



The Department of SUSTAINABLE BIOMATERIALS



THE 2016 WOOD ENTERPRISE
INSTITUTE ENTREPRENEURIAL
SCHOLARSHIP RECIPIENTS

PACKAGING STUDENTS GAIN

NATIONAL RECOGNITION

HELLO FROM YOUR DEPARTMENT

BY BOB SMITH



Robert (Bob) L. Smith
Head, Department of Sustainable Biomaterials.

year history and the largest incoming freshman enrollment at 15. We graduated over 25 students in May, with most of them finding employment within the profession. Many of the students had summer internships with our industry partners. The department remains committed to have our students prepared to "hit the road running" when they graduate, and internships are vital for them getting experience in the industry.

Your department's faculty met this summer for one day to do some long range planning and to review the changes we have made in the past few years. Our objective is to make sure that our students are well prepared for the 21st century workplace. Our

It is hard to believe that another year has passed and we just welcomed 140 students back to our department. We currently have the largest undergraduate enrollment in the department's 37

classes focus on hands-on learning techniques and team building skills so they know how to effectively work with others in a job environment. Repeatedly, when we ask employers what do students need to be successful, it is their social, leadership, communication, and organizational skills that rate higher than their technical skills to be successful in organizations. So we have adapted many classes to let students better develop these important job characteristics. From the freshman level classes in Packaging Science to the Wood Enterprise Institute (WEI) students are working in teams to design and produce a product. Upper level classes require presentation and problem solving exercises to improve the communication skills. While the baby boomer generation was interested in finding a long-term career and moving up the ladder, students today have different goals (and maybe better). They are more concerned about social responsibility, sustainability, serving society, and participating in decision making. They tend to stay with companies for less time and are more mobile than my generation. With the advent of social media, they want information quickly and may struggle with processes that take a long time to develop and implement. On a side note, my thirty year old son has held more jobs (on his choice) in eight years with major companies, than I have in my entire life. I share this to let you know we are adjusting our departments' instructional techniques and classes to meet these students.

COVER: 2016 WEI Entrepreneurial Scholarship recipients. From left to right the students are: Jalen Hill, Steven Morrissette, Danitza Rodriguez, William Bagby, Landon Holbert, Alex Keith, Jonathan Stutesman, Ethan Blye. Photo by Earl Kline.

In this issue of the newsletter you will see who our new graduate students are, where the department has been sharing our good stories, the successes of some of our students and what research is currently going on. This fall starts my 4th year in the role of department head. One of the highlights of these years has been that day in May when students walk across the stage to receive their diploma. The students have worked hard, played hard, and are headed out to make their mark on society. I am very proud of the fact they chose our department and college to spend these years

and that we all have had a small impact on their future. We never know how we impact the lives of others, but as it has been said, "Any act of kindness and goodwill will never go unrewarded." I wish all the graduates continued success in their lives and careers. Please feel free to contact me with any comments or suggestions to improve the program (rsmith4@vt.edu). Again, thanks for your support of our students and I wish you a successful year.

Best wishes, *Bob Smith*

PACKAGING STUDENTS GAIN NATIONAL RECOGNITION

BY ROBERT BUSH



Winning entry into the Paperboard Packaging Alliance 2016 Student Design Challenge developed by a team of Packaging Systems & Design students led by Vina Le.

A group of Packaging Systems & Design students have been recognized by the Paperboard Packaging Alliance for their entry into the 2016 Student Design Challenge. The student entry placed in the top three among 72 entries from packaging and design programs across North America.

Vina Le (team leader), Loc Pham, Anthony Tran, and Miguel Comparativo designed the packaging system as a capstone project in Packaging Systems & Design Senior Practicum, a course led by Dr. Bush. It was designed to respond to a challenge by the Paperboard Packaging Alliance for "... an unconventional, innovative premium package for dry goods food packaging. The package should

contain a structural component that enhances its function and stands out on grocery store shelves."

The team tackled the challenge with an inventive approach to packaging sushi rice for retail sale. The system, called Pararice, included a paperboard structure that stands on the store shelf like a rectangular box but is made with attractive sweeps and curves. A polymer window allows consumers to view the product prior to purchase. The graphics are striking and position the product as high quality and upscale. In addition to the structural and graphics designs, the student entry included marketing and distribution packaging plans.

