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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](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

- Dr. Mike Wolcott, CNR and department alum is being honored as the College of Natural Resources Career Achievement Award recipient at the College Awards Banquet on Tuesday evening. Mike will be visiting in the department on Tuesday and Wednesday. Please see information following on his special seminar presentation on Wednesday at 1pm.
- Congratulations to all of our scholarship and award recipients who will be recognized on Tuesday evening. Special congratulations to Fernando Navarro who is the recipient of the College of Natural Resources Outstanding Doctoral Student Award. Fernando is our featured Spotlight this week. Also congratulations to Richard Johnson, doctoral candidate who is our department A.B. Massey award recipient. Congratulations to all! We are proud of you.
- We rescheduled our reception with art students and their corrugated chairs for Friday April 3rd at 10am in the lobby of Cheatham Hall. These students have entered the 'corrugated design competition' sponsored by the International Corrugated Packaging Foundation (ICPF). Students in Professor Steve Bickley's (VT School of Visual Arts) class designed chairs for this competition and worked with Ralph Rupert and our Center for Unit Load Design to cut out the chairs on the department's CNC table — a gift last year from the ICPF. See the information enclosed herein about this fun, interesting and collaborative partnership.
- We are hosting a delegation of visitors from the Costa Rica Institute of Technology this week. Dr. Henry Quesada is coordinating this visit for colleagues from Costa Rica interested in partnering with our program and other programs at Virginia Tech. A seminar will be presented on Thursday at 10:00 a.m. – 10:45 a.m. in the Fralin Auditorium and is open to all. Come learn about collaborative opportunities in Costa Rica. Information is enclosed.
- Thank you to David Jones and Will Pfeil of our program who have prepared all of the special plaques for the CNR Awards Banquet. David prepared plaque blanks from an oak tree removed near the Grove two years ago and Will laser engraved these plaques. In total – 19 plaques were prepared by David and Will for the College. Way to go Wood Science!



Fernando Navarro  
Ph.D. Candidate

**F**ernando Navarro joined the Department of Wood Science and Forest Products in August 2006. He is enrolled in the interdisciplinary PhD program in Macromolecular Science and Engineering and plans to graduate in May 2010. Fernando holds a B.S. in Chemical Engineering and an M.S. in Forest Products Sciences from the University of Guadalajara, where he is a professor in the Wood Science and Paper Research Department. He is currently supporting himself, his wife, and his two sons, 6 and 9 years of age, through a prestigious grant from the Mexican government. In his PhD research, Fernando studies the use of ink-jet technology for the controlled deposition of cellulose nanoparticles onto flat substrates. His challenging project spans both fundamental phenomena, such as mass transport in drying droplets, and applied aspects, such as the quality of the printed micropatterns.

The results of his research will advance the application of ink-jet technology for microfabrication. Fernando is an exemplary student. He has highly developed technical skills, which allow him to make rapid progress in his research and have earned him the respect of his peers. He is an excellent communicator, which he has demonstrated in two oral presentations at meetings of the Technical Association of the Pulp and Paper Industry. He also won the Eastman Graduate Student competition in the Wood Science department, receiving a \$2000 award from Eastman Chemical Company for best oral presentation (out of 11 students). And he is an excellent mentor, for which he has received the 2008 Mentor of Distinction Award given out by one of Virginia Tech's Summer Undergraduate Research Programs.

Fernando is the 2009-2009 College of Natural Resources Outstanding doctoral student!

Congratulations Fernando.

Fernando is advised by Dr. Maren Roman. Congratulations Dr. Roman!

## Volunteer to Clean Up the New!

By Jim Bisha

### NOTE THIS EVENT WAS RESCHEDULED FOR SATURDAY APRIL 4TH

The Institute of Packaging Professionals (IoPP) and the Forest Products Club (FPC) at Virginia Tech have undertaken the task to adopt a portion of the New River. This event happens twice a year (once before the river traffic picks up and once after). This will be the first cleaning of the year. Nearly a 1 ½ mile stretch will be cleaned up from the Montgomery/Giles line on down on both sides of the road. After this cleaning, signs will be issued to hang up in the cleanup area stating this portion of the river has been adopted by the Institute of Packaging Professionals (IoPP) and the Forest Products Club (FPC) at Virginia Tech. The cleanup, including transportation time, will take under 3 hours.

