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# INSIDE VT WOOD

## Reminder...

Remember to submit department news items by Friday 3 pm of each week to Will Pfeil at [wpfeil@vt.edu](mailto:wpfeil@vt.edu) for inclusion in Inside VT WOOD each Monday morning. All past issues of Inside VT Wood reside on our department website under the publications link.

## News From Paul Winistorfer

- We had a very successful and informative visit last week with our Virginia Cooperative Extension and Virginia Agricultural Experiment Station Directors (Drs. Mark McCann, Nessler and Riddell). Nearly all faculty had the opportunity to present their areas of extension and research activity. Thanks to all who participated.
- Drs. Roman, Renneckar and Zink-Sharp are meeting this week to explore development of a new major within our department under the theme of biomaterials-bioproduts. I have charged them to investigate the North American landscape and report to the faculty opportunities and strategies for us to consider.
- The Student Policy and Affairs Committee is reactivated this academic year. Drs. Hindman (chair), Bond and Bush will meet with me this week to discuss some possible actions by the committee:
  - investigate and develop a 'wood' minor to stand alone on the campus
  - investigate and bring to the faculty a discussion about a joint minor with building construction
  - improve our process in the department regarding student awards and recognitionDr. Zink-Sharp will serve as an ad-hoc resource to the committee
- Please remember our first Department Meeting of the semester on Wednesday September 27 – 8am Brooks Classroom. We will adjourn by 9 am.
- The department is featured as the Major of the Month upcoming in October in the Career Services Newsletter. Page 4 of the newsletter featuring our major is shown below. Career Services is found at [www.career.vt.edu](http://www.career.vt.edu) The newsletter with our major is under the link to Students.

## WOOD WEEK 2006 – Activities Coming UP!

Basic Corrugated Packaging and Unit Load Design Short Course

Center for Unit Load Design

October 2-3 Skelton Conference Center, Inn at Virginia Tech

Center for Unit Load Design Advisory Board Meeting

October 4 – Skelton Conference Center, Inn at Virginia Tech

Center for Forest Products Marketing and Management Advisory Board Meeting

October 4 - Skelton Conference Center, Inn at Virginia Tech

## Wood-Based Composites Center Advisory Board Meeting

October 4 - Skelton Conference Center, Inn at Virginia Tech

## Student Awards and Scholarship Recognition Reception

Wednesday October 4 – 6:30 – 9pm

The Inn at Virginia Tech

## Career Awareness Fair

Thursday October 5 – 9:30 am – 4:00 pm

Brooks Forest Products Center

The following industry partners are participating – come learn about career opportunities

Baillie Lumber Company  
PalletONE  
Louisiana Pacific Corporation  
Department of Wood Science and Forest Products  
GP Roxboro Engineered Wood  
Marshfield Doors  
Augusta Lumber Co.  
ISK Biocides  
Timber Truss Housing Systems, Inc.  
Virginia Department of Forestry  
Woodgrain Millwork  
Coffman Stairs  
Forest Products Society

Award Winning Wood Magic Show

[www.woodmagic.vt.edu](http://www.woodmagic.vt.edu)

October 11 – Brooks Forest Products Center

## Boarding Passes Required for Air Travel Reimbursement

Just a reminder that your boarding passes are required for reimbursement of air travel. Do us a favor in processing your travel reimbursements and have necessary receipts readily available.

## Department to Coordinate VT Wood Shirt Order

The department will be coordinating an order for denim shirts with our VT Wood logo on the front. An order form will be posted on the counter at Brooks and Cheatham. You will be able to select short sleeve, long sleeve, size, and possibly denim color. The order will be placed October 1. Payment will be due at time of order. Watch this week for the order form to be posted.



