Annual Report

Center for Forest Products Business

*Alfred P. Sloan Foundation Industry Studies Center*

Department of

*SUSTAINABLE BIOMATERIALS*

College of Natural Resources and Environment

*VirginiaTech*

*Invent the Future*

Reporting Period July 1, 2017 - June 30, 2018
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Letter from Director:

Dear Colleagues:

It is hard to believe that another year has gone by and I am here wondering again what to share with you about the Center. Three months ago, we graduated 40 students from our program and some of them are now working in your companies. Our department’s undergraduate program has grown to nearly 200 students, and it is probably the largest in the country. We believe the changes we have made in recent years regarding our undergraduate degrees and our name change are starting to attract a broader range of students to our profession. I have often told students that our program is the applied field of business, engineering, physics, or chemistry to our natural resources and wood. Whether it is the student who has a business interest and wants to go into international marketing or the student who has an engineering interest and wants to lean up your mill, our undergraduate program allows students to apply these disciplines to wood products. We remain committed to providing the best marketing, manufacturing, and business education in forest products in North America. Our goal remains to attract and train good students who can help your companies compete in this changing world marketplace.

I have now completed six years as the department head. It is nice being back in the department with my colleagues and directing such a successful endeavor. We are fortunate to have some of the leading scientists in our field working in the department. I want to thank those of you who took time to visit us this past year and spend time with our students. Your interest and experience help us demonstrate the great opportunities that exist for careers in wood products. Students always comment on how they love to hear from our industry partners. Your internships, scholarships and job opportunities demonstrate the partnership that is needed to help us attract and train your future employees. If you would like to visit the department and speak with our students, please do not hesitate to contact me.

Your center has had a good year. Our faculty accomplishments are listed later in this report. We awarded over $25,000 of scholarships in 2017 and will award nearly that amount again in 2018. Your donations make this possible and allow us to better train our students for this changing wood products industry. We have updated our website to provide more information, so please visit us at http://www.cfpb.vt.edu. I thank you for your continued support of our center. If there is anything I can do, please feel free to contact me at 540-231-7679 or rsmith4@vt.edu.

Sincerely,

Bob Smith

“Education is the passport to the future, for tomorrow belongs to those who prepare for it today.”

Malcolm X
Center for Forest Products Business

SUSTAINABLE BIOMATERIALS

Participating Faculty and Staff

Robert Smith  
*Director, Department Head and Professor*  
rsmith4@vt.edu

Henry Quesada  
*Assistant Director and Associate Professor*  
quesada@vt.edu

Bob Bush  
*Professor, Sustainable Biomaterials*  
rbusht@vt.edu

Tom Hammett  
*Professor, Sustainable Biomaterials*  
himal@vt.edu

Earl Kline  
*Professor, Sustainable Biomaterials*  
kline@vt.edu

Angela Riegel  
*Program Specialist, Sustainable Biomaterials*  
ariegel@vt.edu

Mission

To assist the forest products industry by improving the management of their operations and the marketing of their products.
Significant accomplishments:

Hammett, Tom. Master Online Instructor, TLOS, Virginia Tech, Blacksburg, United States, Develop and train faculty and other instructors in on-line course development and presentation

Proposals Funded:


Kline, Earl. Wood Enterprise Institute, Virginia Tech Foundation Inc., USD 63,404 (Active: 03/01/2010 - 02/28/2020).


Chen, Z., M. S. White, H. J. Quesada, J. D. Eisenback. Evaluation of vacuum and steam heat as a methyl bromide alternative for phytosanitary treatment of hardwood and softwood logs, USDA NIFA, Department of Agriculture, USD 393,049, Principal Investigators: Chen Zhangjing Chen (45%), Marshall S. White (45%), Jonathan D. Eisenback (5%) Henry J. Quesada (5%), 12/01/2017-11/30/2019.

Refereed Publications:


Submitted Publications:


**Trade Journal Publications Refereed:**


**Extension Publications:**

SBIO extension newsletter, Editor of the SBIO extension newsletter, published three times per year, 2014-Present, Editor/curator

Sustainable Innovation Management (SIM) web page, Web manager and editor of the SIM web page, 2010-Present, Editor/curator.

**Other Publications:**


**Graduate Thesis/Dissertations:**

Li Liang, 8/28/17, Optimization of Supply Chain for non-food Cellulosic Ethanol Plants, Henry Quesada, major professor.

Gaurav Kakkar, 09/04/17, Exports of Wooden Modular Homes to Developing Countries. Henry Quesada, major professor.