The students have been invited to present their design at an awards luncheon held by the Paperboard Packaging Alliance at the PackExpo trade show in Chicago. At the luncheon they will learn where they placed within the top three designs.

Vina Le graduated from the Packaging Systems & Design program in spring of 2016 and is employed with PCA in Atlanta, Georgia. The other students on the team will be continuing their studies at Virginia Tech during the 2016-17 school year.

SBIO DELIVERS SUMMER CAMP TRAINING FOR VARIOUS HIGH SCHOOL GROUPS IN BIOENERGY

BY HENRY QUESADA



Governor's School students learn the operation of a solar water pump.

August, 2016. Blacksburg, VA. The Department of Sustainable Biomaterials at Virginia Tech participated in the delivery of hands-on educational activities to over 150 High School students of various High School programs during Summer 2016.

A total of 100 Governor's School for Agriculture students visited the Brooks Forest Products Laboratory from June 27-30, 2016 to learn about bioenergy and solar energy. SBIO owns and operates a small-scale syngas power plant capable of producing 10,000 watts/hour. The power plant feeds on biomass, specifically hardwood and softwood chips.



Achievable Dream Academy Students

Three learning stations were set up for the students to learn about the biomass production system. Station one was designed to train students on the specific requirements related to the biomass feedstock, including source, transportation, preparation, storage, and specific physical and mechanical properties. The second station demonstrated the operation of the power plant including maintenance and applications in different settings. A third station was set to show case

solar power applications in agriculture. This learning station was delivered by Extension Specialist John Ignosh, faculty in The Biosystems Engineering Department. Students in this station learn how to operate a solar water pump.

Other High School groups that came to SBIO this Summer to learn more about bioenergy were the Achievable Dream Academy program and the Youth Conservation Camp. These two groups visited the Brooks Forest Products Laboratory on different dates during June and July to learn about bionenergy and the biomass power plant.

The learning activities on the biomass power plant were prepared and delivered by research associate Jeremy Withers and undergraduate Sean Sneed under the direction of Dr. Henry Quesada, professor at SBIO.

APPALACHIAN HARDWOOD MANUFACTURERS, INC. (AHMI) SUMMER CONFERENCE

BY AUDREY ZINK-SHARP

This year's AHMI summer conference was held at the Greenbrier, White Sulphur Spring, West Virginia, on July 25 and 26. In addition to AHMI members, several forest products industry association leaders were in attendance including the National Hardwood Lumber Association, the American Hardwood Export Council,

Wood Component Manufacturers Association, Hardwood Manufacturers Association, Kitchen Cabinet Manufacturers Association, and the Hardwood Federation. One of the sessions was a meeting with representatives of six of the leading forestry and wood products universities in the Appalachian region. AHMI Board of Trustees and

Producer Division members initiated the session to learn about current research at these universities and plan for projects that could benefit AHMI members. Faculty and administrators from Clemson University, NC State University, Penn State University, University of Tennessee; Virginia Tech, and West Virginia University discussed ongoing research at each of their units. Audrey Zink-Sharp presented current research projects in the Sustainable Biomaterials department and provided an overview of our department's outreach and educational programs.



SBIO AT IWF ATLANTA, 2016

BY GAURAV KAKKAR

The International Woodworking Fair (IWF), 2016 hosted at Georgia World Congress Center, Atlanta, Georgia from August 24-27 was a perfect venue showcasing the industry. Scheduled every two years, it is one of the top woodworking trade shows in the world for the furniture manufacturing, architectural woodworking, and custom and general woodworking industries with over 1000 exhibitors. This was a perfect venue for suppliers, manufactures, innovators and entrepreneurs to see the latest advancements in the industry.

Faculty members Bob Smith, Henry Quesada and Linda Caudill, and graduate students Christa Stables, Guigui Wan, Gaurav Kakkar and research associate Jeremy Withers from the Department of Sustainable Biomaterials and the Wood-Based Composites Center represented Virginia Tech

showcasing advanced research and educational activities being undertaken. The "Cookie" from an over 314 years old white oak tree from the presidents' grove was the highlight of the booth. The historic reference and the timeline of events marked on it helped visitors to appreciate all that the tree had seen. The project exhibits from Wood Enterprise Institute (WEI) demonstrated the importance of hands on training incorporated in the programs both at the undergraduate and graduate levels. The visitors were also told about the diversity of programs being offered at the department. The nature of leading research ranging from plant sciences to mechanical applications, from renewable energy to business improvements and expansions were demonstrated. Over 200 visitors were informed about the programs and opportunities being offered at the department.