Here are the details:

- Meet April 4, 2009 at Brooks at 12:45 p.m. to fill out paperwork
- Carpool to the river at 1pm
- Gloves and trash bags will be supplied
- Drinks will be provided

Hope to see you on April 4th!!

James V. Bisha  
Doctorial Candidate  
VT Wood - Packaging  
[bishajl@vt.edu](mailto:bishajl@vt.edu)

## Pallet Re-Use and Recycling Workshop Held in South Boston, VA

Jason Fisher, Virginia Cooperative Extension with Phil Araman, USDA Forest Service, and Urs Buehlmann, Virginia Tech, conducted a pallet re-use and recycling workshop in South Boston VA on March 26, 2009. Participants learned about pallets, pallet manufacturing, re-use, recycling, and disposal and heard about some of the innovative approaches undertaken throughout the nation to reduce costs associated with pallets. Emphasis was given to further increase the environmental plusses from pallet materials procurement and use. With an estimated 2 billion pallets in service every day in the U.S. and 441 million new pallets produced every year in the nation, one can understand the magnitude of raw material and labor needed to manufacture and deal with all these pallets. An additional 357 million pallets each year are repaired or rebuilt from discarded pallets, thus decreasing the environmental impact of pallets, saving landfill space, and creating employment opportunities for local companies. In fact, pallets should never have to be landfilled. Alternative uses for discarded pallets exist, ranging from the production of mulch, animal bedding, or fuel to more value added opportunities like producing flooring for eco-friendly buildings, as shown in Figure 1.



“Green” flooring from recycled pallets installed in an office in Lexington, NC.

The Pallet Re-use and Recycling workshop will be repeated in Chesapeake, VA on April 9, 2009; Abingdon, VA on April 30, 2009, and in Front Royal, VA on May 5, 2009. For more information on the Pallet Recycling workshop series,

visit <http://www.woodscience.vt.edu/palletrecycling/> or contact Urs Buehlmann, Virginia Cooperative Extension and Department of Wood Science and Forest Products at (540) 231-9759, [ubuehlm@vt.edu](mailto:ubuehlm@vt.edu).

## Lean Thinking Workshop in Harrisonburg, VA

Participants of the Lean Thinking workshop conducted on March 24, 2009 in Harrisonburg, VA were given a powerful demonstration of the benefits of Lean. Using a simulated production of cabinet drawer boxes, the ten participants changed an unprofitable manufacturing process that was unable to deliver what customers asked for into a profitable process that delivered orders on time all the time. This was achieved by rethinking traditional business practices with central command to a simplified process where products are “pulled” through the system.

Additional Lean Thinking workshops will be conducted at the following dates and locations: April 2, 2009 in Abingdon, VA; May 7, 2009 in Virginia Beach, VA; and on May 14, 2009 in Danville, VA. For more information on the Lean Thinking workshop series, visit <http://www.woodscience.vt.edu/leanthinking/> or contact Urs Buehlmann, Virginia Cooperative Extension and Department of Wood Science and Forest Products at (540) 231-9759, [ubuehlm@vt.edu](mailto:ubuehlm@vt.edu).



Lean manufacturing simulation conducted at the Lean Thinking workshop in Harrisonburg, VA on March 24, 2009. Participants included (from left to right): Marc André Gonin, Carrie Webber, Matt Yancey, Jonas Hochstetler, Jason Hochstetler, Jeremy Sutherland, and Kathryn Guenther. Not pictured: Gavin Wherry, Earl Kline, Urs Buehlmann.

# Special Seminar

## VT Campus Community is Invited



## Challenges to Re-engineer for a Sustainable Built Environment

Michael Wolcott, Ph.D.  
Director  
Institute for Sustainable Design

LP Distinguished Professor  
Civil and Environmental Engineering  
Washington State University

**Wednesday April 1, 2009**

**1:00 p.m. - 2:00 p.m. Brooks Forest Products Center**

Call the Department of Wood Science at 231-8853 for information, directions and confirmation of your attendance as we expect a large turn-out for this seminar and may have to move the seminar location to a larger venue.