Nicolas Navarro, 12/15/17, A supplier selection framework for the wood fiber supply Chain. Henry Quesada, advisor.
Presentations:


Invited Lectures and Presentations:


Short Courses & Continuing Education:

Hammett, A. L. 2017. First Annual Hemp Day at Virginia Tech. Introduction to hempcrete including advantages, growing of hemp, history of policies. Students then had the opportunity to make hempcrete blocks. 26 Students. November.


Quesada, H. J. 2017. Virginia Forest Products Association (VFPA), Education Session on CLT Co-organizer and instructor. Also presented in the same session Tom Chung and Judd, Charles, 100 students, August 2017.


Courses Taught:

FREC 2784 Global Forest Sustainability
Fall 2017
Credit Hours: 3
Instructor: Tom Hammett
No. of Students: 22

SBIO 1234 Introduction to Wood Design and Craftsmanship
Semester: Fall 2017
Credit Hours: 3
Instructor: Earl Kline/Urs Buehlmann (each 50%)
No of students: 25

SBIO 1984 Special Study
Semester: Fall 2017
Credit Hours: 1
Instructor: Earl Kline
No of students: 9

SBIO 2784 Global Forest Sustainability
Fall 2017
Credit Hours: 3
Instructor: Tom Hammett
No. of Students: 59
SBIO 3004 Sustainable Nature-Based Enterprise  
Fall 2017  
Credit Hours: 3  
Instructor: Tom Hammett  
No. of Students: 31

SBIO 3445 Wood Design and Innovation I  
Semester: Fall 2017  
Credit Hours: 3  
Instructor: Earl Kline  
No of students: 18

SBIO 3445 Wood Design and Innovation II  
Semester: Spring 2018  
Credit Hours: 3  
Instructor: Earl Kline  
No of students: 18

SBIO 3454 Society, Sustainable Biomaterials, and Energy  
Spring 2018  
Credit Hours: 3  
Instructor: Tom Hammett  
No. of Students: 11

SBIO 3954 Study Abroad in Costa Rica  
Semester: Winter 2018  
Credit Hours: 3  
Instructor(s): Henry Quesada/Earl Kline  
No of students: 12

SBIO 3984 Researching Industrial Hemp Production  
Spring 2018  
Credit Hours: 3  
Instructor: Tom Hammett  
No. of Students: 7

SBIO 5004 Seminar  
Semester: Spring 2018  
Credit Hours: 1  
Instructor(s): Robert Smith  
No of students: 7
SBIO 5614 Forest Products Marketing and Management  
Semester: Fall 2017  
Credit Hours: 3  
Instructor(s): Henry Quesada/Robert Smith  
No of students: 7

Hammett: Faculty Advisor to Service Without Borders. Co-led service learning trip for seven undergrads, five from the College of Engineering and one each from the College of Natural Resources and General Studies, to address previously identified needs in a Village in the Mustang province in Nepal's highlands. Total students advised: 7

**Center Engagement and Outreach:**


Abstract: Step by step guide for programming and operating for the Brooks Forest Products Center laser engraver


Kline, D. E. Faculty Advisor (7/1/2017 - Present), Virginia Tech (United States) [Department] (Labels: No Label) Description: SBIO student organization (co-advisor with Henry Quesada).

Kline, D. E. 2017. CNC and Laser Engraving Training and Supervision (7/1/2017 - 9/1/2017), Virginia Tech (United States) [College] (Labels: No Label). Description: Trained and supervised students in using the CNC and Laser engraver in their fund raising project to provide coasters for the CNRE 25 year celebration.

Quesada, H. J. 2017. Statistical Analysis for Maintenance Programs, Master's, Production Industrial Engineering 08/15/2017, Course developed for MS program in Manufacturing Systems at Costa Rica Tech

Quesada, H., Co-Advisor of Society of Renewable Resources (SRR) Club, 2016-Present
Members

Appalachian Hardwood Manufacturers, Inc.
PO Box 427, High Point, NC 27261

Phone: (336) 885-8315; Fax: (336) 886-8865
Email: tom@appalachianwood.org; Website: www.appalachianwood.org

Contact: Tom Inman, President

AHMI is an association that promotes logs, lumber and products from the Appalachian region.