Associate professor Henry Quesada (from left to right), graduate students Gaurav Kakkar, Jeremy Withers, Christa Stables, Guigui Wan and Linda Caudill Managing Director, Wood-Based Composites Center.

SBIO works closely with the industry. New potential opportunities for extension activities under the Center for Forest Products Business and the academia industry collaborations under the Wood Based Composites Center were also identified. Prof. Urs Buehlmann led five sessions covering different aspects of the wood industry's competitiveness and future growth.

It was a perfect opportunity to promote the program to both potential students and industrial collaborations. It was also a significant opportunity for the graduate students to interact with people from the industry and learn more about the growth and future of the wood industry. And as always, the "GO HOKIES" shout out from the people passing by was enough to get everyone's attention.

DEPARTMENT RECEIVES GRANT TO EVALUATE THE PRODUCTION OF ECO-FRIENDLY SURFACTANTS FROM BIOFUEL MANUFACTURING SIDE STREAMS

BY MAREN ROMAN

A team of researchers, led by Prof. Maren Roman, of the Virginia Tech Department of Sustainable Biomaterials, and including Prof. Joseph Bozell, of The University of Tennessee's Center for Renewable Carbon, and Dr. Edward Bilek, of the U.S. Department of Agriculture Forest Products Laboratory, was recently awarded a grant by the Southeastern Sun Grant Center to explore the potential technological and economic benefits of the production of high-value surfactants from biofuel manufacturing side streams.

Biofuels and biobased chemicals are produced in so-called biorefineries. To achieve commercial viability, biorefineries have to follow the model of the petrochemical industry by integrating the production of low value fuel with that of high-value chemicals derived from each of the primary components of plant biomass (cellulose, hemicellulose, and lignin). The project will assess whether the hemicellulose fractions of switchgrass and hardwoods,

obtained by an innovative solvent-based biomass fractionation process at the Center for Renewable Carbon, can be converted into eco-friendly surfactants using a chemical process developed at Virginia Tech and evaluated for economic viability by the Forest Products Laboratory.

The specific objectives of the project are to optimize the fractionation process for most desirable hemicellulose hydrolyzate composition while maintaining a high cellulose yield, develop a process for the production of eco-friendly surfactants from the hemicellulose hydrolyzates, determine the properties of the surfactants and identify potential applications, and determine the economics of the conversion process and economic benefits for an integrated biorefinery (producing bioethanol from the cellulose fraction).

2016 FALL SEMESTER STARTS WITH SBIO WELCOME PARTY AND GOBBLERFEST

BY YOUNG KIM

On Wednesday, Aug. 31, 2016 a Sustainable Biomaterials BBQ was held outside of Cheatham Hall. The SBIO and Packaging Systems and Design Club provided the main entrees and lawn games as students provided side dishes and drinks. Many

forward to this coming semester. Exciting events this semester that were discussed are hiking trips, ice cream socials, and especially Pack Expo. Twenty members of the Packaging Systems and Design Club will be attending Pack Expo in Chicago, Illinois



Students, faculty and staff joined together at the SBIO BBQ held outside of Cheatham Hall.

faculty, staff and students joined together to enjoy the food and converse among each other in a more casual setting, allowing a foundation for more connections. This event allowed older members of the SBIO and Packaging Systems and Design Club to introduce themselves to newer members of the clubs and explain different events that they have to look

Nov 6-9 which is the world's largest trade show. This allows students to meet with companies and learn about their processes as well as introduce themselves and enhance their own Networks.

Friday Sept. 2, 2016 was Gobblerfest, which is an annual festival where students are able to discover

numerous clubs, organizations and other activities provided through the school as well as in the community. The Packaging Systems and Design Club participated in this event in hopes of attracting more members to the club as well as the major. At the booth, the club handed out bottled water and keurig coffee to attract students to the booth, which then allowed the members to talk about the club and the activities and benefits the club offers to students, such as professional development.

