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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](#).

News From Paul Winistorfer

- Our Graduate Student Spotlight this month is Jesse Paris, M.S. student working under the direction of Dr. Chip Frazier.
- STUDENTS - Course and curriculum changes are coming to the department! Be sure to visit with your advisor in the coming month about any implications planned changes will have on your registration for fall 2009 courses.
- Students – are you taking advantage of our Wood Industry Student Placement Program website on our department homepage? If you are not – you should. Post your resume today and start building your career now.
- The department is in the mid-stage of planning a week-long summer camp for high school students. We are working feverishly for a summer 2009 offering and have received generous support from the Virginia Forestry Educational Foundation. Watch for more information soon.
- Ever wonder what we are “About”. Check out our newly revised ‘[About Us](#)’ piece!

Virginia Tech Awarded Grant for Lean Transformation Research

Department of Wood Science and Forest Products faculty member Urs Buehlmann and his PhD graduate research assistant Mathias Schmitt with the VTWood manufacturing systems team recently obtained funding from René Aernoudts, founder and chairman of the Lean Management Instituut (LMI), Driebergen, Netherlands for a three-year study in lean transformation. LMI is an affiliate of the Lean Global Network (LGN), Cambridge, MA. LGN is the umbrella organization for partners of the Lean Enterprise Institute (LEI), the home of Lean leaders such as Jim Womack, Dan Jones, and John Shook. For readers not familiar with the “world of Lean,” the three authored world bestsellers such as “The machine that Changed the World (1990),” “Lean Thinking (1996),” “Learning to See (1999),” or “Lean Solutions (2005),” books that changed business practices of enterprises around the globe. Toyota is the originator and most widely observed and followed lean practitioner and is seen as a leading global car manufacturing company.

In close collaboration with LMI, LGN and LEI, the VTWood manufacturing systems team will study critical factors in leadership influencing the success of lean transformation efforts. Understanding the factors determining successful and sustainable lean transformation efforts are critical to the nations’ industry to remain competitive in global markets and to survive the current economic problems. Results from this research will be used to write a book on lean transformation and to teach and coach the U.S. industry in coming years.



Jesse Paris
M.S. Candidate

My name is Jesse Paris and I am a first-year graduate student. I am a member of Dr. Frazier's group, and my research is on the polymeric properties of Carboxymethylcellulose acetate butyrate, CMCAB. This mixed-cellulose ester was developed by Eastman Chemical for automotive coatings. We are interested in investigating its use as a renewable and formaldehyde-free wood adhesive. My committee includes Dr. Edgar and Dr. Roman.

I was born and raised in Richmond, Virginia, where my parents still live now as empty-nesters. My father, Kevin, is a Title I math specialist with Henrico Co. Public Schools, and my mother, Cindy, is the Op/Ed editor of the Richmond Times-Dispatch newspaper. My older sister, Lindsey Paris-Lopez, has an undergraduate degree from Hollins University and a Master's in Divinity from Hartford Seminary. She was married in August '07, and lives with her husband, Alex, in Queens, New York. They are expecting their first child in late April.

Growing up, I was an active member with my church's youth group, and participated in many community charities, as well as several domestic and international mission trips. One particular

trip in the summer before my high school senior year had significant impact on my life and its direction. We went to Malawi, Africa, where we built a feeding center for AIDS orphans and an irrigation system in the home community of several of those children. It was on this trip that I realized I was a global citizen, and how fortunate I was for my education and resources. I decided that I wanted to be an environmental scientist, and to study the positive and negative impacts of using our world's natural resources.

Soon after arriving at Virginia Tech I discovered the Department of Wood Science and Forest Products, in which I rooted my education and have since branched my interests to several of its fields. I majored and received a B.S. in Manufacturing Systems, worked for the packaging laboratory most of my undergraduate career, and am now pursuing my M.S. in Adhesion Science. I was an active member and officer with the Forest Products Club, and am now an ambassador to the dean of our college. Last summer after graduation, I visited the West Coast and hiked through the costal redwoods and sequoias of California. This pilgrimage to the "giants" offered me new awe and a reaffirmation concerning the power and importance of this natural resource. I hope to graduate and receive my second degree from this department in May 2010.