## Nanotechnology for the Forest Products Industry

by Scott Renneckar

I presented “Nanotechnology for the Forest Products Industry” at the Virginia Forest Products Association Summer Conference (9/16/06). The presentation began with a discussion on the excitement of nanoscience, introducing the audience to the scale of things a billion times smaller. The presentation also included areas in which the manufacturers should look for new technologies related to machining and process control, as well as the research that we are leading within the Department in nano/bio (self-assembled composite materials, cellulose nanocrystals

in medicine, etc.). Because current nanoscience research is discovery based, I attempted to open a dialogue on application-based nanomaterial design related to quality and speed of production.

## **Manufacturing Improvement Begins with “5-S” (Sort, Straighten, Shine, Standardize, Sustain)**

by Earl Kline

It is impossible to begin any improvement without proper organization, maintenance, and standardization. “5-S” is a tool used to improve and sustain the safety, ergonomics, work environment, and productivity of manufacturing operations. Taylor Leonard explained 5S and how to organize and lead a successful 5S event with industry illustrations.

Taylor Leonard is the Continuous Improvement Manager for Woodgrain Millwork’s Marion, VA and Montevalio, AL facilities. Taylor is a graduate of the Wood Science and Forest Products Department at Virginia Tech and has been with Woodgrain for 10 months.

Taylor will also discuss employment opportunities at Woodgrain for students who are looking for jobs or internships.

## **WBC 2006 Fall Industry Advisory Board Meeting**

by Linda Caudill

The Wood-Based Composites Center will be holding its Fall Industry Advisory Board meeting on October 4-5, 2006 in Latham B at the IVTSCC. A series of technical presentations, along with a 4:30 p.m. poster session will be held on October 4th. Any interested faculty or staff members are invited to attend. If you wish to fully participate in the meeting on the 4th, or would like to join us for lunch that day, please contact me, Linda Caudill ([lcaudill@vt.edu](mailto:lcaudill@vt.edu)) and I will make sure you are included! Agendas and participant lists are also available.

## **WOOD 3315 Students Lab Experience**

by Bob Wright

The new laboratory section added to Mechanical Properties of Wood I (WOOD 3315) during the recent curriculum changes within the department has been serving as an invaluable addition to the learning experience for the students. Uh, and the instructor. Having never fully experienced the detailed preparation that helps a lab exercise proceed smoothly and also deliver the desired teaching moments, there has been a fun learning curve for me.



The students have been introduced to practical applications of vector addition and determination of a resultant vector given specific input vectors. This has helped them grasp the concept of force vectors in structural analysis. Another lab reinforced the physical meaning of the engineering term of a ‘moment’, or rotational influence. Using measured torque and force, random lengths of test boards, prepared by David Jones, were determined.

Today’s lab helped reinforce the understanding of force application and system reaction via the interpretation of six physical models wherein students had to create the free body diagrams of the force systems. Photographs show students at some of the different work stations. Stations illustrated simple-supported weightless beams with point load, a distributed load system on rollers, a coffee stir-stick bridge from last years’ class outfitted with model fork trucks as loads, a cantilever, and one or two other configurations.

## Majors of the Month: *WOOD SCIENCE and FOREST PRODUCTS*

We bet you've never heard of this major, right? Right. You will be surprised to know that the Department of Wood Science and Forest Products ([www.woodscience.vt.edu](http://www.woodscience.vt.edu)) at Virginia Tech is the leading teaching and research program in the country devoted to wood as a material and how we use this renewable resource in all areas of our society.

- Who develops new building materials for housing construction? **Wood Science and Forest Products.**
- Who designs shipping and container systems for global commerce? **Wood Science and Forest Products.**
- Who develops new adhesive systems to enable stronger, lighter, and better lasting wood construction systems? **Wood Science and Forest Products.**
- Who does market research in global commerce and trade of renewable materials? **Wood Science and Forest Products.**
- Who is researching the role of nanotechnology for new products, durable products, industrial coatings, fungicides and biocides? **Wood Science and Forest Products.**
- Who is developing new biobased products from renewable materials such as wood? **Wood Science and Forest Products.**