A huge attraction to the table was a Hokie bird statue designed completely out of corrugated board standing on a pallet designed by a Virginia Tech Packaging Systems and Design Alumni. Overall, Gobblerfest was a huge success as there were multiple pages filled with names and emails of students who are interested in learning more about the club and become a part of it.

D. EARL KLINE NAMED CHARLES BLAKESLEE NETTLETON FACULTY FELLOW

BY LYNN DAVIS

D. Earl Kline, professor of wood process control in the College of Natural Resources and Environment at Virginia Tech, has been named the Charles Blakeslee Nettleton Faculty Fellow in Forest Products by the Virginia Tech Board of Visitors.

The fellowship recognizes teaching and research excellence; recipients hold the honor for a period of three years.

A member of the Virginia Tech community since 1988, Kline leads the [Wood Enterprise Institute](#), a business start-up learning environment. This concept-to-market, real-world setting focuses on the higher order learning skills of inquiry, problem solving, innovation, entrepreneurship, and teamwork.

Established by Kline in 2007, the Wood Enterprise Institute is a student-run, faculty-supported two-semester course sequence in the Department of Sustainable Biomaterials. Since its inception, the institute has grown in recognition as a premier

The Nettleton Faculty Fellowship in Forest Products was established by a gift of Blakeslee Chase, daughter of Charles Blakeslee Nettleton. Charles B. Nettleton was a successful entrepreneur and land manager who bought and managed a 10,000-acre parcel of forestland in Alleghany County, Virginia, and built a lumberyard that became Lumber and Building Supplies. He was the husband of Carrie Nettleton, the first Virginia woman to hold the title of president of the National Council of State Garden Clubs.

learning venue for creativity, innovation, entrepreneurship, and business leadership.

Kline is a dedicated teacher who brings his industry and real-world connections to the classroom, emphasizing the skills of inquiry and entrepreneurship to address applied problems and arriving at solutions. He fosters a hands-on environment, leveraging practitioners from industry to augment classroom experiences.

He is a member of many professional organizations and he has organized, led, conducted, and participated in many professional meetings. Kline has served on numerous department and college committees. He has held two editorships of prominent scientific publications.

Kline received his bachelor's and master's degrees from Virginia Tech and his and his doctorate from Texas A&M University.



D. Earl Kline

Kline has an established research program initially focused on machine vision as applied to lumber grading systems, but evolving to the field of continuous improvement. He has secured more than \$3.1 million in external funds to support his research, has published extensively in scientific literature, and holds two U.S. patents for his discoveries.

Dedicated to its motto, Ut Prosim (That I May Serve), Virginia Tech takes a hands-on, engaging approach to education, preparing scholars to be leaders in their fields and communities. As the commonwealth's most comprehensive university and its leading research institution, Virginia Tech offers 240 undergraduate and graduate degree programs to more than 31,000 students and

manages a research portfolio of \$513 million. The university fulfills its land-grant mission of transforming knowledge to practice through technological

leadership and by fueling economic growth and job creation locally, regionally, and across Virginia.

PROFESSOR BARRY GOODELL WAS AWARDED AN AUGUST-WILHELM SCHEER VISITING PROFESSORSHIP AT THE TECHNISCHE UNIVERSITÄT MÜNCHEN (TUM), GERMANY

BY BARRY GOODELL

Professor Barry Goodell was awarded an August-Wilhelm Scheer Visiting Professorship at the Technische Universität München (TUM), Germany this year. Professor Klaus Richter at TUM nominated Goodell, and also served as an excellent and friendly host for Goodell's visit. The Scheer Professorship allowed Goodell to visit Munich in June, where he worked with Richter and Assistant Professor Phillip Benz on developing research collaboration. Goodell also gave several lectures and a keynote talk at meetings there, toured industry

sites and worked with several of the students and staff at TUM; all of which was very rewarding. This summer, Goodell also attended and spoke at:

the International Research Group on Wood Protection meetings in Lisbon, Portugal; the International Academy of Wood Scientists meeting in Paris, France, where he attended as a Fellow; Meetings of the BioMim research group in Oslo, Norway; and the LignoBiotech IV meetings in Madrid, Spain.



