing on the building inspectors and the construction industry market segment. In his 11 years at Southern Forest Products, Eric also directed the State & Environmental Affairs department and the Industrial Markets Program. Eric is a member of the Society of American Foresters, a Licensed Registered Forester in the State of Alabama, and a Society of American Foresters Certified Forester.

Dr. Laurie Grace: Dr. Grace joined the MSU faculty in 1994 after completing her PhD in forest products at the Swedish University of Agricultural Sciences. She has taught Forest operations and Timber Harvesting and Introduction to Wood Supply systems, in addition to numerous guest lectures on other courses. She currently serves as the primary Forestry advisor for undergraduates in the Forest Products option (one of the Forestry concentration areas). She is also involved in graduate education as well as outreach activities.

Dr. Thomas Gorman

Dr. Gorman is Professor and Head of the Forest Products Department, has been teaching and conducting research at the University of Idaho since 1987. He has been serving as Head of the Department since 2000. The Forest Products Department has an enrollment of 0 undergraduate students in their SWST-accredited program, and carries out research in sustainable forest products utilization with a current enrollment of 12 graduate students. Prior to coming to Idaho, he was a Research Engineer at the USDA Forest Products Laboratory in Madison, Wisconsin. He holds a M.S. (1984) and Ph.D. (1987) in Wood Products Engineering from S.U.N.Y. College of Environmental Science and Forestry in Syracuse, New York. His B.S. in Wood Science and Technology was completed in 1980 at the University of Massachusetts. He is a licensed professional engineer in Idaho and Washington, a member of the Forest Products Society (FPS), and is past-Chairman of the Inland Empire Section of FPS.

Dr. Mirja Hanson

Mirja is a facilitator, consultant, adjunct professor and author with 35 years of experience in community development, multiple-stakeholder decision making, policy consensus building, inter-organizational partnerships, leadership development and strategic planning. Her focus areas are sustainable development, affordable housing, education and public services effectiveness. She has worked with public and private organizations including more than 50 agencies in every level of government; numerous education institutions; the U.S. House of Representatives, 100 town meetings in U.S. municipalities, State of Minnesota Sustainable Forest Policy Roundtable, U.S. Steel, 3M Corporation, United Nations Sustainable Development Program and Habitat for Humanity. Prior to private practice, Mirja was a senior in-house consultant with the Institute of Cultural Affairs and the State of Minnesota's Management Analysis and Development Division. Her most recent publication is *Clues to Achieving Consensus: A Leader's Guide to Navigating Collaborative Problem-Solving* (2005). Hanson has a doctorate in education from the University of St. Thomas, masters in business administration from the University of Minnesota, and a bachelor of art degree from the Metropolitan State University in Minnesota. She is an adjunct faculty member at the University of St. Thomas and a founding member of The International

Association of Facilitators. She spent her first two decades in Japan as a part of a missionary family from Finland and the last three decades in Minnesota with her husband, six children and six grandchildren

Dr. David Jones

Dr. Jones is assistant extension professor in forest products at Mississippi State University. He earned his BS in Forestry from Clemson University, an MSF from Stephen F. Austin State University, and a Ph.D. in forestry at the University of Georgia. He worked at Virginia Tech as a Post Doc prior to taking his current position at Mississippi State. His principle research areas are wood quality and rapid assessment techniques of wood properties. His extension interests include landowner education, the wood magic science fair, solving emerging problems in the forest products industry, and wood identification. He is a member of the Forest Products Society, Society of Wood Science and Technology, and the Society of American Foresters.

Dr. Steve Kelley

Dr. Kelley is currently a Professor and Department Head in the Department of Wood and Paper Science at North Carolina State University. As Department Head he helps mentor a faculty of 21 tenured, tenure-track, research and teaching faculty, 15 staff, 55 graduate students and 150 undergraduate students. He teaches two undergraduate classes, Introduction to Wood Chemistry, and Wood Adhesives and Composites. He also has an active research program focused on technical development for bioenergy and biomaterials, and life cycle analysis. He has more than 75 refereed publications, and 15 patents and patent applications.

Prior to joining NCSU he spent 13 years at the DOE's National Renewable Energy Laboratory working on biomass conversion technologies. His responsibilities included technical leadership and innovation in the areas of biomass characterization, production of value-added biobased products and thermal conversion processes, and project management. He was also responsible for helping to develop the strategic vision for NREL biomass program and supporting DOE staff. He left NREL as a Principal Scientist and Technology Lead for the Thermochemical Platform. Prior to joining NREL he worked in industry (Eastman Chemical Co. and Bend Research, Inc.) for 6 years developing new cellulose-based materials and membrane processes.

He received his Ph.D. in Chemistry from Virginia Tech. He has served at the Division Chair, Program Chair, and Awards Chair for the Cellulose and Renewable Materials Division of the American Chemical Society, and on the Long-range Planning committee of the Society of Wood Science and Technology. He is a Fellow in the International Academy of Wood Science.

Dr. Kelley has served as an Adjunct Professor at East Tennessee State University, Oregon State University and is currently an Adjunct Professor at the University of Tennessee, Knoxville.

Dr. Shane C. Kitchens

Dr. Kitchens is an Assistant Professor in the Forest Products Department at Mississippi State University. He received a B.S., M.S., and PhD in Forest Products from Mississippi State University. Shane worked in the forest products industry (Buckman Laboratories, Memphis, TN – Area Sales Manager and Corley Manufacturing, Chattanooga, TN – Product Manager) for nine years before returning to Mississippi State in 2003 to pursue a PhD program in the College of

Forest Resources. Shane's research has focused on wood protection systems, lumber and log quality programs, southern climatic housing issues, and wood destroying organisms. Shane has authored and co-authored over twenty publications, holds two United States Patents, and has given many formal and informal presentations in the last 15 years on the subject of lumber discolorations and wood protection.

Scott Lockyear

Scott Lockyear is a licensed engineer with a Masters Degree from Washington State University. He has spent the last two years as the WoodWorks Technical Director in the Southeast focusing on the promotion of wood products in commercial construction. Prior to joining WoodWorks Scott was the Technical Manager for iLevel in the Southeast US. Scott has also worked for the American Wood Council as a staff engineer.

Bill Martin

Mr. Martin, MBA & MPPA, is an innovative senior executive manager with over 30 years experience in both private and public companies. He has successfully performed duties as President, COO, VP Market Development, National Sales Manager, EVP Operations and as an entrepreneur in various manufacturing and distribution environments. Bill has extensive experience in strategic planning, sales and marketing strategy, company restructuring and transformation, enhancing cash flow, revenue and profits. He has a lengthy track record of successfully managing companies to a sustained growth.

