

June 2007						
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INSIDE VT WOOD

Reminder...

Remember to submit department news items by Friday 3 p.m. of each week to Will Pfeil at 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.

Red Alert

Our weekly communication schedule will resume August 13, 2007.

- Rick Caudill will be on Annual Leave June 25 - July 9.
- Debbie Garnand will be on Annual Leave June 27 – July 8.

News From Paul Winistorfer

- We had great participation in Knoxville for the SWST and FPS annual International Conventions two weeks ago (38 people from our program attended the meetings). And, we came away with additional recognition for our faculty and graduate students. Please read below about the awards garnered by Dr. Dan Hindman and graduate student Zhiyuan Lin. Congratulations!
- We have set dates for Wood Week 2007. Wood Week will be September 3-8th, 2007. The career awareness fair will be Thursday Sept 6th, the student scholarship reception will be Friday evening Sept. 7, and the Virginia Forest Products Association-Virginia Tech Forest Products Industry Technology Conference will be held on Saturday September 8th at the Inn at Virginia Tech. Details and schedules will be coming in the following weeks. **MARK YOUR CALENDARS NOW.**
- I have a scheduled trip to Southside the first week of July for a meeting among the Southside partners interested in establishing educational programming for the regional wood industry there. Our progress, communication and momentum continues.

Hindman wins L. J. Markwardt Award



The 2007 L. J. Markwardt Wood Engineering Award was presented to Drs. Daniel Hindman, Harvey Manbeck and John Janowiak at the Forest Products Society's 61st International Convention. The L. J. Markwardt Wood Engineering Award is "presented annually to the author or authors of a technical papers published during the two calendar years prior to the award year in either the *Forest Products Journal* or *Wood and Fiber Science* that is judged to be the most outstanding research paper in the field of wood as an engineering material", according to the Forest Products Society website. The award was given for two papers entitled "**Torsional Rigidity of Rectangular Wood Composite Materials**" and "**Torsional Rigidity of Wood**

Composites I-joists". Both papers can be found in Wood and Fiber Science, Volume 37, number 2. The published research was part of Dr. Hindman's Ph.D. dissertation, with Drs. Manbeck and Janowiak acting as co-advisors. The papers discuss experimental methods for conducting torsion tests of wood composite and I-joist materials, while also providing prediction models for the torsional rigidity based upon elastic constants of the materials. This award carries with it a cash prize for the authors.

Ziyuan Lin Wins Second Place in SWST Graduate Student Poster Competition



Ziyuan Lin (Lin), PhD student working under the direction of Dr. Scott Rennecker, was awarded 2nd place in the annual Society of Wood Science and Technology (SWST) Graduate Student Poster Competition at the International Convention of the Society in Knoxville, Tennessee in June. Lin's poster was titled '**Process and Characterization of Nanocomposites Tailored Wood Fiber-Reinforced Polypropylene Composites: Layer-by-Layer Self-Assembly of Polyelectrolytes and Clay Nanoplatelets**'.

There was a companion oral presentation of this work later in the week, which reflected the contributions of the faculty working with and advising Lin on this research. Drs. Scott Rennecker and Dan Hindman were both listed as co-authors of this presentation.

CULD and WERC Sponsor Mold Conference

By Bonnie MacCubbin

The Center for Unit Load Design and the USDA Forest Service's Wood Education and Resource Center (WERC) co-sponsored "Preventing and Eliminating Mold on Hardwood Pallets: A Manufacturer's Perspective," a one-day conference (repeated a second day), June 7 and 8 at WERC in Princeton, WV. This conference provided a consolidated and comprehensive educational



curriculum designed to inform primarily eastern U.S. hardwood lumber and pallet manufacturers about mold related problems, the causes of mold growth on raw wood surfaces, and how to prevent and eliminate it.

The conference included topics such as the science of mold, how mold affects food processors, various chemical treatments for mold, and wood drying. Mark White moderated the conference that included exhibitors from around the region and featured Brian Bond and Peter Hamner as two of the speakers.