Professor Goodell – and a bit of Professor Richter's head - bicycling to meetings in Munich, Germany in June 2016. (Photo by K. Richter)

RICHARD BONSI ACCEPTS FACULTY POSITION

BY TOM HAMMETT

One of Dr. Tom Hammett's PHD students, Richard Bonsi, has been working in his native Ghana as Managing Director, Bonstech Sustainability and Management Experts (BSME), and serving as the Regional Director for West Africa with Scientific Certification Systems (SCS) Global Services in Accra. After a long interview process during the summer, he was just offered and has accepted a faculty position on the Faculty of Forest Resources

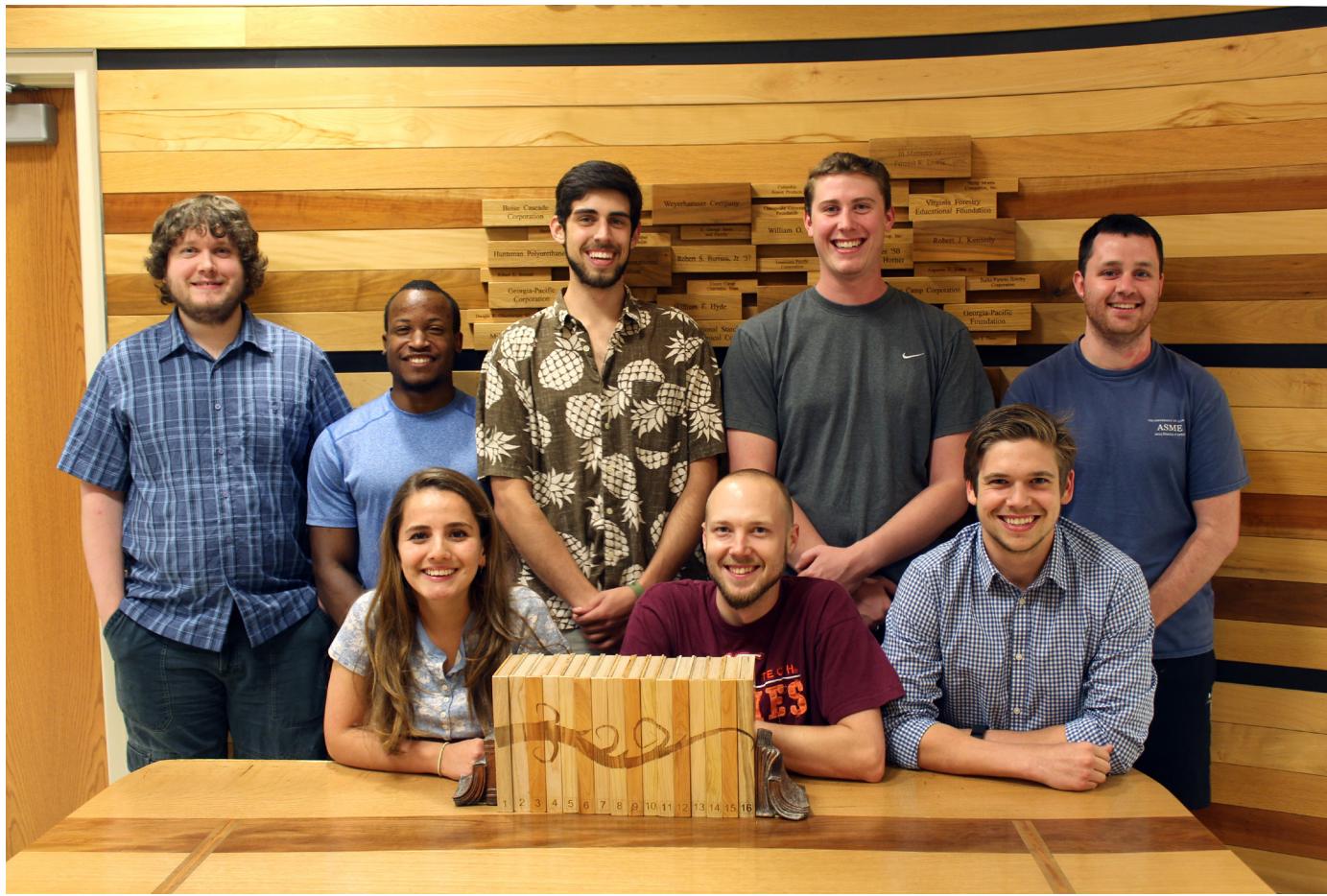
Technology, at Kwame Nkrumah University of Science & Technology, in Kumasi, Ghana. He will be teaching these courses: Business Management and Administration for Natural Resource Managers; Forest Products Utilization; Entrepreneurial Skills; Human Resources Management; Ecotourism Business.