As Director of the Franklin Furniture Institute, Bill has supported and initiated projects that help build sustainability in the furniture and home furnishings industry. These projects include lean transformation, logistics planning and modeling, testing certification and market planning. Bill also was the PI and a Co-PI on two separate rail revitalization projects that supported economic development of the Central Mississippi Region. Bill received his Masters in Business Administration and his Masters in Public Policy and Administration from Mississippi State University. He earned his Bachelor of Science in Industrial Technology from the University of West Florida.

Colin McCown

Colin McCown holds a Bachelor of Arts degree in Industrial Psychology and a Master of Science degree in Forest Products, both from Mississippi State University, perhaps making him the world's only Wood Psychologist. Beginning his professional career in 1991, he worked in the treated wood utility pole industry for over twelve years with Thomasson Lumber Company, starting in Research and Development and ultimately serving as Vice President of Technical Services and Legal Affairs. After leaving Thomasson in 2003, Mr. McCown became the Executive Vice President of the American Wood Protection Association in Birmingham, Alabama. He is a member of the Forest Products Society, the Society of Wood Science and Technology, the American Society of Association Executives, ASTM International, Accredited Standards Committee O5, the National Council of Forestry Association Executives, and the American Wood Protection Association. He and his wife Kim have been married for 17 years, and live in Birmingham, Alabama with their three children, Erin (15), Will (12), and Ben (9).

Hunter McShan

Mr. McShan is President of McShan Lumber Company. McShan Lumber Company is a sawmill producing high quality Southern Yellow Pine lumber for domestic and export markets. We annually produce about 26 mmbf of high grade kiln dried boards and specialty products all of which are certified under SFI. McShan Lumber Company is located in McShan, Alabama and has been in business since 1907.

Dr. World Nieh

Dr. Nieh is presently the Forest Products National Program Leader and the Co-Lead of the Resource Management and Use (RMU) Strategic Program Area (SPA) for the U.S. Forest Service stationed in Washington D.C. Prior to joining the Forest Service in 2006, Dr. Nieh worked in research and marketing for forest products companies and suppliers to the forest products industry. While working in the forest products industry he was responsible for the development, technical support or marketing of products including engineered wood products, structural wood composite, wood plastic composites, furniture components, treated wood products, paper products and various types of wood adhesives. His current focus areas as Forest Products Program Lead and RMU SPA Co-Lead at the U.S. Forest Service are bioenergy and nanotechnology. Dr. Nieh received his Ph.D. in Forest Products from Mississippi State University and studied at the Polymer Science Department of the University of Southern Mississippi as part of his Ph.D. curriculum. He is a member of the American Chemical Society, the Forest Products Society and the Society of Wood Science and Technology.

Glynn Pittman

Mr. Pittman is a 1976 graduate of Mississippi State University, past President of the Southern Pressure Treaters Association (SPTA). A 30 year veteran of the forest products industry with the majority of his career spent in wood preservation, he has managed facilities from Texas to New England. He is now Resource and Operations Manager of McFarland Cascade's Southern Operation at Electric Mills, MS.

In addition to SPTA, Pittman currently serves as a director for the North American Wood Pole Coalition (NAWPC) as well as on several committees of the American Wood Preservers Association (AWPA). He is on the Advisory Committee for Mississippi State University School of Forest Resources – Forest Products Department and the East Mississippi Community College -Forest Technician Program. Pittman is active in the Mississippi Forestry Association, the Lauderdale County Forestry Committee and the Mississippi Manufacturers Association.

Glynn is past National Chaplin and District Director of the US Jaycees, Past President of two local Chambers of Commerce, and is lead tenor in his church sanctuary choir. And finally, Glynn is a diehard MSU Bulldog fan and supporter.

Dr. Rubin Shmulsky

Dr. Shmulsky is the Forest Products Department Head and Professor at Mississippi State University.

Education:

[Mississippi State University](#) Ph.D., Forest Resources
[Mississippi State University](#) M.S., Forest Products
[University of Massachusetts](#) Building Materials and Wood Technology

Research Interests:

Drying of wood and wood products
Mechanics of wood and wood products
Engineered wood products

Dr. Robert Smith

Dr. Smith is a Professor in the Department of Wood Science and Forest Products, and Associate Dean for the College of Natural Resources at Virginia Tech. He is also the director of the Center for Forest Products Marketing and Management. He holds a Ph.D. from Virginia Tech in Forest Products Marketing, a MBA from the University of Wisconsin at Oshkosh, and a B.S. in Wood Science from Michigan Tech. Bob taught undergraduate and graduate courses in the areas of forest products marketing and business management. Prior to completing his Ph.D., he was a sales representative for eight years in the Midwest for a major supplier of treated wood products and for six years was a production manager at a wood treating plant. He grew up in the hardwood lumber industry where his father managed a mill in northern Michigan. He has authored over 200 articles in the areas of forest products, marketing and sales. He has directly managed over \$1.5 million in research funding. His current research efforts focus in industrial marketing and international trade of forest products. Bob teaches forest products marketing and sales workshops throughout the North America.

David Smith

Dr. Smith joined the faculty of the Department of Wood Science and Engineering in the Forestry College at Oregon State University in 2008 after a long career in industry. His primary reason for entering academia was to provide insight and stimulation to the next generation of scientists and professionals that will take on the responsibility of fashioning better ways to use the world's forest resources to solve important problems. He has a BS and MS in Wood Technology from the University of Washington. Current responsibilities at OSU include teaching several courses related to wood products manufacturing, and working with faculty to restructure the WSE program to build undergraduate enrollment.

Prior experience includes 12 years as a consultant with Evergreen Engineering, and over 20 years providing technical and management services in pulp mills and composite panel plants for several employers. A current area of interest is the utilization of woody biomass for fuel to generate heat and power. He keeps abreast of emerging energy conversion technologies, and is particularly interested in the development of economical, in-woods processing techniques for converting logging slash or pre-commercial thinnings into ready-to-use power plant fuels .

Dr. Paul M. Smith

Dr. Smith is a Professor of Forest Products Marketing at Penn State University. He received a B.S. in Forestry, University of Montana, M.S. in Forest Products, University of Idaho and Ph.D. in Forest Products Marketing, Virginia Tech. He is also an adjunct Professor at Washington State University's Wood Materials & Engineering Laboratory. Dr. Smith's industry experience

includes five years as a forester in Colorado and Montana and two years as operations manager for a wood products trading company in the Pacific Northwest (USA). He has served as a market research consultant for the FAO (Food and Agricultural Organization), the ITTO (International Tropical Timber Organization), 12 industry trade associations, over 70 private firms and has made over 40 international trips to present papers, conduct research and consult.