- Who is researching new modern manufacturing systems to maintain global competitiveness? **Wood Science and Forest Products.**
- Who is designing and developing new composite building materials that use more of each tree and produce less waste? **Wood Science and Forest Products.**

What is a \$30 billion industry in Virginia that is based on renewable materials that impact every facet of your life from chemicals, housing, furniture, paper, food additives, pharmaceuticals, biobased plastics, and more? **Wood Science and Forest Products.**

The department offers a single major: Wood Science and Forest Products. In the major students select from six degree options to focus on a career specialization. These options are

- Adhesion Science (qualifies for a minor in chemistry)
- Forest Products Marketing and Management
- Manufacturing Systems
- Non-timber Forest Products
- Packaging Science (offered as a minor on campus)
- Wood Structures and Materials

The department boasts of a 100% placement rate with strong starting salaries, and upward mobility. Career opportunities are plentiful in industry, research, government organizations, international organizations and even right here at home in Virginia.

The department is hosting a Career Awareness Fair on October 5 at the Brooks Forest Products Center with up to 20 industry partners representing the breadth of the sector. Check it out – it's a great way to learn about exciting opportunities in the major.

The department website ([www.woodscience.vt.edu](http://www.woodscience.vt.edu)) has in depth information about the major, courses, option requirements, an on-line interactive check sheet system, newsletters, publications, student organizations, on-line information request and more. Check it out today. Be a part of the growing renewable materials field of the future. Do it right here at Virginia Tech in the leading program in North America! Wood Science and Forest Products at Virginia Tech. Scholarships, internship opportunities, summer jobs and a career await you.

For more information on majoring in Wood Science & Forest Products at Virginia Tech look at the Virginia Tech Guide to Undergraduate Majors [www.career.vt.edu](http://www.career.vt.edu).



### General Campus Announcements

The latest issue of Synergy is now available online through: [www.multicultural.vt.edu/synergy](http://www.multicultural.vt.edu/synergy)

Synergy, produced by the Office of Multicultural Affairs and the Office for Equal Opportunity, is a new tool designed to reach out across all areas of the university community and provide a new vehicle of communication on issues of diversity, multiculturalism and inclusion.

Submissions: All members of the University Community (faculty, staff and students) are encouraged to submit items to be included in Synergy.

E-Alerts: If you or your staff /students are interested in receiving direct e-alerts when new issues of Synergy are posted online, please sign-up to join an electronic mailing list at

<https://survey.vt.edu/survey/entry.jsp?id=1156362497845>.

Distribution: Please share information about Synergy with your fellow colleagues and students.

We encourage you to take advantage of this opportunity as we help to breakdown the communication barriers in order to develop synergy across the entire campus in our efforts to "enhance the future of Virginia Tech through synergy in the promotion of equity and diversity".

## VT Majors Fair

Dear Colleagues,

It is time for departments to register to participate in the VT Majors Fair.

October 12, 2006

10 am - 4 pm

Owens Banquet Hall

This year, Cassell Coliseum is being renovated so we have reserved Owens Banquet Hall for our program. Owens is actually undergoing renovations as well, but the planners believe the renovations will be completed in time for the Fair. Although the set up of Owens does not offer the same features as Cassell, the location promises to attract a lot of students as they visit Owens for lunch, snacks, and meals throughout the day.

Last year, there were more than 400 students and 42 departments who participated. The feedback from students was very positive and appreciative! Students at last year's Fair learned about majors and minors available at Virginia Tech. More importantly, they were able to meet the people who are the programs! Faculty, administrators, staff, and graduate students interacted with undergraduates to show what makes their programs so special and what exciting futures can be found with their programs of study. Such an experience far exceeds anything a student can gain from online information or by reading a brochure. The VT Majors Fair is a great way for your department to join this university-wide effort to help students enjoy academic success and realize their full potential.