My activities include playing football and basketball, relaxing at the river on summer weekends, and cheering on VT athletics. Go Hokies!

Wanted: Representatives for the Graduate Student Assembly

Are you a graduate student in the department of Wood Science and Forest Products and interested in:

- Meeting other graduate students,
- Playing a part in student government,
- Being a more active graduate student, and/or
- Increasing your marketability when you graduate.

The department is looking for two (2) graduate students as representatives to the Graduate Student Assembly (GSA). The representatives will be required to attend the monthly meeting and to keep the department graduate students informed of issues that are raised during the meetings.

Packaging Program Recruitment

New ICPF/CBU Curricula Prototype Available for Early Corrugated Packaging Introduction for Local High School Students and to Assist Colleges in Student Recruitment: www.careersincorrugated.org

[ICPF's Corrugated Curricula](#) | [Corrugated Packaging and Display Careers & Job Openings](#)

The International Corrugated Packaging Foundation (ICPF) mission is to generate a stream of increasingly qualified students to enter the corrugated packaging and display industry, now and into the future. ICPF is dedicated to the continued creation and building of partnerships within the education community, the granting of equipment and other resources to advance corrugated curriculum, the expansion of student internships within the industry and the promotion of corrugated packaging & display career opportunities for packaging, business, accounting, engineering, environmental science, marketing, graphic design, architecture, structural design, and tech graduates.

WoodLINKS USA Announces New President Board of Directors and Board Members



Dave Peel
Microvellum, Inc.

February 2, 2009 — Tuscola, Ill. Dave Peel, President of Microvellum, Inc. of Central Point, Oregon has been elected President of the Board of Directors of WoodLINKS USA by the WoodLINKS Board, announced Mark Smith National Director of WoodLINKS USA. Peel assumed his role as Board President February 1 and takes over from outgoing Board President Dr. Paul Winistorfer, Professor and Department Head at Virginia Tech. Winistorfer served WoodLINKS as President for the past three years.

Peel and his firm Microvellum, Inc. provide software to the wood industry. Founded in 1991, Microvellum Inc. is the Global leader in AutoCAD-based manufacturing software for the woodworking industry. Microvellum is headquartered in Medford, Oregon and has offices throughout North America, Europe and Australia. Microvellum offers a single-source solution for 2D

& 3D drawings, production reporting, labeling, job management, estimating, nested optimization, direct g-code generation and more.

Microvellum has been a strategic partner and supporter of WoodLINKS USA through provision of software to WoodLINKS USA schools and teachers. Peel has been a long time supporter of industry education.

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Peel will work with WOODLINKS USA National Director Mark Smith and the Board of Directors in fulfilling the mission of the WoodLINKS organization. WoodLINKS is a 501(c)3 industry-education partnership focused on human capital development for the woodworking industries. There are over 75 schools delivering WoodLINKS programming in the U.S. WoodLINKS receives generous support from industry trade associations, industry suppliers, and individuals.

Smith also announced the appointment of other new Board members joining WoodLINKS USA, Anthony Lynn of Castle Machinery, Herb Meldahl of Onsite Woodwork, David Hildebrand of Thermwood, Inc. and David Spencer of Willow Creek Tool Sales, Inc.

Alumni Association, College of Natural Resources Name Assistant Director of Alumni Relations

By Melissa Vidmar

BLACKSBURG, Va., February 9, 2009 — Stephanie Guilliams of Roanoke, Va., has been named assistant director of alumni relations for the College of Natural Resources.

Guilliams will serve as a liaison between the College of Natural Resources and the Virginia Tech Alumni Association. Her responsibilities include planning and coordinating events for the College of Natural Resources. Guilliams will also be responsible for assisting with alumni association events including reunions and other special programs.

