

SWST Newsletter

November—December 2003

SOCIETY OF WOOD
SCIENCE AND
TECHNOLOGY

The logo for the Society of Wood Science and Technology (SWST) features the letters "SWST" in a large, bold, white, sans-serif font. The letters are set against a solid black rectangular background.

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Dear Readers:

Following the introduction of the *SWST Snapshot* (next page) in the last issue, I received a following question:

"I like the statistics listed in the Newsletter. It's a good way to keep tabs on the Society. How does one interpret the delinquencies? Since the numbers seem quite high, are they "solid" numbers or does the reader need some help for interpretation?" - Bill Galligan.

There are two kinds of delinquents—membership dues and journal subscriptions. According to Vicki, the numbers are high this time of the year because of the different way each institution handles accounts payable. The best thing each of us can do is to make sure that our business office pays on time.

Starting with the next issue, the Newsletter will be delivered electronically. You will receive an e-mail message with a link to the Newsletter. Archived issues are at the SWST home page in a pdf format and you will need Adobe Acrobat Reader to view or print them. This change will save the Society about \$400-500 in shipping and printing charges per issue.

Happy Holidays to all of you,

Rado Gazo

SWST Snapshot

SWST Membership	Dec. 2003
Full members	292
Student members	59
Retired members	55
Affiliate members	3
Delinquent members	70
Fellows	0

Wood And Fiber Science Journal	Dec. 2003
Subscribers	232
Delinquent Subscribers	39
Number of articles in 35(4)	11

Currently in the pipeline

Ready for typesetting	18
Under revision by authors	28
Under review	42
Rejected	2

Financial	Dec. 2003
Cash & Bank Accounts	\$41,203
Investments	\$50,734
Liabilities	\$628

Web Page	Sept./Oct. 2003
Number of unique visitors	9,393
Number of new visitors	7,011
Gigabytes transferred	7.7
More data: http://www.swst.org/nettracker/reports/	

Important Committee Activities Dec. 2003

Past President's Council: Developing a list of potential member services to increase the visibility and effectiveness of the Society.

Education Committee: Proposing means to increase student participation in the Annual Meeting's Student Poster Competition.

Publication Policy Committee: Providing a comprehensive evaluation of possible redesign of *Wood and Fiber Science*.

News

Magnum Opus, or The Alchemists

Johannes Peter Hösli, a member of SWSR since 1983, has surrendered to his tortuous mind and, instead of writing another scientific publication, has written his first novel. Jean Pierre's book does have the appearance of a scientific account, though it tells the story how the Magnum Opus of the alchemists had been found twice, first by a true adept who was seeking spiritual fulfillment on his tedious road to enlightenment by the true and eternal sun, and then, by an opportunist who found his financial freedom thanks to the adept's testament and a faultless Sun computer. The story ends with an encounter of the two leading characters, an atomic explosion, and a gargantuan laughter.

Everybody interested in laboratory life, business, money, philosophy, religions, and other human irregularities should read this book at least twice.

Read the first chapter at:

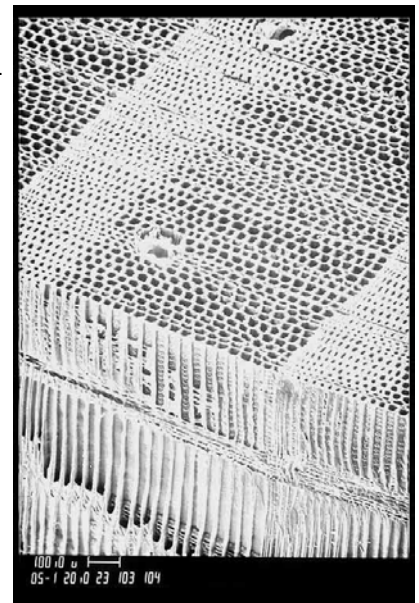
www.trafford.com/robots/03-1752.html

Johannes Peter Hösli
Magnum Opus, or The Alchemists
Trafford Publishing Service, 250pp
ISBN 1412013747

Wood Block on Broadway

A new furniture store called "Materials" recently opened in New York City and featured an SEM image of a wood cube as part of their opening displays. Ms. Daniela Fabricius discovered the image on SWST's website in Teaching Unit 1 in the section on wood structure and contacted SWST to obtain permission to turn the image into a poster for their opening. The image is one originally provided by the SUNY-CESF Center for Ultrastructure Studies. The store is located at 109 Broadway if you are in the neighborhood and in need of some new furniture.