Dr. Smith teaches undergraduate and graduate courses at Penn State in Forest Industries Marketing Management, Wood Products Sales & Sales Management, Case Studies in Wood Products Marketing, Colloquium, and International Wood Products Marketing. He also conducts research and disseminates the results to appropriate audiences through publications and presentations. In addition, he regularly consults for a variety of international wood-based sectors, but maintains an emphasis on global competitiveness, technology driven product-market development and sustainable building materials marketing. He has served as program chair for Wood Products in the School of Forest Resources and is the 2008 recipient of Outstanding Faculty Award in Penn State's School of Forest Resources. Dr. Smith served as President of the Society of Wood Science & Technology (SWST), has Chaired both the National Planning Committee for Forest Products Research and the NE Section of the Forest Products Society (FPS), served on the FPJ Editorial Committee, was a member of the FPS Long-Range Strategic Planning Committee, and served as a Wood Award judge for the FPS. He currently serves as an elected Northeast representative of the Forest Products Society Executive Board, an invited member of the Composite Panel Association Certification Oversight Board (COB), and an invited member of the Forest Foundation Board.

Dr. Smith has been principal investigator on over 50 academic research projects, has published over 100 peer reviewed articles and proceedings papers, and has presented nearly 200 papers, including 21 invited keynote, featured, and international talks. Dr. Smith's recent research interests include: Trade Show Use and Effectiveness; Value Analysis; Product-Market Development; Brand Name Development; Content Analysis of Advertising, Sustainable Building Material Marketing, and Pennsylvania's Hardwood Industries.

-DRAFT-

[<Back>](#)

FPS CONVENTION HIGHLIGHTS THE FUTURE DIRECTION OF FOREST PRODUCTS RESEARCH AND DEVELOPMENT

The Forest Products Society (FPS) announces their 2010 International Convention. The **FPS 64th International Convention** will take place June 20-22, 2010 at the Monona Terrace Community & Convention Center in Madison, Wisconsin, USA.

The International Convention is the premier event for professionals in the forest products field. Convened annually by FPS, the International Convention brings together hundreds of scientists, design professionals, managers, decision makers, and others from academia, government, non-profit, and private industry to discuss the state of forest products research and learn about

innovations in the field.

Attended by FPS members and non-members, the annual International Convention is the perfect venue to build new professional connections with top researchers from around the world and reconnect with colleagues and friends in the field. With over 170 technical presentations and 120 scientific posters, the International Convention is the place to learn about the latest developments in forest products research and application.

Hear from industry, university, trade association, and government leaders on the future direction of forest products research and development. The convention will highlight some of the creative contributions that have been made by the research and development community and lay out plans for new and emerging technological advances.

Technical session themes include:

- Building on a Century of Forest Products Research;
- Woody Biomass: Economics, Supply, Conversion to Energy, and Environmental Impacts;
- Bio-Based Materials - Characterization, Processing, and Product Development;
- Treated Wood Products for the 21st Century's 'Green' Customers;
- Improving the Softwood Lumber Industry in a Troubling Market;
- Manufacturing and Business Process Management;
- Extension and Technology Transfer in a Changing Industry;
- Growing Wood and Biomass for Industry - Property Requirements and Material Procurement;
- Wood Products Research: Anatomical, Structural, and/or Biological;
- Marketing & Utilization of Temperate & Tropical Species;
- Wood-Based Carbon Materials for Advanced Applications;
- Design of Wood Buildings Using Current Codes and Practices;
- and much more...

The **FPS 64th International Convention** isn't only about learning, it's also about professional networking in a business casual setting. In addition to the annual Welcome Reception, Awards and Student Luncheons, university alumni receptions and Paul Bunyan Party, several exciting pre- and post-convention tours have been planned.

The International Association of Wood Products Societies (IAWPS) will hold its business meeting in conjunction with the **FPS 64th International Convention**. Meetings of the International Association of Wood Anatomists (IAWA), International Academy of Wood Science (IAWS), and IUFRO Division 5 will be held following the Convention.

The **FPS 64th International Convention** will be held in conjunction with the 100th anniversary of the founding of the USDA Forest Service, Forest Products Laboratory (FPL). To commemorate 100 years of innovation, guests and employees will gather outside FPL's new Centennial Research Facility for a ribbon cutting ceremony. The official program will include FPL Director Chris Risbrudt hosting the event. Invited speakers include USDA Secretary of Agriculture Tom Vilsack, U.S. Senators Herb Kohl and Russ Feingold, Congresswoman Tammy Baldwin, Governor James Doyle, Forest Service Chief Tom Tidwell and Deputy Chief of Research Ann

Bartuska. A reception will follow with entertainment by the Fiddlin' Foresters and a tour of the 90,000 square foot research facility where displays, exhibits, and ongoing research will be highlighted.

The **FPS 64th International Convention** is hosted by the FPS Midwest Section.

Strategic Sponsors include: *Platinum Level Sponsors* – TECO and the USDA Forest Service, Forest Products Laboratory. *Silver Level Sponsors* – The Aldo Leopold Foundation, FPS Midwest Section, and Pella Corporation. *Bronze Level Sponsors* – Ashland and iLevel by Weyerhaeuser.

Annual Awards Sponsors include: Arch (Wood Award) and American Forest & Paper Association (Wood Engineering Award).

Student Activities Sponsors include: FPS Eastern Canadian Section, FPS Great Lakes Section, FPS Inland Empire Section, FPS Mid-South Section, FPS Midwest Section, FPS Ohio Valley Section, FPS Northeast Section, FPS Pacific Northwest Section, FPS Pacific Southwest Section, FPS Rocky Mountain Section, FPS Southeastern Section, FPS Upper Mississippi Valley Section, FPS Willamette Valley Chapter, A. William Boehner (Consultant), North Carolina State University (Wood Machining & Tooling Research Program), and Winandy & Associates, LLC.

Cooperators and Partners include: International Association of Wood Products Societies (IAWPS); International Association of Wood Anatomists (IAWA); International Academy of Wood Science (IAWS); IUFRO Division 5 (Forest Products); and Society of Wood Science & Technology.

To view the program and register, visit www.fpsconvention.org. Or contact the Forest Products Society, 2801 Marshall Court, Madison, WI 53705-2295; Phone: 608-231-1361, ext. 208; Fax: 608-231-2152; conferences@forestprod.org.