"Train the Trainer" Event

Earl Kline participated With John Hudson and Ken Martin from Virginia's Philpott Manufacturing Extension Partnership (VPMEP) in a "Train the Trainer" project at Stanley Furniture in Stanleytown, Va on 19 June. The purpose of this project was to train Stanley Furniture employees to become teachers of lean business concepts. A training model, utilizing a manufacturing simulation developed by Brian Brashaw at University of Minnesota Duluth combined with successful wood industry case studies, incorporates experiential learning techniques to simulate the transformation of a traditional wood products manufacturing system into a lean and profitable enterprise. Stanley

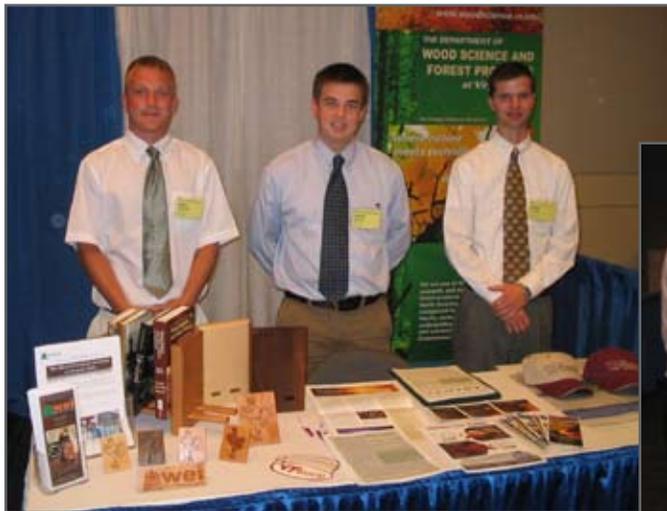
Furniture managers who participated in two of our “Lean Manufacturing” Workshops in 2006 were impressed with how well the model taught critical tools and methods needed to help establish a base level of education needed to begin a “journey of improvement”. Stanley Furniture approached Kline about the possibility of duplicating the training program with the goal of using it to train all 2000+ employees. To help facilitate this goal, Kline teamed up with VPMEP to conduct a “train the trainer” session at Stanley. Ultimately the training will be handed-off to several Stanley Furniture Continuous Improvement Facilitators to teach the program company wide. The training program has developed over the past three years through funding from NSF, the Sloan Foundation, and Wood Education Resource Center (USDA Forest Service) and has been utilized in 9 Lean Manufacturing Workshops teaching continuous improvement concepts to over 150 industry participants.



Left to Right, Ken Martin (VPMEP), Earl Kline (Virginia Tech), and John Hudson (VPMEP) team together to “train the trainer”

WEI Students Go to Knoxville

Jesse Paris, Mike Elebash, Adam Birkett, and John Foster, Representing the Wood Enterprise Institute (WEI) in the Department of Wood Science and Forest Products traveled to the Forest Product Society (FPS) Annual Meeting in Knoxville, TN on June 11-12. Beside attending FPS technical sessions, the group shared their learning experiences from WEI and the Department to participants at the annual meeting.



Left to Right, Mike, Adam, and John show the customizable table top bookshelf to FPS participants. ▲

▼ Jesse (second from right) - Sharing the WEI experience or closing the sale?



Norman Awarded AWFS Scholarship

Garrett Norman was awarded a \$3000 General Industry Scholarship from the Association of Woodworking and Furnishings Suppliers (AWFS) in recognition of his industry based studies with the wood furniture industry. Garrett is working towards his Masters degree in Wood Science and Forest Products under the direction of Dr. Earl Kline. Garrett’s project involves benchmarking material and information flows to assess the effectiveness of how the wood supply meets actual furniture demand.