Audrey Zink-Sharp



News

TWO SWST MEMBERS RECEIVE INTERNATIONAL AWARD

Ian Smith, a professor of structural and timber engineering in the faculty of forestry and environmental management was named the co-winner of the American Society of Civil Engineers' J. James R. Croes Medal for work related to improved reliability-based design of timber construction.

The award, established in 1912, is presented in recognition of an outstanding engineering science paper published in any of the society's 30 peer reviewed journals.

Dr. Smith was the principal, sharing the award with Australia's Greg Foliente, the co-author.

Their paper Load and Resistance Factor Design of Timber Joints: International Practice and Future Direction was published in the *Journal of Structural Engineering* in January 2002. Gold medals will be presented to Dr. Smith and Dr. Foliente in Nashville, Tenn., on Saturday, Nov. 15.

The paper's focus is on the scope of work required to elevate the design of timber joints to a level comparable with design of timber members. Dr. Smith's extensive knowledge of regional differences in world practices was a key ingredient of the paper that reflects his almost three decades of research in North America, Europe and Australia on wood as a structural material.

"Differences exist around the world in how joints behave because the types of wood and fasteners used can be very different," said Dr. Smith. "Some hardwoods and softwoods fracture quite differently and that influences how joints fail. In Canada we use softwoods that are different from those used in countries like Australia. Many countries use plenty of eucalyptus and tropical hardwood while we don't. It's important to be aware how different woods behave, and to appreciate regional variations in construction practices."

"Joints are a recurring theme because they are usually the components that are the key to achieving safety and economy in building design" said Dr. Smith.

Findings from research at UNBF have led to better design and construction practices in Canada and a number of countries around the world. Many of the activities that helped achieve the ASCE award were funded by the Natural Science and Engineering Research Council of Canada (NSERC).

Much of Dr. Smith's work is aimed at ensuring building safety, done in the public interest. Only government agencies like NSERC are willing to provide funding for such purposes.

Currently Dr. Smith is leader of a number of major research and development projects under government and industrial funding.

He is principal author of the book *Fracture and Fatigue in Wood* published earlier this year in the United Kingdom by John Wiley & Sons. This book is the first of its kind.

Fall Board Meeting

- 2004 Annual Meeting Technical Session – "Effective Research and Technology Transfer", June 27, 2004, Grand Rapids, Michigan
- 2004 Tutorial/Workshop – "Surface Chemistry and Wood Finishing", Monday afternoon, June 28, 2004, Grand Rapids, Michigan
- New typesetter for Wood and Fiber Science, beginning in April 2004, Impressions, Inc. from Madison, WI
- 32 teaching units have been sold
- Policy statement on need for forest products research was sent to Congress
- New career brochure has been printed and is available – 1 copy free, \$56 per hundred
- Accreditation Handbook and procedures were discussed and sent to the committee for fine-tuning
- Request for DSA nominations being sent out to members
- The Policy and Critical Issues Committee has an ad hoc committee working on identifying a mechanism for input into USDA NRI program
- SWST/FPS ad hoc committee met to begin to identify areas of cooperation and plan for future. They will continue to investigate
- Cellulosic Cell Wall meeting in Colorado in August was a success. A proceedings will be published for purchase
- Announcement of a co-sponsored "International Symposium on Wood Science - Education and Research Programmes" to be held August 16-20, 2004, in Stara Lesna, Slovakia. Homepage: <http://alpha.tuzvo.sk/~kudela/>
- The Newsletter will become electronic starting with the January/February 2004 issue. Requests for hard copy can be made to Executive Director
- Spring 2004 Meeting will be held in San Antonio, March 13

“National Needs” Position Statement

National Need in Capacity for Forest Products Research and Development

Summary: Greater investment in forest products research is urgently needed.

Statement: It has been estimated that the return on investment in wood products research in the U.S. ranges from 40 to 86 percent per year. Despite this reality, the United States lags far behind other countries in funding for forest products research in both the public and private sectors.