If you participated last year, someone will contact your department to update your registration. If you did not participate last year, please register online <https://survey.vt.edu/survey/entry.jsp?id=1121977230044>. (Note: students do not need to register to attend.)

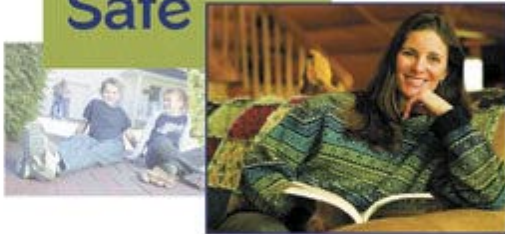
For questions or more information about this event, please contact Kimberly LaBoone (231-5499) with the Center for Academic Enrichment and Excellence.

Sincerely,

Kimberly L. LaBoone, Ph.D.  
Assistant Director, College Transition Programs  
Center for Academic Enrichment & Excellence  
110 Femoyer Hall (0276)  
Blacksburg, VA 24061  
(540) 231- 5499 office  
(540) 231-2618 fax  
klaboone@vt.edu



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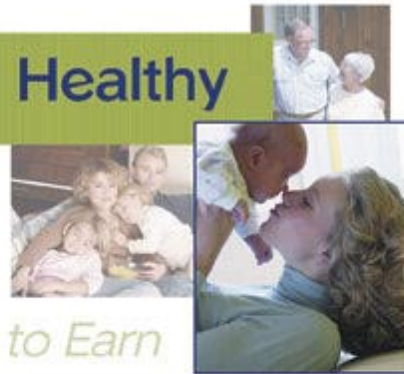
**Green**



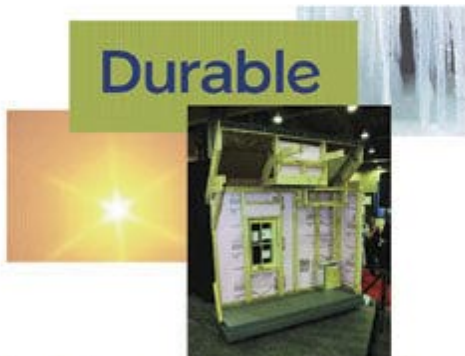
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# 10% off FPS Publication Orders Placed During Wood Week at Virginia Tech – 2006

To receive the 10% discount, return this completed order form via fax (608-231-2152) or mail to the Forest Products Society, 2801 Marshall Court, Madison, WI 53705-2295 USA. To order by phone, call 608-231-1361, ext. 202.