THE 2016 WOOD ENTERPRISE INSTITUTE ENTREPRENEURIAL SCHOLARSHIP RECIPIENTS

BY EARL KLINE

The vision of the Wood Enterprise Institute (WEI) is to be recognized as a leading student learning environment for entrepreneurship. To achieve this vision, the Virginia Tech College of Natural Resources and Environment, Department of Sustainable Biomaterials and the Whitehurst family instituted the WEI Entrepreneurial Scholarship program in 2015. This scholarship seeks exemplary students who will participate in leadership roles to collaboratively unleash their passion for innovation and creativity towards building a successful entrepreneurial experience.

The second year of the WEI Entrepreneurial scholarship has been awarded in May 2016 (2016 WEI Scholars.jpg). This year's scholarship group kicked off the Fall semester by holding a retreat at Mountain Lake to develop an action plan to help guide and mentor the WEI student business project for the 2016-17 academic year. The scholarship recipients will also function as the Board of Directors for the Wood Enterprise Institute overseeing critical activities such as filling leadership roles, establishing milestones, and reviewing performance reports towards these milestones. As happens in many businesses, the primary function of this year's



2016 WEI Entrepreneurial Scholarship Recipients (L-R): Jonathan Stutesman, Jalen Hill, Danitza Rodriguez, Landon Holbert, Steven Morrisette, Ethan Blye, William Bagby, Alex Keith.

Board of Directors is to hold everyone accountable for meeting their performance expectations.

The creation of the WEI Board of Directors through the Entrepreneurial Scholarship is another good example of allowing students to take ownership of

putting their knowledge to work through greater experiential learning opportunities. Many thanks goes to Mr. Brooks Whitehurst for his continued interest and support to see the WEI entrepreneurial experience grow and flourish.

STUDENTS GIVE NEW LIFE TO GROVE WHITE OAK

BY EARL KLINE

This table comes from the wood from a white oak tree that lived on the front lawn of the Grove at Virginia Tech. The tree died of natural causes in

2014 and was dated to be 314 years old. This puts the birth of the tree sometime before 1700!



The "1872 pylons" logo marks the growth year when Virginia Tech was established.

wattractive and functional base. A laser engraved inlay was used to mark the year when Virginia Tech was established on the exact growth year on the table. Dendrochronology on a tree disk from the butt log was used to help determine the location of the "1872" growth ring. The inlay, bowties, and leg stretcher were made with sycamore wood that comes from the Henderson Lawn Sycamore tree --- another well-known historical tree from Virginia Tech's past!

To push the envelope of entrepreneurial risk, the 2015-2016 Wood Enterprise Institute (WEI) team found a way that allows the Grove tree and its historical significance to live on as a custom hand-crafted table. This table highlights the natural character of the wood with a live-edge table top with a solid,

The students built 3 tables. Two of the tables were sold to alumni in the College of Natural Resources and Environment. The third table is on display at the Brooks Forest Products Center.



WEI Grove Oak Table built by students. This table comes from the wood from a white oak tree that lived on the front lawn of the Grove at Virginia Tech.

Over 500 hours of combined student hours went into the creation of these unique tables. This time included the design, testing, instruction, jig creation, promotion, marketing, and job coordination as well as the machining, assembly

and finishing. While students learned about the fine craft of woodworking, a much higher order learning was practiced involving leadership and problem solving together as a team. These are skills that will last a lifetime!

MEET OUR NEW STUDENTS FOR THE FALL SEMESTER

BY ANGELA RIEGEL

We are very happy to welcome five new graduate students to the department this semester.



Gloria Alvarez

Gloria Alvarez is from Arlington, VA and she received her undergraduate B.S. degree in Packaging Systems and Design from Virginia Tech in May. She is currently conducting research on pallets with

Dr. Laszlo Horvath. In her free time her hobbies include cooking, exercise, and occasionally kite flying.