The 2002 National Research Council report on *National Capacity in Forestry Research* documents the loss of research capacity in forest products. Over the last 20 years funding for forest products research by the USDA Forest Service has declined by almost 30 percent. The number of USDA Forest Service research scientists involved in wood science and technology-oriented research has declined by more than 75 percent since 1985. During this same time period three U.S. undergraduate forest products programs were eliminated, and private sector investment in forest products R&D declined as a result of consolidation in the domestic forest products industry. In 2002 the USDA National Research Initiative attempted to eliminate competitive funding of research in forest products utilization following a steady decline in funding of wood utilization research by this program.

There is a critical national need for reinvestment in forest products research. Without additional government support this nation will not have either the technology needed to remain competitive in a global economy, or the next generation of trained professionals needed to ensure that forests are sustained as domestic demand for wood and fiber product grows.

Background: The United States relies heavily on an abundant supply of wood and wood products. Nowhere is this more evident than in residential construction where wood accounts for about 90 percent of structural framing and sheathing and very large proportions of cabinets and cabinet tops, moldings, millwork, sub-flooring, finished flooring, and so on. Overall, more wood is consumed every year in the United States than *all* metals, *all* plastics, and Portland and masonry cement *combined*.

U.S. forests are the most important source of the renewable wood raw materials needed to supply a growing population. Recent assessments of the state of the nation's forests have revealed a more-than-fifty-consecutive-year-record of net forest growth in excess of forest removals, despite steadily increasing demand for fiber and chemicals supplied by these forests and corresponding increases in harvest levels. New technology developed by wood science and forest products research and development programs, coupled with successes in

forest management, made it possible for the nation's forests to supply substantial quantities of critical raw materials while providing clean water, recreation, biodiversity, and a myriad of other forest values. To continue to maintain all of these values and also keep pace with the nation's growing need for wood and fiber will require proactive action on several fronts, including advancement of knowledge and technology to improve wood utilization, improved technologies for dealing with plantation-grown wood and other bio-fiber, ongoing improvement of environmental performance of manufacturing technologies, and increased use of recycled wood-based materials.

Science and technological developments in the wood science and technology field over the past century have been impressive. For example, advances in process and product development over just the past 60 years have increased by 400 to 500 percent the quantity of useful products obtained from a given quantity of logs. Moreover, recycling technology has increased waste paper recovery and reuse rates nationally by 50 to 65 percent in the last 15 years alone. Additionally, the development of wood composites and engineered structural materials has allowed better utilization of low value resources to create high value materials, thereby enhancing forest management options. All of these developments have served to greatly extend the forest resources of the United States. Put another way, present forest harvest levels would have to be many-fold greater had advances in process development of the past six decade not occurred.

Continued population growth and associated growth in demand for shelter will substantially increase domestic consumption of wood in the decades ahead. In order to minimize impacts of growing wood demand on the nation's forests, and to most effectively utilize wood that flows into the U.S. as net imports (thereby minimizing impacts on forests outside of the U.S.) continued process and product technology development is urgently needed.

Recommended Course of Action: Rebuild national forest products research capacity by:

- increasing by 50 percent the base funding of the U.S. Forest Products Laboratory
- establishing 4 to 6 university-based centers of excellence in forest products education and research.
- increasing McIntire-Stennis funding for wood utilization oriented research.
- doubling funding for wood utilization research within the USDA Competitive Grants, National Research Initiative.

This position statement was completed by Jim Bowyer and accepted by the Board. It is now available for comment by the membership. Comments should be sent to Executive Director, SWST, One Gifford Pinchot Drive, Madison, WI 53726, e-mailed to vicki@swst.org, or faxed to 608-231-9592. The deadline for comments is January 30, 2004. Ballots will be mailed out after comments are taken into consideration.

Policy and Critical Issues USDA NRI

Dr. Chavonda Jacobs announced at the June 2003 SWST meeting that changes may occur in the USDA NRI program for Improved Utilization of Wood. As a result, SWST president Doug Stokke and the SWST board appointed an ad hoc committee of Stephen Shaler (University of Maine and SWST Critical Needs Committee Chair) and Michael Wolcott (Washington State University) to identify a mechanism for SWST to have an input in the Improved Utilization of Wood program. Following is an excerpt from a conference call by Michael Wolcott, Chavonda Jacobs, Mark Poth, Douglas Stokke, and Stephen Shaler as reported at the Fall Board Meeting:

- In response to recommendations from a recent National Research Council review of the NRI, the USDA intends to alter the program to target critical needs issues and implement larger awards with higher potential impact.
- It is likely that interdisciplinary, multi-institutional programs will also result. The potential outcomes of these changes will be to elevate status of the program and free staff time to communicate successes and needs for the program.
- Any input provided to USDA should result from a broad-based, consensus planning process to reflect opinions of the research community at large.
- Shaler and Wolcott recommended that a Research Needs Assessment Workshop be organized to strategically establish critical and topical research needs from the Wood Sciences research community which the Board approved

The SWST position paper on important issues must be developed and submitted to the NRICG program in a March/April timeline to have any impact on the selection of topic areas for 2005. To develop this position paper, the Ad Hoc committee will solicit succinct statements of important areas (Why is it important? What are the technical obstacles? What will be the benefits from obtained solutions?). Put another way, SWST needs to define critical science & technology needs which will allow SWST researchers to apply their unique and varied hammers to build important solutions (out of wood of course!).

A summary one to two page document will be drafted by February 15, 2004 and submitted to the SWST membership electronically. A final meeting, held in conjunction with the SWST board meeting on March 13/14 in San Antonio Texas, will finalize the document. This meeting will be open to all SWST members. Following the meeting, SWST will submit the position paper to the NRICG program through Dr. Chavonda Jacobs and implement a personal follow-up.

Conferences

5th International Wood and Fire Safety Conference

The High Tatras, Slovak Republic, April 18 - April 22, 2004 (New dates). An unique international research conference totally devoted to wood and fire safety. For further information, see <http://www.wfs.tuzvo.sk/> or contact Robert White (rhwhite@fs.fed.us)

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E-mail: rhwhite@fs.fed.us

Wood Science - Education and Research Programmes

The Society of Wood Science and Technology, the Division 5 of the IUFRO and the Faculty of Wood Sciences and Technology of the Technical University in Zvolen, Slovakia, are organizing on August 16-25, 2004, the International Symposium "Wood Science - Education and Research Programmes". Detailed information is available at <http://alpha.tuzvo.sk/~kudela>.

We hope that this conference will be a good opportunity for exchange of knowledge on educational and research programs of faculties aimed at wood science and technology worldwide.

Please, consider this announcement as the invitation for all members of the IUFRO working parties of the Division 5.

Yours sincerely,
Dr. Jozef Kudela

Progress in Woodfibre-Plastic Composites Conference, May 10-11, 2004

Toronto Marriott Eaton Centre Hotel - Toronto, Ontario
Sponsored by the University of Toronto and Materials and Manufacturing Ontario. For information contact Val Iannaci at 905-823-2020, ext 226, email info@mmo.on.ca, or access the conference website through <http://www.mmo.on.ca/seminars.htm>

Wood Truss Repair Course

January 16-17, 2004
Virginia Tech, Blacksburg

The focus of this workshop is design procedures for the repair of broken or damaged trusses. Repair methods and design calculations for typical cases of damaged trusses will be presented. The course is intended to provide an opportunity for participants to discuss alternate methods of truss repair design and methods of executing the needed field repairs. The specific objectives are to:

- 1) Review nail, screw, and bolt connection design provisions of the NDS-2001,
- 2) Present design data on lateral design values for nails installed in sheathing and lumber,
- 3) Present a design methodology for repair of roof and floor trusses,
- 4) Demonstrate truss repair design through typical examples, and
- 5) Present design information on truss bracing, vibration control, and wood floors supporting ceramic tile.

This course offers 1.2 Continuing Education Units (CEU's) and a certificate. For more information, contact Dr. Frank Woeste (fwoeste@vt.edu)

Employment Opportunities

Fire Researcher - Engineer or Forest Products Technologist

Research scientist position in fire research - Primary responsibility will be a research program to document and enhance the survivability of wood structures in the wildland-urban interface. The position is in the Fire Safety Research Work Unit at the USDA, Forest Service, Forest Products Laboratory, Madison, WI. Work will include both empirical studies and theoretical modeling of fire behavior in potential scenarios involving structures in the wildland urban interface. Requires academic training or demonstrated employment experience of the theories, principles, concepts, and practices of one of the following: fire-retardant treatment of materials, fire protection engineering, fire testing of materials, or forest fires.

For more information regarding this GS- 11/12/13 position, and directions on how to apply go to: www.usajobs.opm.gov/ Click on the "Search Jobs" button, then in the "Keyword Search" type either FPL-12-04D for Research General Engineer or FPL-14-04D for Forest Products Technologist. Must be U.S. citizen to apply. Vacancy announcement closes January 12, 2004.