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Item #	Item Name	lb.	FPS Member/ Nonmember Price	Quantity	AMOUNT
7231	China's Boom: Implications for Investment & Trade in Forest Products and Forestry	1	\$30 / \$45		
7232	Recent Developments in Wood Composites	1	\$30 / \$45		
7233	8th International Woodfiber-Plastic Composites Proceedings	3	\$65 / \$75		
7234	Undervalued Hardwoods for Engineered Materials and Components	2	\$49		
7235	A Guide for Developing A Wood Collection	0.5	\$6 / \$8		
7236	The Plywood Age	2	\$30		
7237	Woodframe Housing Durability and Disaster Issues	3	\$55 / \$85		
7238	Sawing, Edging, and Trimming Hardwood Lumber: Putting Theory Into Practice <i>by Denig and Wengert</i>	1	\$35 / \$50		
7239	Wood and Timber Condition Assessment Manual <i>by Ross, Brashaw, Wang, White, and Pellerin</i>	2	\$39		
7240	Swelling and Shrinking of Wood: A Practical Tech. Primer <i>by Otto Suchsland (full-time student \$35)</i>	2	\$59 / \$75		
7241	Structural Behaviour of Timber <i>by Borg Madsen</i>	4	\$50		
7242	7th International Woodfiber-Plastic Composites Proceedings	3	\$65 / \$75		
7243	Manual for the Inspection of Residential Wood Decks and Balconies <i>by Anderson, Woeste, &amp; Loferski</i>	2	\$39		
7244	Long-Term Outlook for U.S. Timber and Forest Products	1	\$25 / \$35		
7245	BestPossible Profits: Guidebook for Forest Products Companies <i>by Eugene L. Bryan</i>	2	\$55		
7246	13th International Symposium on Nondestructive Testing of Wood	2	\$59		
7247	Building An Industrial Wood Finish <i>by Robert M. Cox, Jr.</i>	1	\$24.95		
7248	Quality Drying: The Key to Profitable Manufacturing	2	\$12		
7249	Enhancing the Durability of Lumber and Engineered Wood Products	2	\$45 / \$55		
7250	Nondestructive Evaluation of Wood <i>by Roy F. Pellerin and Robert J. Ross</i>	2	\$65		
7251	6th International Woodfiber-Plastic Composites Proceedings	2	\$55 / \$65		
7252	Wood Adhesives 2000	3	\$65 / \$75		
7253	Forever Green: The History and Hope of the American Forest <i>by Chuck Leavell</i>	1	\$24.95		
7254	Durability and Disaster Mitigation in Wood-Frame Housing	2	\$45 / \$55		
7255	A Guide to Useful Woods of the World	3	\$39.95/\$44.95		
7256	Quality Lumber Drying in the Pacific Northwest: Vertical Integration = Improved Profit	2	\$12		
7257	Green Spirit – Trees are the Answer <i>by Patrick Moore</i>	2	\$20		
7258	Wind Safety and Performance of Wood Buildings	2	\$40 / \$50		
7259	Use of Agricultural Fibers in the Manufacture of Composite Panels	2	\$25 / \$35		
7260	Wood Adhesives 2000 Extended Abstracts	2	\$25		
7261	Issues Related to Handling the Influx of Small-Diameter Timber in Western North America	2	\$25 / \$35		
7263	5th International Woodfiber-Plastic Composites Proceedings	3	\$55 / \$65		
7264	Effective Predryer Operations <i>by Kenneth Eckert and Robert Little</i>	1	\$25 / \$35		
7265	11th International Symposium on Nondestructive Testing of Wood	2	\$59		
7266	1998 Resin & Blending Seminar Proceedings	2	\$12		
7267	International Contributions to Wood Adhesion Research	2	\$40 / \$50		
7268	The Nature of Wood and Wood Products CD-ROM <i>(full-time student \$38.50)</i>	1	\$69.95		
7269	Wood Handbook: Wood as an Engineering Material <i>(full-time student \$19.95)</i>	3	\$39		