About the Forest Products Society – The Forest Products Society is an international non-profit technical association founded in 1947 to provide an information network for all segments of the forest products industry – from standing tree to finished product. The Society publishes a peer reviewed journal and technical publications, convenes conferences and workshops on topics of interest to the forest products community, and serves a membership of about 1,300 academic, industry, and other professionals.

[<Back>](#)

CONFERENCE ON PROCESSING TECHNOLOGIES FOR THE FOREST AND BIO-BASED PRODUCTS INDUSTRIES

Dear all,

I want to make you aware of the - Call for Abstracts - for our upcoming Conference on

Processing Technologies for the Forest and Bio-based Products Industries, October 6-8 2010, Salzburg/Kuchl, Austria.

You will find all relevant details by following the link:

<http://conference.fh-salzburg.ac.at/index.php?id=2>

Best regards,

Stefanie

FACHHOCHSCHULE SALZBURG GmbH
Salzburg University of Applied Sciences

Dr. DI (FH) Stefanie Wieland
Head R&D
HTB - Wood Processing Technology & Construction

Markt 136a (Jadorferstraße) | 5431 Kuchl | Austria
fon: +43 (0)50-2211-2016 | fax: -2099
email: stefanie.wieland@fh-salzburg.ac.at

[<Back>](#)

6TH INTERNATIONAL SYMPOSIUM WOOD STRUCTURE AND PROPERTIES

I would like to inform you again about the 6th International Symposium Wood Structure and Properties '10 held in September 6-9, 2010, Podbanske, High Tatras, Slovakia. The symposium will be organized under umbrella of the Technical University in Zvolen, Slovakia and IUFRO Division 05.01.00 – Wood Quality.

The aim of the Symposium is to present the recent knowledge in natural variation of wood properties, biological control of wood quality and its influence on final products, and to outline the trends of further development. The symposium should be of interest to researchers, biological, forest and wood scientists, educators, students and manufactures in the field of wood and forest products.

Symposium session will address the following topics:

1. Biological control of wood properties
2. Wood structure and dendrology
3. Fundamental knowledge and variation of wood properties
4. Evaluation of wood quality and its influence on final products
5. Behavior of wood in technological processes

For further information please visit http://www.tuzvo.sk/wsp_2010

Please note the important deadlines:

- March 31, 2010: Registration and submission of abstracts of presented papers and/or posters.
- April 31, 2010: Decision on the acceptance of papers and/or posters.
- June 30, 2010: Deadline for early bird fees.
- July 31, 2010: Deadline for submission of the final versions of manuscripts and symposium fee.
- August 2010: Peer-review of manuscripts
- September 6-9, 2010: The 6th International Symposium - Wood Structure and Properties 2010

If you have any question regarding the symposium, please, don't hesitate to ask.

Dr. Rastislav Lagana
Faculty of Wood Sciences and Technology
Technical University in Zvolen
T. G. Masaryka 24
96001 Zvolen, Slovakia

Phone: +421 (45) 5206364
Fax: +421 (45) 5321811
Email: lagana@vsld.tuzvo.sk

[<Back>](#)

5TH EUROPEAN WOOD MODIFICATION CONFERENCE



The Fifth European Conference on Wood Modification ECWMS

September 20-21

2010

Riga
Latvia

**SECOND ANNOUNCEMENT
AND CALL FOR PAPERS**



The European Conference on Wood Modification is now firmly established as the premier event dedicated to all global wood modification technologies.

The conference provides a forum for members of research organisations and companies to learn about the latest developments in this rapidly changing field.

The conference will cover thermal, oleothermal, mechano-thermal, chemical, impregnation modifications, as well as other technologies (microwave, rf plasma, enzymatic, etc.). There will also be sessions dealing with testing methods and standards, environmental issues, and various aspects of commercialisation, as well as our renowned poster presentation sessions.

There will be opportunities for companies to showcase their new technologies and products to an international audience.



Call for Papers

The organising committee of ECWMS would be pleased to receive high quality papers on all subjects concerned with wood modification.

Oral and poster presentations will cover the following topics:

- Fundamental research
- Standards and testing
- Process requirements
- Product development
- Product performance
- Environmental issues
- Commercialisation
- Market potential

Abstracts (one page) should be sent to conference secretariat by email (please use a word file attachment):

info@ecwm5.lv

Important Dates

Abstract submission: **5/3/10**

Paper submission: **30/6/10**

Scientific Committee

Dr. Julia Carmo	Anglo-Carmo, Portugal
Prof. Dr. Callum Hill	Napier University, UK
Mr. Waldemar Homan	TNO, The Netherlands
Dr. Dennis Jones	BRE, UK
Prof. Dr. Holger Militz	Göttingen Uni., Germany
Mr. Antti Nurmi	VTT, Finland
Mr. Bøke Tjeerdsma	SHR, The Netherlands
Prof. Dr. Joris Van Acker	Ghent Uni., Belgium
Dr. Mats Westin	SP, Sweden
Dr. Bruno Andersons	LSIWC, Latvia

Local organizing committee

Bruno Andersons
Arnis Kokorevics
Kristaps Klauss
Ize Irbe
Vladimirs Biziks
Juris Grinins

Conference Fees

The Conference participation fee is €400 per delegate. For students - €250 per delegate (a copy of the document certifying the student's status of a participant should be enclosed). The fee includes the Welcome party (19/9/10), lunches, coffee-breaks, Conference dinner and Conference Proceedings. For accompanying persons - €80 per person. The price includes the Welcome party and Conference dinner.

Accommodation

Information will be provided on the conference web-site:

<http://www.ecwm5.lv/>

Conference Venue

Riga is the capital and largest city of Latvia, a major industrial, commercial, cultural and financial centre of the Baltics, and an important seaport, situated on the mouth of the Daugava. It is the largest city in the Baltic states.



Riga's historical centre has been declared a UNESCO World Heritage Site, and the city is particularly notable for its extensive Jugendstil (Art Nouveau) architecture. The historical centre has many excellent cafes and restaurants through its narrow winding streets, ideal places to relax after a busy day.



The conference will be held close to the heart of the city, and within walking distance of several hotels.

Trade Stands

Trade stands will be available at the conference for promoting products and processes. Interested parties are requested to contact the conference organisers for more details.