Dr. Wolcott is the College of Natural Resources 2009 Career Achievement Award Recipient and is visiting campus to receive this honor from the College of Natural Resources.

In an optimum world we would drive less, reducing gasoline consumption. We would walk more, improving our health. And all of the structures would be built of sustainable and efficient materials. On a larger scale, the process of building and operating commercial and residential buildings—which currently accounts for nearly half of the energy consumption in the United States—would drop dramatically. The shift towards this future is not impossible but it will require a shift in the way we think about designing the buildings and communities in which we live and work. An integrated approach encompassing all aspects of building and community design, civil and environmental engineering, materials and energy technologies, as well as public health and policy, must be formulated to address our historical reliance on renewable resources. New processes and designs that result in a reduced energy and water footprint, equity across economic levels, and greater trust and shared vision by communities are imperative to meet our current challenges. On the road to this future, we will need to build upon our existing and emerging green building standards with improved design goals set by public policy. Efforts at Washington State University to prepare for these professional challenges in creating an Institute of Sustainable Design, which merges ongoing education in architecture, construction management, civil, and environmental engineering with research specialties of the Wood Materials and Engineering Laboratory (W MEL) and the Integrated Design Institute to address the holistic design of sustainable communities.

# Special Student Display of Creative Works

Friday April 3, 2009

10:00 a.m. Cheatham Hall Lobby (next to West End Diner)

## Art and Wood Science in Partnership

Come see the creative work of art students enrolled in Professor Steve Bickely's course ART 1214 Principles of Art & Design II.

Art students have entered the International Corrugated Packaging Foundation Student Design Competition. The contest requires students to design and fabricate a chair from corrugated medium.

Six chairs have been designed by Professor Bickely's students. Working with Ralph Rupert, Director of the Center for Unit Load Design in the department of Wood Science and Forest Products, College of Natural Resources and Ph.D. student Jim Bisha, students used the CNC (computer numerical controlled) cutting table donated to the Wood Science department a year ago by the International Corrugated Packaging Foundation.

Corrugated sheet stock was donated by Corrugated Contained Corporation in Roanoke, VA. (<http://www.cccbox.com/>)

Chairs and students will be on display from 10:00 – 11:00 a.m. in the lobby of Cheatham Hall. Light refreshments will be served. Come see a fun partnership between our programs.



# Special Seminar Announcement

Thursday, April 2, 2009

10:00 a.m. - 10:45 a.m. Fralin Auditorium

## **The Costa Rica Institute of Technology: A leading higher education institution**

Presented by MBA, Marisela Bonilla, Director of International Cooperation

Other Officials of the Visiting Delegation: Dr. Dagoberto Arias, Vice-president of Research and Extension, and M.Sc. Giannina Ortiz, Vice-president of Academic Affairs.

Details of Costa Rica Tech: Since the Costa Rica Institute of Technology (Costa Rica Tech) was created in 1971 the Institute has become Costa Rica's first and only technological university oriented to the modernization and improvement of the national productive sector and technology transfer for the transformation of the Costa Rican society. Costa Rica Tech has given priority to the integral education of professionals in the areas where the technological transformation is key for the improvement of the quality of life such as technology, environment and human development. The technology, engineering, and business management academic programs at the Costa Rica Tech are the fundamental base for the improvement of the manufacturing, agribusiness, forestry, financial, and government sectors in the country. With over 600 faculty members, more than 10,000 students in bachelor, master and doctoral levels, and 4 campus in the country, Costa Rica Tech is considered today a higher education and technological leader not only in Costa Rica but in Central America.



A visiting delegation from the Costa Rica Institute of Technology is visiting Virginia Tech April 1-3, 2009 and is being hosted by the department of Wood Science and Forest Products and the College of Natural Resources. If you would like to meet with delegation visitors to explore collaboration, please contact Dr. Henry Quesada, Assistant Professor, department of Wood Science and Forest Products at 231-0978.