Guilliams has held previous positions with the Virginia Department of Conservation and Recreation, Roanoke's Center in the Square, and Hollins University. She has also served on the College of Natural Resources' Advisory Board.

Guilliams earned her bachelor's degree in Forestry from Virginia Tech and later went on to earn a master of arts from the University of Oklahoma.



Stephanie Guilliams

Wooden Water Pipe Reveals History of Town's Infrastructure

Small town finds evidence of early 19th century water system

By Jennifer Fulcher, WEF Highlights

Leesburg, a small town in Virginia, has unveiled an interesting piece of history. Last summer, employees at the Leesburg Utility Maintenance Division were alerted to the discovery of a 2.4-m-long (8-ft-long) log found on a resident's property on the west side of town. The log, with its hollowed-out center and tapered end, is a historic artifact that provides evidence of an early water system.

"We know from old records and town ordinances that there was a water system of sorts in the early 1800s," said Max Mellott, assistant superintendent of the Leesburg Utility Maintenance Division.

During the summer 2008, a wooden pipe was found in Leesburg, Va. The log pipe is tapered on one end so it could be driven into the next pipe, creating the town's first water system. Photos courtesy of Max Mellott. [Click for larger images.](#)

Mellott is becoming an expert on the town's water history. For the past year and a half he has spent as much time as possible researching the topic. He has scoured the town council minutes from the early 19th century through present day to piece together the story of Leesburg's early water infrastructure.

Leesburg became the seat of Loudoun County in 1758, and was incorporated as a town and granted the status of a municipal corporation or a local governing body, by the Commonwealth of Virginia in 1813. Mellott speculates that the town built the first portion of its water system sometime between its incorporation in 1813 and its first record of a water system in 1832.



“The town became responsible for its well-being,” Mellott said. “They had to raise their own taxes and provide for the cost of being a town.”

Two records that verify the existence of a water system appear in 1832. The first was a contract for conducting a lottery to raise money for the water system signed by Leesburg Mayor Presley Cordell on Jan. 4, 1834. According to the Loudoun Times-Mirror article, “Original Water System Included Wooden Pipes,” published in July 29, 1965, by Penelope Osburn, 6000 tickets were offered for \$5 each and cash prizes were awarded.

“The town of Leesburg ... is authorized to raise by Lottery any sum of money not to exceed twenty-five thousand dollars, for the purpose of repairing or rebuilding the Leesburg Academy ... and with the residue of the said sum of supplying the said town with water,” according to the 1834 lottery contract.

The second documented evidence of a water system appears in an amendment to an act concerning hydrants and pumps in the town, which was approved on July 19, 1832. The act states that “it shall be unlawful for any person to obstruct in any way the passage of the water from the hydrants to the cisterns or in any of the logs or pipes, or to permit a tub or bucket to remain under the ... spout of any pump or hydrant longer than necessary to fill.”

The recently discovered log water pipe is not the first to be found in the town. Another piece of log pipe was found in 1965 and is currently in the care of the Loudoun Museum. This artifact was left square on the end and has a metal piece attached that is tapered on both sides. The metal portion of this pipe was driven into the end of another log to connect a portion of the water system, Mellott explained. The log pipe with a metal attachment belongs to a newer portion of the water system and it shows the progression of Leesburg’s water infrastructure over the years.

For the newly unearthed log pipe, “they actually tapered the log itself,” Mellott said. This provides evidence that the log is a part of the town’s first attempt at a water system.



The main spring that fed the water system was known as Rock Spring, which is located on the western side of town, said John Creamer, utility maintenance manager of the Leesburg Utility Maintenance Division. The town also had a secondary spring near Rock Spring that would provide an alternative supply of water during droughts, Mellott said.

Water was transported through the pipes by gravity to supply a system of hand pumps and cisterns through the main streets of town. The system provided citizens with a somewhat dependable source of water, Mellott said. The town also had a few hand-dug wells.