The AWFS is a trade association with an international, corporate membership that includes manufacturers and distributors of machinery, hardware, lumber, upholstery materials, bedding components, wood products and other suppliers to furnishings and wood product manufacturers. The AWFS is the largest national trade association in the U.S. representing the interests of the broad array of companies that supply the home and commercial furnishings industry.

Graduate Professional Masters in Green Building

Degree description:

Sustainable living is a vital issue on many people's minds today. Mainstream public and politicians alike have resolved to reduce pollution and waste and reverse global warming. This is particularly true for those in the building industry, whose daily decisions have a critical impact on the health and well-being of the community and the environment.

Building accounts for approximately 40% of U.S. primary energy consumption (USDOE 2004)

Green Building is a world-wide movement to create cleaner and more energy efficient buildings. From energy and water sustainability to recycling of dumpster debris, the potential impact of providing higher education in this field is tremendous.

This non-thesis option will focus on professional training in environmentally responsible building practices.

Students will learn:

- Energy conservation methods in residential design
- LEED-certified building requirements
- Design with sustainable building materials
- Green planning and development policies
- Green initiatives on infrastructure, roads and bridges
- Courses will naturally come from several disciplines. Students will be required to integrate concepts of resource stewardship, economic vitality, and social equity.

Who should enroll?

- Architects, Engineers, Builders and Building Officials who wish to enhance their knowledge of sustainable building methods and materials.
- Design and construction professionals who desire a deeper understanding of the environmental impact of construction and ways to mitigate it.
- Students in the building field seeking a focused, non-thesis graduate program that allows for interdisciplinary study and practical training.

Course requirements:

Please note: Courses and course schedules are subject to change.

Students will work with their academic advisor to select the most appropriate combination of courses for their study.

In addition to completing a 6 credit practicum BMATWT 698Y, students must earn a minimum of 30 graduate credits per the lists below. Each course is worth 3 credits with the exception of the practicum.

Required courses:

- BMATWT 698Y – Internship in Green Building (6 credits)
- NRC 601 – Research Concepts, Fall

Courses in the departmental field (select 4 – at least one 600 or higher level):

- BMATWT 540 – Design of Timber Structures, Spring, (prerequisites)
- NRC 549 – Ecosystem Management
- NRC 697D – Social Conflict and Natural Resource Policy, Fall
- POLISCI 784 – Environmental Policy
- REGIONPL 558 – Issues In Environmental Management
- REGIONPL 591G – S-Housing & Public Health
- REGIONPL 577 – Urban Policies
- REGIONPL 693S - S-Planning for/with Multiple Publics, Fall
- RESECON 720 – Environmental and Resource Economics, Fall
- SOC 565 – Sociology and Ecology of Community
- WFCON 697U&V – Urban-suburban Wildlife Ecology & Management, Fall

Courses outside the departmental field (select 5 – no more than one 400 level course):

- ARCHDES 520 – Building Physics I/Energy Efficient Housing, Fall
- CEE 490A – Sustainable Aspects of Civil and Environmental Engineering
- ENGLISH 499 C-D – Imagining a Sustainable World
- ENV-HLTH 565 – Environmental Health Practices
- ENV-HLTH 660 – Issues in Environmental Health Policy & Law
- ENVIRDES 553 – Resource Policy & Planning
- ENVST 497G – Environmental Problem Solving in the Community
- GEO-SCI 444 – Sense of Place and Environmental Behavior
- GEO-SCI 420 – Human Impact on the Environment, Spring
- LANDARCH 591F – Green Urbanism
- LANDARCH 591B – Sustainable Communities
- LEGAL 497N – Environmental Justice, Fall
- M&I-ENG 551 – Thermal Environmental Engineering
- M&I-ENG 570 - Solar&Dir Enrgy Conv, Spring (prerequisites)
- PUBHLTH 590H – Indoor Environment and Health, Fall (prerequisites)

Admissions:

General guidelines for graduate admissions can be found at the University's Graduate School website.

Program Coordinator:

Please direct inquiries to:

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