Item #	Item Name	lb.	FPS Member/ Nonmember Price	Quantity	AMOUNT
7270	Engineered Wood Products: A Guide for Specifiers, Designers, and Users (full-time student \$19)	3	\$29		
7271	Quality Lumber Drying in the Pacific Northwest: The Team Approach to Improving Your Bottom Line	1	\$12		
7272	Engineered Systems Using Structural Panels	1	\$8		
7273	Biology and Prevention of Sapstain	1	\$35 / \$45		
7274	Lumber Drying Sourcebook: 40 Years of Practical Experience	3	\$30		
7275	Recent Advances in Understanding Full-Scale Behavior of Wood Buildings	1	\$30 / \$40		
7276	Forest Management Into the Next Century: What Will Make It Work?	2	\$14		
7278	Eastern Hardwoods: Resources, Technologies, and Markets	2	\$12		
7279	Preparing for the 21st Century: Value Added Marketing for Value Added Products	2	\$10		
7280	Dry Kiln Operator's Manual	2	\$30		
7281	Process and Business Control Technologies for the Forest Products Industry	1	\$15		
7282	Wood: Influence of Moisture on Physical Properties by John F. Siau	3	\$59.95		
7285	Sanding & Sawing Seminar Proceedings	2	\$12		
7286	The Use of Recycled Wood and Paper in Building Applications	2	\$12		
7289	Earthquake Performance and Safety of Timber Structures	2	\$35 / \$45		
7290	Structural Changes Within the Global Forestry Sector	1	\$15		
7292	Drying Pacific Northwest Species for Quality Markets	2	\$12		
7293	Woodfiber-Plastic Composites: Virgin and Recycled Wood Fiber and Polymers for Composites	2	\$45 / \$55		
7294	Life Cycle Environmental Impact Analysis for Forest Products	1	\$30 / \$40		
7295	Environmental Quality in Wood Processing	1	\$10		
7297	Lodgepole Pine in North America by Peter Koch (3 volume set)	7	\$55		
7298	Wood Decks: Materials, Construction, and Finishing	1	\$19.95		
7301	Measuring and Controlling VOC and Particulate Emissions from Wood Processing Operations...	1	\$10		
7319	The Globalization of Wood: Supply, Processes, Products, and Markets	2	\$12		
7324	Dry Kiln Schedules for Commercial Woods – Temperate and Tropical	2	\$15		
7360	Fiberboard Manufacturing Practices in the United States by Suchsland and Woodson	2	\$65		
MF-4120	Marketing Forest Products: Gaining the Competitive Edge by Jean Mater	2	\$49		
MF-4130	Small Sawmill Handbook: Doing It Right and Making Money by Joseph Denig	1	\$39		
MF-4170	Plywood & Veneer-Based Products: Manufacturing Practices by Richard F. Baldwin	2	\$59		
MF-4180	Scanning Technology & Process Optimization: Advances in the Wood Industry	2	\$49		
MF-4190	Softwood Drying: Enhancing Kiln Operation by Larry Culpepper	2	\$59		
MF-4560	Modern Particleboard & Dry-Process Fiberboard Manufacturing by Thomas M. Maloney	3	\$59		
MF-4630	Quality Control in Lumber Manufacturing	2	\$49		
MF-4650	Operations Management in the Forest Products Industry by Richard F. Baldwin	1	\$59		
MF-4660	Computer Control Systems for Log Processing and Lumber Manufacturing by Ed M. Williston	2	\$49		
MF-4670	Maximizing Forest Products Resources for the 21st Century by Richard F. Baldwin	2	\$59		
MF-4710	Managing Mill Maintenance: The Emerging Realities by Richard F. Baldwin	2	\$49		
MF-4730	Lumber Manufacturing: Design & Operation of Sawmills & Planer Mills by Ed M. Williston	2	\$55		
MF-4760	Value-Added Wood Products: Manufacturing and Marketing Strategies by Ed M. Williston	2	\$49		

A copy of your current student ID must accompany orders at the student price.

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Delivery charges by region (1 to 8 pounds total weight).

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1	7.00	7.00	8.00	10.00	11.50	12.00
2	7.50	8.00	12.00	15.00	17.00	18.00
3	8.00	11.00	17.00	20.00	22.50	25.00
4	8.50	13.00	22.00	24.00	28.00	32.00
5	9.00	18.00	25.00	25.00	35.00	35.00
6	9.50	20.00	27.00	28.00	39.00	39.00
7	10.00	21.00	29.00	30.00	42.50	42.50
8	10.50	23.00	31.00	33.00	47.00	46.00

Delivery charges by region (9 to 15+ pounds total weight).

Total Weight (lb.)	United States	Canada	Mexico	Europe	Australia, New Zealand, Japan	All other countries
9	\$11.00	\$24.00	\$33.00	\$36.00	\$51.00	\$50.00
10	11.50	25.00	35.00	40.00	55.00	53.00
11	12.00	26.00	37.00	43.00	59.00	57.00
12	12.50	27.00	39.00	46.00	62.00	61.00
13	13.00	28.00	41.00	49.00	66.00	65.00
14	13.50	29.00	43.00	52.00	70.00	69.00
15	14.00	30.00	45.00	55.00	75.00	73.00
15+	call for rates: 608-231-1361, ext. 202					

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