MISSISSIPPI STATE UNIVERSITY FOREST AND WILDLIFE RESEARCH CENTER/DEPARTMENT OF FOREST PRODUCTS

Title: Assistant or Associate Professor of Forest Products

Function of Job:

This is a 12-month, tenure-track, full time appointment for an individual with research, teaching, and technical assistance responsibilities in the area of forest products manufacturing and utilization.

Characteristic Duties and Responsibilities:

Incumbent will participate in all aspects of the Forest Products Department research and teaching program. Incumbent will conduct a program of research in wood science & technology emphasizing developments in forest products manufacturing. Incumbent will work closely with the forest products industries in Mississippi and the region to assist them in applying technologies that will improve their competitiveness. Delivery of industrial technical assistance will be pursued via plant visits, short courses and workshops, web-based communication and written reports. Incumbent will teach undergraduate and graduate courses and assist in student advising and curriculum development.

Minimum Acceptable Qualifications:

A Ph.D. from an accredited institution of higher learning in either a Wood Science/Wood Products or a related field.

Additional Desirable Qualifications:

Experience is preferred in at least one field of forest products manufacturing and in producing applied and basic research results.

Salary: \$50,000-\$70,000, commensurate with training and experience.

Deadline: December 1, 2003 or until a suitable candidate is found.

To Apply: Send letter of application, resume, official transcripts, and 2 letters of reference to:

Deborah C. Reginelli
Forest Products Laboratory
Box 9820
Mississippi State, MS 39762-9820

Mississippi State University is an Affirmative Action/Equal Employment Opportunity Employer.

Research Engineer/Scientist in Engineered Wood Composites

USDA Forest Service, Forest Products Laboratory (FPL)
One Gifford Pinchot Drive
Madison, Wisconsin 53705

Applications are invited for a full-time, permanent Research Forest Products Technologist, Chemical or Mechanical Engineer, or Materials Scientist, in the *RWU4706: Performance Engineered Composites* research group at USDA Forest Service, Forest Products Laboratory (FPL), One Gifford Pinchot Drive, Madison, Wisconsin 53726-2398.

Responsibilities: Conduct research to develop a fundamental understanding of the relationships between materials, process and the structural performance and serviceability of both traditional and innovative engineered-wood composites. The successful candidate will work in collaboration with scientists and engineers across the FPL, with academia, and with industry technical professionals to define fundamental property-processing relationships, to develop models to predict composite properties as a function of material selection and processing conditions, and to transfer that understanding and technology to users.

Requirements: (1) PhD in Wood Science/Forest Products, Chemical or Mechanical Engineering, or Materials Science; (2) Demonstrated experience in conducting the full cycle of research; (3) Knowledge of science, manufacture, and engineering performance of composites and/or wood composites; (4) Demonstrated ability to succeed in a cooperative/collaborative research environment, (5) Demonstrated skills in oral and written communications, including demonstrated ability to independently conduct research, transfer technology, and write and publish technical reports.

This position is expected to be announced in mid-December 2003. Do not apply before the vacancy is officially listed at: www.usajobs.opm.gov. For complete statement of requirements, please see the official vacancy announcement.

Other requirements: U.S. citizen 18 years old or older may apply. Check official vacancy announcement for application deadline.

Salary: range: \$56,463-73,403 per year.

Visit www.usajobs.opm.gov to view the official vacancy announcement. For application information contact Lee Norton, (608) 231-9268, lnorton@fs.fed.us. For technical information contact Jerrold Winandy, Forest Products Laboratory, (608) 231-9316, jwinandy@fs.fed.us

Research Scientist Position, Quebec, Canada

The Forest Products Processing Research and Expertise Services (SEREX) at Amqui, Québec, Canada, invites applications for a Research Scientist position in wood composites and wood technology.

The successful candidate will develop a funded applied research program in collaboration with our research staff and collaborating industries and research organisms. The position will be available in January 2004.

Required Qualifications : Ph. D. in Wood science or related field; Solid experience in resin formulation and chemistry; Sound record of publications in refereed journals; English language required, French preferred.