Nathan Gerber

Nathan Gerber earned his B.S. in Sustainable Materials and Technology at North Carolina State University. He is currently making a

survey to detail the health of the pallet industry while giving companies an incentive to annually update their information. His hobbies include reading sci-fi/fantasy, hiking, fencing sabre, and playing tabletop games.



Cody Wykle

Cody Wykle is a master's student at Virginia Tech. He received his undergraduate degree in the Department of Sustainable Biomaterials from Virginia Tech last spring. He is working with Dr. Zink-Sharp on a project for a company having issues with "spotty bonds" and "lose face" hickory and maple veneer. His hobbies

include playing games, as well as working out, and spending time with friends and family. He enjoyed his time here as an undergraduate and looks forward to the next few years.

Soohyung Lee is a new PhD. student in Sustainable Biomaterials working with Professor Young Kim. He received his B.S (Packaging) degree at Yonsei University in South Korea and an M.S. degree (Packaging) at Michigan State University. His research is not decided, but can be said as "Enhancement of mechanical properties using natural fiber composites."



Soohyung Lee

He is thrilled about the opportunity to complete his graduate degree. His research will focus on quantifying the amount of wood waste going to landfills and performing case studies of businesses that have achieved zero wood waste to landfills through diverting materials to be reused, recycled, or repurposed as opposed to ending up in landfills. When not studying, Zack enjoys golf, rugby, finding a good TV series, and singing in the car.



Zack Shiner

NEW STAFF MEMBER BY ANGELA RIEGEL



Matt Hixon

We are pleased to announce that Matt Hixon has joined our department as a lab and maintenance technician.

Matt Hixon joined the department on July 11 as

a Lab Technician. Matt was born and raised in the New River Valley. He is a United States Marine Corps veteran with two combat deployments. He lives in Pilot, Virginia with his wife and young daughter. Matt is excited about his position at the university and looks forward to all the opportunities that come his way.



SBIO

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Specialists

Brian Bond

bbond@vt.edu

Wood Processing

Urs Buehlmann

ubuehlm@vt.edu

Secondary Industry
Manufacturing

Henry Quesada

guesada@vt.edu

Continuous
Improvement

Extension highlights

The wood products industry in Virginia is a critical contributor to the economy of the state, an industry represented by more than 1,000 primary and secondary industries and over \$25 billion in economic impact.

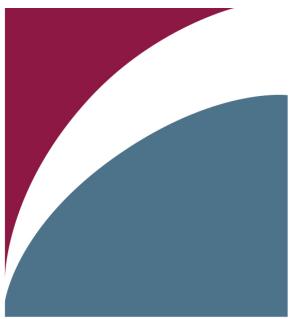
The Department of Sustainable Biomaterials (SBIO) at Virginia Tech is one of the leading U.S. academic programs in the field of renewable materials with a focus on cellulosic materials such as wood products. Besides research and teaching efforts, SBIO has an important role in dissemination of new knowledge in the area of renewable materials through SBIO's three extension specialists.

SBIO Professors offered educational session to Indian Lumber buyers



Dr. Urs Buehlmann talks about the housing market.

On August 22, 2016 a group of lumber buyers from India attended an educational session on the hardwood industry in North America. Professor Urs Buehlmann provided a review of the primary and secondary industry and also critical insights on the housing market and how it impacts the lumber industry. Professor Brian Bond presented on wood drying basics and the impact of the drying



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process on cost and lumber quality. In addition, Dr. Henry Quesada reviewed the main markets for hardwood products in the USA.

The session was jointly organized with the Virginia Department of Agriculture and Consumer Services (VDACS)

SBIO Department participates at the 2016 Expo Richmond

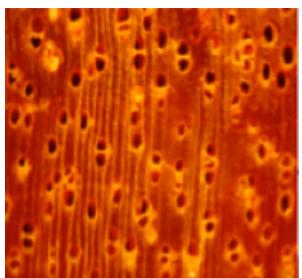


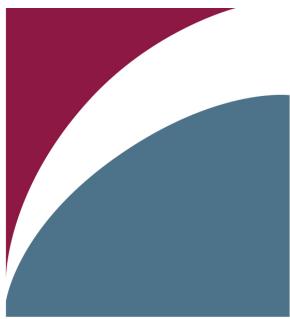
Professor Brian Bond presents on the latest developments in vacuum drying technology.

industry organizations, and wood hobbies who come to get a glimpse of new developments related to software and hardware in the forestry and forest products industries.