Conference Secretariat

The contact details for the ECWM5 secretariat will be via the email address:

info@ecwm5.lv

*On behalf of the Organising Committee,
we look forward to seeing you at ECWM5
in Riga in September 2010!*

[<Back>](#)

FIRST SERBIAN FORESTRY CONGRESS

Dear colleagues,

The Forestry Faculty of Belgrade University has the pleasure to invite you to participate in the International Scientific Conference “First Serbian Forestry Congress”, under the slogan Future with Forests, to be held on 11-13 November 2010 in Belgrade, Serbia.

The announcement, abstract form and additional information on the Conference can be found at: www.sfb.rs We look forward to meeting you in Belgrade in November 2010.

Chairman of the Organizing Committee

Prof. Dr. Milan Medarević

Dean of the Faculty of Forestry

Vice Chairman of the Organizing Committee

Prof. Dr. Ratko Ristić

[<Back>](#)

FREE WEBINAR

GUIDELINES FOR USING METAL PLATE CONNECTED WOOD TRUSSES IN NON-RESIDENTIAL BUILDINGS

Please see the information below regarding a free webinar from WoodWorks. I will be presenting a 1-1.5 Hr. webinar on Tuesday May 18th at noon central daylight savings time.

The webinar will address working with metal plate connected wood trusses. This presentation is AIA accredited. Please attend if possible and be sure to pass this information on to any of your colleagues. This information will be of value to engineers, architects, contractors and others in the construction industry.

Speakers: Archie Landreman, Technical Director, WoodWorks North-central and Jim Vogt PE, Structural Building Components Association

May 18, 2010

10am PST | 11 am MST | 12 noon CST | 1PM EST Register Online

<https://wood2.webex.com/wood2/k2/j.php?ED=142793152&UID=1128525822&RT=MIM0&FM=1>

Wood trusses are a common structural component of the floors and roofs of non-residential buildings, and a considerable amount of information is available to assist building designers and

contractors with the specification and installation of this specialty product. This presentation will focus on some of the important issues involving the specification and use of wood trusses, including working with truss shop drawings, standard design responsibilities, and job site applications.

Archie A. Landreman
Technical Director
WoodWorks North-Central
For Non-Residential Construction

6522 River Meadows Turn | Racine | WI. | 53402
Tel: 262-672-4746 | Fax: 866-674-7250
Cell: 262-497-5550
E-Mail: Archie@woodworks.org | www.woodworks.org

[<Back>](#)

DEAN, SCHOOL OF FORESTRY AND WILDLIFE SCIENCES

Auburn University invites applications and nominations for the position of Dean of the School of Forestry and Wildlife Sciences. The School seeks an innovative, dynamic, and experienced administrator who will enhance and further its reputation and position as a major international leader of teaching, research, and extension.

Established in 1856, Auburn University is one of the nation's premier land, sea, and space grant institutions. In the 2010 edition of U.S. News & World Report, Auburn was ranked 39th among public universities. Located on 1,843 acres, Auburn has 1,176 full-time faculty, 154 part-time faculty, and enrolls 24,602 students from all fifty states and approximately 80 countries, with 19,926 undergraduates, 3,689 graduate students, and 987 first professional students in the fall of 2009. It is nationally recognized for its commitment to academic excellence, positive work environment, exciting student life, and the beauty of its campus. Auburn is a small, friendly university town located on the beautiful plains of eastern Alabama about 50 miles east of Montgomery, Alabama's capital, and 115 miles southwest of Atlanta, Georgia. Auburn enjoys a warm and sunny climate with mild winters and is within close proximity to numerous beaches and mountains.

The School of Forestry and Wildlife Sciences enrolls 351 undergraduate and 82 graduate students. Committed to excellence in teaching, research, and extension, with 26 research staff, 23 support staff, and 42 faculty members, the School offers undergraduate degrees leading to a Bachelor of Science in Forestry; Bachelor of Science in Wildlife Ecology, including a Pre-Vet option; and a Bachelor of Science in Biosystems Engineering, with a Forestry option, which is a joint program with the College of Engineering and College of Agriculture. The School also offers graduate degrees leading to a Master of Natural Resources, Master of Science in Forestry,

Master of Science in Wildlife Sciences, PhD in Forestry and Wildlife Sciences, and a PhD in Applied Economics in Forestry, which is a joint program with the Department of Agricultural Economics and Rural Sociology and the Department of Economics. Instructional efforts are bolstered by the School's research funding, which is nearly \$7 million annually.

The School maintains the most modern research and teaching facilities on the Auburn campus, having moved into an 110,000 SF facility in 2005. Funding for the facility was provided primarily from non-university sources. Field research and education are also important in the School. The 5,300 acre Solon Dixon Forestry Education Center is an outstanding school forest that provides an exceptional summer field experience for students, and other education and outreach opportunities during the remainder of the year. Additionally, there are over 4,000 acres managed as research and demonstration forests that encompass a variety of forested ecosystems. In addition, the School is committed to international education, and offers its students a number of opportunities to study abroad through its international programs.

The School plays a vital supporting role for Alabama's forest products industry, one of the state's largest manufacturing industries contributing in excess of \$23 billion annually to the economy and employing 1 out of every 10 Alabamians. In addition, a thriving wildlife industry adds more than \$4 billion to the state's economy and provides more than 53,000 jobs. Formation and administration of cooperatives focused on forest herbicides, silviculture, nursery operations, forest health, and fish and wildlife research provides evidence of the integral leadership role the School plays in Alabama's forestry and wildlife communities. Currently, the School, along with other units on campus, is providing key support for the state's nascent biofuels industry.

The Dean of Forestry and Wildlife Sciences serves as the chief academic and administrative officer for the School and reports directly to the Provost and Vice President for Academic Affairs. The Dean's primary role is to provide vision and leadership in the School and to foster a culture supportive of the School's interdisciplinary and core missions, both internally and externally to the broader academic community, through excellence in learning, discovery, and engagement.

Candidates should be creative and innovative leaders who understand the local, domestic, and international issues facing forestry and wildlife sciences in the broadest sense. In addition, the Dean must be able to work closely with others, build consensus, and motivate the faculty, staff, and students to help advance the School. Responsibilities include:

- advocating for the faculty, staff, and students both inside and outside the University;
- promoting and encouraging faculty development in teaching, research, and extension;
- providing the strategy and vision to increase the stature and visibility of the School nationally and internationally;
- overseeing effective fiscal and personnel management, including the recruitment of highly qualified and diverse students, faculty, and staff; and
- building partnerships with potential donors and funding agencies; working closely with the School's Advisory Council; and establishing national and international relationships with individuals, associations, corporations, and state and federal agencies.