To apply, send a letter of application, a resume and the names, phone numbers and e-mail addresses of at least three references to :

Damien St-Amand, ing. f., General manager, SEREX
25, rue Armand-Sinclair, porte 5
Amqui (Québec) G5J 1K3
E-mail : dstamand@globetrotter.net, Fax : 418-629-2280
www.serex.qc.ca

Graduate Studies in Wood Science Oregon State University

The Department of Wood Science and Engineering at Oregon State University seeks a motivated individual to study at the M.S. or Ph.D. level for a project to assess the ability of ionic liquids to absorb and recover the pollutants from wood dryers and presses. The student will study the efficiency with which the synthesized fluids can be used and recovered including designing and operating a small pilot operation. Success in the project would lead to a new method of pollution control in the industry. Students with backgrounds in Wood Science, Chemical Engineering, Chemistry, Physics, or other related disciplines are encouraged to investigate this opportunity. This is a funded project and stipends and tuition waivers are available for qualified students. Students may be able to double major in a second department. For information about the two areas described above, contact:

Mike Milota or Kaichang Li
Department of Wood Science and Engineering
119 Richardson Hall
Oregon State University
Corvallis, OR 97331-5751

Mike.Milota@OregonState.edu, (541)737-4210, or

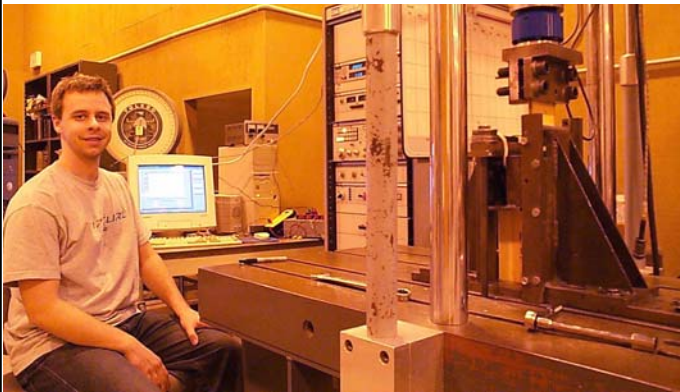
Kaichang@OregonState.edu, (541)737-8421

<http://woodscience.oregonstate.edu/>

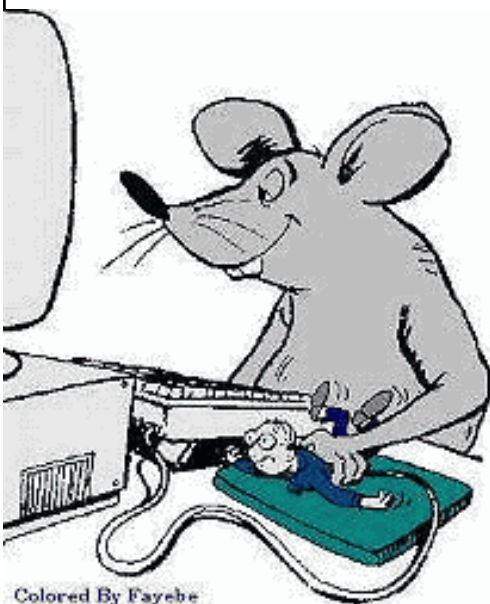
Student Profile

Jeffrey Smith, Virginia Tech

Beginning at an early age, the wonder and amazement of the natural world has captivated me. This encouraged me, in addition to my genuine curiosity for how things work, to pursue an education and career in natural resources. I received my B.Sc. in Wood Science & Forest Products from Virginia Tech in the spring of 2002. With a continuing interest in research, I began progress toward completion of a master's degree at Virginia Tech. My thesis research is titled, "Durability-Based Design for Light-Frame Structures: An Analysis of Connection Degradation." Dr. Joe Loferski is serving as my major professor. The project involves a quantitative investigation of loss in load resistance of nailed sheathing/stud connections typically found in residential wall and floor systems as cyclic moisture conditioning is applied. I am interested in how wood connections are inhibited by seasonal changes in climate. I plan to graduate in the summer of 2004 with a M.Sc. in Forest Products from Virginia Tech. My resume is available online: <http://www.woodscience.vt.edu/resumes/jsmith120203.pdf>



Doug's Amusements Corner



One day they
will do this to
us!

About the Society

The SWST Newsletter is published six times a year by the Society of Wood Science and Technology, One Gifford Pinchot Drive, Madison, WI 53705, USA.

Items for the Newsletter may be sent to Rado Gazo, at: radowazo@fnr.purdue.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.

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Society of Wood Science and Technology

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Wood and Fiber Science

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SWST Newsletter

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