This year the trade shows kicked off with the SBIO Department presenting an innovative educational session that included speakers from Virginia Tech, the US Forest Service, and the American Hardwood Export Council (AHEC).

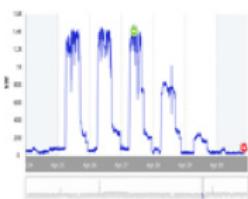
For the following two days the SBIO Department along with other members of the CNRE at VT, showcased new research and short-course opportunities, and delivered short courses to visitors coming to the Expo Richmond. As usual many fellow Hokies stopped by our booth to greet and catch-up on latest developments. The Expo Richmond is also a great venue to network and reconnected with industry





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and industry organizations that hire a good portion of the graduates from the SBIO Department.

Upcoming Events

Forest Products Exports 2016



Dr. Henry Quesada will participate as a panelist in the upcoming Forest Products Export conference to be held during October 17-18, 2016 in Charleston, SC.

The conference is organized by the South Carolina Forestry Commission. The event is a great opportunity to connect with colleagues and experts in international trade of forest products, learn about emerging markets, and explore different resources to enter or increase your market share

in international markets. For more information and registration please, follow this link: <http://www.southernforestproducts.org>

The Future of the Hardwood Lumber Industry



Conference to be held November 2 - 3, 2016 at the Wood Education and Resource Center (WERC) in Princeton, WV.

Remaining competitive is no small feat for domestic producers of hardwood lumber. We are still in the midst of a slow recovery from the recession 7 years ago with residential housing markets making a slow comeback and offshore producers fighting to maintain and increase their share of the US markets. While many aspects of the current business climate cannot be controlled, leading companies always wonder what the future might bring. They try to understand the underlying



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principles, how they may work out, and where the opportunities to be taken advantage are.

With a focus on the U.S. Hardwood Industry, participants at “**the Future of the Hardwood Industry**” conference will hear leading industry experts explain their view of things to come, learn of business opportunities, compare their efforts with others in the industry, and discuss with industry experts. Sponsored by the U.S. Forest Service’s Wood Education and Resource Center (WERC), the National Hardwood Lumber Association (NHLA), Virginia Tech, and Virginia Cooperative Extension and organized by Virginia Tech’s Department of Sustainable Biomaterials, the two-day conference on “**the Future of the Hardwood Industry**” will be of interest to anyone interested in manufacturing and marketing hardwood lumber, supplying logs or buying lumber. Participants will also have an opportunity to visit Allegheny Lumber’s Princeton, WV lumber manufacturing facility and to network at the sponsored dinner.

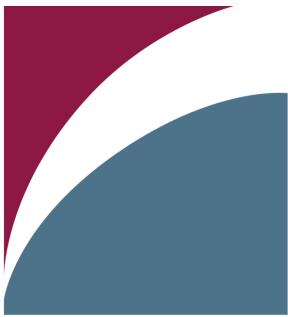


The conference, to be held at the Forest Service’s Wood Education and Resource Center (WERC) in Princeton, WV on November 2 - 3, 2016, will shed light on the now and the future of our industry and will show potential opportunities for keeping your business successful.

For more information on “**the Future of the Hardwood Industry**” conference, please visit <http://woodproducts.sbio.vt.edu/futurehardwoods/> or contact Urs Buehlmann, Virginia Tech at (540) 231-9759, or buehlmann@gmail.com.



The Department of Sustainable Biomaterials in the College of Natural Resources and Environment is the leading program in North America engaged in wood and renewable materials utilization. The faculty focuses on the science and business of wood and renewable materials utilization through learning, discovery, and engagement. The department is home to the Center for Forest Products Business, the Center for Packaging and Unit Load Design, and the Wood-Based Composites Center. The department is an active participant in the renewable materials research initiative in the Institute for Critical Technology and Applied Science (ICTAS). Students learn from the leading wood and renewable materials scientists in the world, who bring the latest science and application of principles to the classroom.



For more details and registration, please visit the web site [http://woodproducts.
sbio.vt.edu/futurehardwoods/](http://woodproducts.sbio.vt.edu/futurehardwoods/)

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