Requirements

Candidates must have a strong commitment to student achievement and faculty scholarship, effective interpersonal skills, and possess the drive to move the School forward nationally and internationally through excellence in the academic, extension, and research missions of the School and University. In addition, the successful candidate must be an excellent administrator with a proven record of vision resulting in the ability to achieve specific goals, set priorities, and allocate resources. Specific qualifications include:

- an earned doctorate and a record of teaching and research meriting tenure as a full professor in one of the School's disciplines;
- a commitment to excellence in undergraduate and graduate education;
- an established record of research and effective research administration;
- demonstrated accomplishments in extension, university outreach, or service;
- a demonstrated track record of effective leadership and management;
- evidence of professional distinction and national recognition in their field;
- effective communication skills and commitment to transparent budgeting and decision-making; and
- demonstrated ability to foster cooperation and consensus building.

The candidate selected for the position must meet eligibility requirements for work in the United States at the time the appointment is scheduled to begin and continue working legally for the proposed terms of employment.

Applications and nominations should be directed to the University's executive recruitment consultant:

Martin M. Baker Vice President
Baker and Associates LLC
10 Glenlake Parkway
South Tower-Suite 140
Atlanta, GA 30328
mbaker@baasearch.com

The application review process will begin May 20, 2010 and will continue until a qualified candidate is selected and recommended for appointment.

Auburn University is an affirmative action/equal opportunity employer.

Minorities and women are encouraged to apply.

[<Back>](#)



Chaired Professor in Wood Products Engineering, ref no 506-10

LTU is currently a world leader in wood industry measurement techniques and modeling for sawmills. We work closely with SP Träteknik and leading sawmill industries to measure, model and control sawmill processes for cutting and component manufacturing.

We now have simulation tools for sawmill processes that enable model-based development of measuring techniques, processes and components. Our database has virtual raw materials consisting of three-dimensional tomographic images of spruces and Scotch pines that can be sawed in our virtual sawmills and used to develop new cutting methods, simulate product quality and test new customer-oriented processes. Now we also want to use this knowledge to cover later stages of the wood value chain. Problems to solve could include how to design a new, functional wooden bridge, how to produce glued laminated wooden beams with a special look and optimized strength, or how to select the best trees and processes for creating a wooden floor with a certain look.

Subject description

Wood products engineering comprises research and development of wood products in an empirical, verified model world in which the end user's product requirements are integrated with material properties and manufacturing processes.

Duties

The chaired professor is director of research in the subject, supervises students and PhD-students, and is active in the subject's learning processes and related activities within the university.

This entails compiling methods for developing customized wood products for which market demands, wood properties and manufacturing processes are considered from a holistic perspective. Development of multidimensional measuring techniques for following up the status of wood products after use and the end customer's functional needs are also important areas. Measurement techniques help create databases that form the basis for simulation in a virtual world. The model world then becomes a base for developing and improving products and processes in the woodworking industry and industrial wood construction.

One research area might be measurement techniques for the wood industry that include developing current wood-metrics concepts that apply to the functional needs of end products and end customers. A related area is modeling, simulating and optimizing based on measurement data with real-time perspectives obtained from research projects and industrial operations.

Qualification requirements as per the Higher Education Ordinance

To be qualified for employment as a professor, a person must be a proficient scientist and educator. Educational and scientific proficiency are given equal consideration.

Bases for assessment

These bases for assessment apply to the position:

- Scientific proficiency
- Educational proficiency

Other bases for assessment

- Documented experience with qualified supervision
- Experience in applying for and obtaining research funding on regional, national and international levels
- Documented experience in managing and developing R&D operations in collaboration with industry, institutions and the public sector

Additional information

For additional information, please contact Department Head Gunnar Landsell, +46 (0)910-585389, gunnar.landsell@ltu.se or Professor Anders Grönlund, +46 (0)910-585307, anders.grönlund@ltu.se.

Location and start date

The position is located in Skellefteå and is open for immediate placement or by agreement.

Application

Send your application marked with reference number 506-10 to: Luleå University of Technology, Registrar, SE-971 87 Luleå, Sweden. Attach any scientific work to be used primarily in support of the application. In particular, the applicant's educational merits should be documented. Submit the application in triplicate. There is an application template for your convenience at <http://www.ltu.se/omltu/lediga-jobb/d1922/1.8898?l=en>

Application deadline: May 28, 2010

WOOD AND FIBER SCIENCE

JOURNAL OF THE SOCIETY OF WOOD SCIENCE AND TECHNOLOGY

VOLUME 42

MARCH 2010

CORRIM SPECIAL ISSUE

CONTENTS

Introduction to Special Issue

- LIPPKE, BRUCE, AND JAMES B. WILSON. Extending the findings on the environmental performance of wood building materials ----- 1

Articles

- LIPPKE, BRUCE, JIM WILSON, JAMIE MEIL, AND ADAM TAYLOR. Characterizing the importance of carbon stored in wood products ----- 5
- PUETTMANN, MAUREEN E., RICHARD BERGMAN, STEVE HUBBARD, LEONARD JOHNSON, BRUCE LIPPKE, ELAINE ONEIL, AND FRANCIS G. WAGNER. Cradle-to-gate life-cycle inventory of US wood products production: CORRIM phase I and phase II products ----- 15
- ONEIL, ELAINE E., LEONARD R. JOHNSON, BRUCE R. LIPPKE, JAMES B. MCCARTER, MARC E. MCDILL, PAUL A. ROTH, AND JAMES C. FINLEY. Life-cycle impacts of inland northwest and northeast/north central forest resources ----- 29
- PUETTMANN, MAUREEN E., FRANCIS G. WAGNER, AND LEONARD JOHNSON. Life cycle inventory of softwood lumber from the inland northwest US ----- 52
- BERGMAN, RICHARD D., AND SCOTT A. BOWE. Environmental impact of manufacturing softwood lumber in northeastern and north central United States ----- 67
- HUBBARD, STEVEN S., AND SCOTT A. BOWE. A gate-to-gate life-cycle inventory of solid hardwood flooring in the eastern US ----- 79
- WILSON, JAMES B. Life-cycle inventory of particleboard in terms of resources, emissions, energy and carbon ----- 90
- WILSON, JAMES B. Life-cycle inventory of medium density fiberboard in terms of resources, emissions, energy and carbon ----- 107
- WILSON, JAMES B. Life-cycle inventory of formaldehyde-based resins used in wood composites in terms of resources, emissions, energy and carbon ----- 125
- ONEIL, ELAINE E., AND BRUCE R. LIPPKE. Integrating products, emission offsets, and wildfire into carbon assessments of inland northwest forests ----- 144