During 1850 this system supplied water to a population of approximately 1700 people, and encompassed approximately 155,394 m². Details on the water system can be found in the 1894 Sanborn-Perris Map of the town. At that time Leesburg had a population of approximately 2000; two, 457-m (1500-ft) reels of hose; and 10 fire cisterns with an

average capacity of 18,925 L (5000 gal). The cisterns were filled by 76-mm (3-in.) water mains stretching from the spring.

Mellott and Creamer said they suspect that the water system was meant to provide water to fight fires as well as drinking water. “One of the biggest fears that people lived with back in those days was fire,” Mellott said. Pumps were located where residents could use them for firefighting, Creamer added. “Most water systems were put in for fire prevention.”



The water system spanned a couple of thousand feet in length, Creamer said. “It wasn’t huge but ... this gave them a reliable water source.” The system could have evolved from a single pipe from the spring to a primitive pump or trough in town during the early part of the 19th century to the extensive system of cisterns and pumps seen throughout the town during the late 19th century, but they don’t know for sure, Mellot explained.

The Utility Maintenance Division does know that the town had an early wooden pipe water system that evolved to a more advanced wooden pipe water system that was in use until 1906, when the town installed cast iron pipes.

Mellott’s research revealed that when new council members or a new mayor was elected, each would be assigned a street and become responsible for routine cleanup, upkeep, and repairs, which included maintaining the water system.

“They had a water committee and a sewer committee, and ... a sanitation committee,” Mellott added. The council members would serve on these committees to monitor the water system conditions and the health and sanitation of the town. The committees also passed acts and ordinances for the protection of the town’s residents. One of these acts prohibited the use of water for washing tubs, wagons, or horses during a drought, Mellott said. Leesburg also created the position of superintendent of waterworks before the turn of the century, Creamer said.

Leesburg’s early water system is a unique for such a small town. And the history might have been lost without the interest of the town’s employees. “When you look at these old systems, the thought processes, and the people that were involved in them,” Creamer said, “it’s extraordinary.”

“We knew some of our stuff was pretty old, but nobody had even bothered to try to establish dates [pertaining] to when certain things were done,” Mellott said. “I’ve always liked history, so I just started going to the library.” Now that the division knows Leesburg’s background, when it digs something else up, it will be better equipped and interested in determining what it is, instead of throwing it away, he added.

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School of Architecture + Design Faculty, Students Only U.S. University Team Invited to Cologne Furniture Fair

By Heather Riley Chadwick
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BLACKSBURG, VA., February 9, 2009 -- A team of faculty and students in Virginia Tech's School of Architecture + Design in the College of Architecture and Urban Studies represented the United States at the imm Cologne furniture fair in Germany. Virginia Tech was the only U.S. university invited to participate.

The team is led by Joseph Wheeler, associate professor of [architecture](#), and Robert Dunay, the T. A. Carter Professor of Architecture and director of the Center for Design Research. Dunay and Wheeler, both members of the American Institute of Architects and residents of Blacksburg, have been working with graduate and undergraduate students from architecture and industrial design to develop the exhibit titled, Industrialized Furniture. The work represents a distinctive aspect of design research, presenting an intellectual dimension emphasizing innovative use of computer and fabrication technology.

At the [imm Cologne 2009](#) about 1,200 exhibitors from more than 50 countries showed an international product range which is unique in respect to its quality and diversity.

In total, 120 independent designers and studios, as well as 21 universities from the fields of architecture, interior design, and product design presented their work to imm Cologne exhibitors, visitors and journalists during the fair held Jan. 19-25.

The invitation to participate in the imm Cologne furniture fairs was a direct result of [the team's participation in the Milan Furniture Fair last year](#). Imm Cologne organizers saw Virginia Tech's work and invited them on the spot.

[Find more information, including video and photos.](#)

Mark Your Calendar:

- Virginia Forest Products Association Spring Meeting March 20-22, 2009 Williamsburg, VA.
- Virginia Forestry Association Annual Convention April 24-26, 2009 Norfolk, VA