[<Back>](#)

WOOD AND FIBER SCIENCE

JOURNAL OF THE SOCIETY OF WOOD SCIENCE AND TECHNOLOGY

VOLUME 42

APRIL 2010

NUMBER 2

CONTENTS

Articles

- ZHANG, CHAO, AND GREGORY D. SMITH. In-plane permeability of oriented strand lumber. Part II: Microscopic investigation of void structure during compression ----- 121
- KAVAZOVIĆ, ZANIN, JEAN DETEIX, ALAIN CLOUTIER, AND ANDRÉ FORTIN. Sensitivity study of a numerical model of heat and mass transfer involved during the medium-density fiberboard hot pressing process ----- 130
- SCHILLING, JONATHAN S., AND ADAM NORCUTT. Effects of wood mixtures on deterioration by a filamentous brown-rot fungus ----- 150
- CHENG, QINGZHENG, TRAIRAT NEIMSUWAN, SIQUN WANG, AND JINGXIN WANG. Tensile and impact properties of steam-exploded wood-polypropylene composites ----- 158
- KIZILTAS, ALPER, DOUGLAS J. GARDNER, YOUSOO HAN, AND HAN-SEUNG YANG. Determining the mechanical properties of microcrystalline cellulose (MCC)-filled PET-PTT blend composites ----- 165
- CHEN, SIGUO, CHUNGUI DU, AND ROBERT WELLWOOD. Effect of panel density on major properties of oriented strandboard ----- 177
- A. BUSTOS, CECILIA, CÉSAR MOYA L., JUSTO LISPERGUER M., AND EDUARDO VIVEROS M. Effect of knife wear on the gluability of planed surfaces of radiata pine ----- 185
- FENG, MARTIN W., GUANGBO HE, AND AXEL W. ANDERSEN. Effects of esters and resorcinol on phenolic resins as adhesives in medium-density fiberboard manufacturing ----- 192
- NYRUD, ANDERS Q., AND TINA BRINGSLIMARK. Is interior wood use psychologically beneficial? A review of psychological responses toward wood ----- 202
- HUANG, ZEEN, PAUL COOPER, XIAODONG WANG, XIANG-MING WANG, YAOLIN ZHANG, AND ROMULO CASILLA. Effects of conditioning exposure on the pH distribution near adhesive-wood bond lines ----- 219
- MA, ERNI, TETSUYA NAKAO, GUANGJIE ZHAO, HIROSHI OHATA, AND SUSUMU KAWAMURA. Dynamic sorption and hygroexpansion of wood subjected to cyclic relative humidity changes ----- 229
- AICHER, SIMON. Process zone length and fracture energy of spruce wood in mode-I from size effect ----- 237
- EVANS, PHILIP D., CHRIS BOROUGH, ROBIN WINGATE-HILL, AND ROSS B. CUNNINGHAM. Technical note: The suitability of young fast-grown radiata pine clones for conversion into vineyard trellis posts ----- 248
- MCCONNELL, T. ERIC, NATHAN S. LITTLE, SHELDON Q. SHI, AND TOR P. SCHULTZ. Technical note: The susceptibility of chemically treated southern hardwoods to subterranean termite attack ----- 252

Books

- RESCH, H. Drying wood with high frequency electric current ----- 255

[<Back>](#)

NOTES FROM SPRING 2010 BOARD MEETING APRIL 8-9, 2010

- The Accreditation Committee is working on a first draft of expanded accreditation guidelines criteria that could be broadened to include allowances for programs with a focus in areas such as bioproducts, green building materials, life cycle analysis, bioenergy and some aspects of industrial ecology.
- Several universities in China are interested in SWST accreditation
- There was a recent “Recruiting Undergraduates for Wood Science and Technology” Workshop held at Mississippi State University. A full summary is available [here](#).
- A total of 37 applicants for membership were approved in the last five months. The Membership Committee is continuing to find ways to reach out to new members.
- SWST is on Facebook
<http://www.facebook.com/#!/group.php?gid=258203093856&ref=mf>
- Table of Contents from each issue of Wood and Fiber Science will be sent via email to members in the future, before you receive the actual issue in the mail
- Two new policy position statements are in progress and will soon be ready for member comment. They are “*Advantages of using lignocellulosic biomass rather than food products for bioenergy*”, and “*Need for Hazardous Fuels Reduction on Public Land*”. Stay tuned for more information.
- The National Research Needs Assessment report is completed and online. It has been used as an Appendix for an Agenda 2020 Roadmap. Work is underway to condense it.
- Work continues on exploring the concept of Wood Scientists Without Borders program. Look for an upcoming survey.
- Sign up for the National Visiting Scientist Program if you would like to visit a university or company and talk about your expertise. You can sign up (if you are not in the system now) at http://swst.org/vsp/visitsci_signup.pdf You can also offer your institution as a place scientists can come to visit by filling out a Request to Participate form at <http://swst.org/vsp/vspApplication.pdf>
- The 2010 International Convention will be held October 11-15, 2010 in Geneva, Switzerland. See information on our website at <http://www.swst.org/meetings/AM10>
- The 2011 Convention will be cosponsored by Forest Products Society in Portland, Oregon, June 22, 2011, at the Doubletree Hotel in Portland, Oregon.
- The 2012 Convention will be held August 27-31, 2012 in Beijing, China, at the International Centre for Bamboo and Rattan. Hold the dates!
- The 2014 Convention is available for “Proposals to co-host”
- *Wood and Fiber Science* continues to raise its impact factor, publishing quality papers from all around the world. The Board is exploring how to make it stronger and more viable for our members. The availability of all past articles online has raised our visibility and makes the journal popular in a timely manner.

- “Volume 42 CORRIM Special Issue Second Report – March 2010” has been published and is available online also.
- The Board continues to review our Strategic Plan and find ways to implement it.
- The next Board meeting will be a conference call in July. If you have any concerns or suggestions please contact Vicki at the Executive Office Vicki@swst.org

[<Back>](#)

SWST ON FACEBOOK

The Society of Wood Science and Technology (SWST) would like to update you that the SWST Facebook group is up (<http://www.facebook.com/#!/group.php?gid=258203093856&ref=mf>). The Facebook was set up for society promotion, communication (complementary to webpage and e-mail contacts), and membership recruitment especially of students, who perhaps are the major users of Facebook.

We would like to request your assistance in mentioning this SWST Facebook to students at your institution so that they can find out more about the society. We would also appreciate your encouragement to your students to join us as society members, not only as Facebook group members. The SWST student membership, which only costs \$25 per year, would allow students to enjoy benefits such as electronic access to past and current papers published in our Wood and Fiber Science Journal, participation in our annual conventions and symposia, and posting of thesis/dissertations and resume in our “career opportunities” website.

Students who are pursuing degrees other than wood science/technology are also eligible to apply.

More details about how SWST benefits students can be found at <http://www.swst.org/members/letter.html>. The online application form is at <http://www.swst.org/memapponline.html>

For additional information, please contact Dr. William Tze (wtze@umn.edu), SWST Membership Chair, or Dr. Ben Dawson-Andoh (bdawsona@wvu.edu), Membership Vice Chair.

Sincerely,

William

William T. Y. Tze
Assistant Professor
Bioproducts and Biosystems Engineering
University of Minnesota
206 Kaufert Lab
2004 Folwell Ave
St. Paul, MN 55108

Office: 612-624-2383
Fax: 612-625-6286

[<Back>](#)

INTERNATIONAL SWST VISITING SCIENTIST REPORT

FRENCH GUIANA

Nov. 6 – 23, 2009

Barbara Lachenbruch
Dept. of Wood Science and Engineering
Oregon State University

I received an SWST award to be a visiting scientist to French Guiana, South America (east of Venezuela, north of Brazil, latitude 4° N) to visit research facilities and sites, meet resident scientists, consider whether collaborations would be possible, and to attend the 6th Plant Biomechanics Meeting.

In Kourou, I did the majority of my Visiting Scientist stint. I visited with people who worked at one of three institutions, all of which are French: CIRAD, INRA, or CNRS. Most of the people worked on the same campus, but the wood lab (CIRAD Laboratoire de Science de Bois, LBS) was a few miles away. I used the library in CIRAD as a home base, and had internet access there during the hours it was open. I was impressed with the level of integration of scientists among the organizations. With the exception of INRA, the agency scientists seemed to work with very low borders, they shared a well-attended weekly seminar, and they all knew the names of people in other buildings and where their labs and research were.

The mix of people on the campus was also very interesting, and conducive to productivity: most of the scientists were from “metropole” (the term used to describe France on the continent, including Corsica:.) Scientists often come for a period of 5-7 years, and then move on, either back to metropole, or to another research location, of which there are many (i.e., Reunion Island, Guadeloupe, Martinique, parts of Africa, etc.). Many of the scientists I met were meting out their careers into these 5-7 year units, talking about the year in which they would return, and how that will correspond, especially, with their children’s schooling or being with grandchildren. Several of the scientists had settled in FG and were not on rotation. A few of the scientists were originally from other countries, including one I met from the US, one from Italy, and one from Ireland. Besides the scientists (who had PhDs) there was evidence of many graduate students, although I probably only saw 10 or 15. I got the impression that they were in the field; labs seemed active, and there was much discussion about who was where each day

The research stations I visited were within a few hour’s drive of Kourou (which was about an hour from Cayenne, the biggest city in FG). The stations had small groups of workers variously sitting around or rushing around with machetes and diameter tapes. There appeared to be very much maintenance ongoing (re-measuring plots, regenerating clones with seeds and grafts, posting genotypes, clearing undergrowth from large experiments, maintaining extensive infrastructure—glass houses, shade houses, roads; keeping poachers off experimental plots, dealing with pests, accommodating visitors and scientists). The stations seemed to be operated efficiently. One that I visited had had a new head in the previous half year, and these heads

rotate just as the other scientists rotate, so the head and the workers were still getting used to one another's expectations.

I had the sense that it would be easier to do field work from Kourou than it was during the year I spent in Montpellier, France. It seemed that when the people were physically present in FG they were there to take advantage of the experimental potential—as one would here in a field outpost. I do not mean that they were not involved in outreach and teaching; there was a Week of the Scientist the second week I was there, and school children and the public from throughout the country were being accommodated with presentations and displays. But people I met had ready access to vehicles, equipment, and research plots, and the scientists themselves appeared to get out quite regularly (probably weekly in most cases).

After Kourou, I went to Cayenne, the capital, for the 6th Plant Biomechanics meeting. This is a meeting that is organized by the group of people who decide to do so, and it is every three years, somewhere. There were about 80 presentations over six days, with most of the participants from western Europe but a few North Americans, people from Japan, and then fewer from another few countries (Russia, Estonia, Israel, Argentina, Iran). The main topics of the meeting were *Physics of growth*, *Modeling processes in wood*, *Plant and fluid dynamics*, *Biomechanical aspects of plant development*, *Micromechanics*, *Tree biomechanics*, *Biomimetics*, *Ecology and evolution*, and *Mechanics of biomaterials*, where I spoke about structural and functional differences among transgenic hybrid poplar lines with varying lignin contents. The Proceedings book has 551 pages of reviewed articles (<http://www.ecofog.gf/Docs/PBM2009Proceedings.pdf>). It is very nicely laid out; papers are mostly 8 pages long.

I do not think I would want to spend a sabbatical year in Kourou, although I would be interested in doing research with people and perhaps staying a month or two. If people have questions about my experience, please contact me.

[<Back>](#)

ABOUT SWST

The SWST Newsletter is published six times a year by the Society of Wood Science and Technology, SWST, P.O. Box 6155 Monona, WI 53716-6155 PH: 608-577-1342 Fax: 608-467-8979.

Items for the Newsletter may be sent to Adam Taylor, at: AdamTaylor@utk.edu

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.

E-mail: Vicki@swst.org

Web site: <http://www.swst.org>

Society of Wood Science and Technology

President: James Funck
Past President: Jerrold Winandy
President Elect: Susan Anagnost
Vice President: Todd Shupe
Executive Director: Vicki L. Herian
Directors: Vikram Yadama (2008)
Robert Bush (2008)
Steve Quarles (2009)
Sheldon Shi (2009)

Wood and Fiber Science Editor: Frank Beall
Newsletter Editor: Adam Taylor

[<Back>](#)

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 deficiencies; Microbiological evaluations (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 Treatments, Treatment Mechanics, Wood Deterioration & Preservation and Composite Durability.

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 AEWB 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 polymer 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 specialties.

Will Discuss Informally: Above listed specialties.

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.com

Specialty: 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, Beijing 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., Director & Professor of Forest Products Marketing, 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: vlosky@lsu.edu; website: www.rnr.lsu.edu/lfpdc

Specialties: Forest Products Marketing; Forest-sector Business and Economic development; eBusiness; Certification; International Marketing Development. Will Discuss all specialties formally or informally

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.