Atlanta Hardwood Corporation
5596 Riverview Road, Mableton, GA 30126-2914

Phone: (404) 792-2290; Fax: (404) 792-2294
Email: ahc@hardwoodweb.com; Website: www.hardwoodweb.com

Contacts: James W. Howard, Jr., President; Marty Payny, Sales Manager; and Patrick G. Altham, VP Export

Products: boards, common; boards, select; flooring; moulding

Species: alder, ash, basswood, beech, cherry, hickory, imported hardwoods, mahogany, hard maple, soft maple, white maple, red oak, white oak, poplar, walnut, eastern white pine

Baillie Lumber Company
PO Box 6, Hamburg, NY 14075

Phone: (716) 649-2850; Fax: (716) 649-2811
Email: information@baillie.com; Website: www.baillie.com

Contacts: Jeff Meyer, President; Kenneth A. Philbrick, Yard Operations Manager

Products: boards, common; boards, select

Species: ash, basswood, beech, birch, cherry, red elm, hickory, hard maple, soft maple, red oak, white oak, poplar, walnut
Bingaman & Son Lumber, Inc.
PO Box 247, Kreamer, PA 17833

Phone: (570) 374-1108; Fax: (570) 374-5342
Email: cbingaman@bingamanlumber.com; Website: www.bingamanlumber.com

Contacts: Chris Bingaman, Vice President Operations/Sales Manager

Products: boards, common; boards select; glued-up stock; furniture dimension

Species: ash, basswood, birch, cherry, hickory, mahogany, hard maple, soft maple, red oak, white oak, poplar, black walnut, eastern white pine

Boehm-Madisen Lumber Co., Inc.
PO Box 906, Brookfield, WI 53008-0906

Phone: (262) 544-4660; Fax: (262) 544-0795
Email: boehmmad@execpc.com

Contacts: Thomas J. Kestly, Sr.

Products: boards, common; boards, select; flooring; timbers; cutstock; log cabin siding; glued-up stock; pattern stock; decking, laminated; decking, roof; dimension, furniture; dimension, precut; edge-glued products;

Danzer Group
Danzer Veneer Americas, PO Box 3455, Williamsport, PA 17701

Phone: (570) 322-4400; Fax: (570) 322-7213
Email: vijayreddy@danzerveneer.com; Website: www.danzerveneer.com

Contact: Dr. Vijay Reddy, Vice President, (724) 827-8366 Darlington, PA.

Products: veneers for panel, furniture, door, cabinet, edge-banding and flooring, dimension, dry; cutstock; glued-up stock; moulding; fingerjoint stock; furniture dimension; window & sash stock

Species: white ash, aspen, basswood, birch, cherry, black cypress, hickory, hard maple, poplar, red oak, soft maple, white maple, white oak, walnut ash
Fitzpatrick & Weller, Inc.
PO Box 490, Ellicottville, NY 14731-0490

Phone: (716) 699-2393; Fax: (716) 699-2893
Email: sales@fitzweller.com; Website: www.fitzweller.com

Contacts: Dana Fitzpatrick, Executive Vice President

Products: boards, common; boards, select; dimension, dry; glued-up stock; moulding; dimension, furniture

Species: ash, white ash, basswood, beech, birch, cherry, hickory, maple, hard maple, soft maple, white maple, red oak, white oak, poplar, hemlock, eastern white pine

Frank Miller Lumber Company, Inc.
1690 Frank Miller Road, Union City, IN 47390

Phone: (765)-964-3196; Fax:(765)-964-6618
Email: clea@frankmiller.com; Website: www.frankmiller.com

Contacts: Martha Miller Mathias – President, CEO, COB

Products: boards, common; boards, select; dimension, green, quarter rift lumber

Species: white ash, basswood, beech, cherry, elm, hackberry, hard maple, soft maple, white maple, red oak, white oak, yellow poplar, black walnut

Hardwood Manufacturers Association
665 Rodi Road, Suite 305, Pittsburgh, PA 15235

Phone: (412) 244-0440; Fax: (412) 244-9090
Website: info@hardwood.org

Contacts: Linda Jovanovich

HMA is an association that assists the furniture, flooring, kitchen and bath, and moulding and woodwork industries with hardwood information.

Hardwood Market Report
PO Box 2633, Memphis, TN 38088-2633

Phone: (901) 767-9126; Fax: (901) 767-7534
Email: hmr@hmr.com; Website: www.hmr.com

Contact: Judd Johnson, Editor

Hardwood Market Report, established in 1922, is a weekly publication giving benchmark pricing information and marketing commentary on North American hardwood lumber and the hardwood products industry
**Industrial Timber & Lumber Company**
23925 Commerce Park, Beachwood, OH 44122

**Phone:** (216) 831-3140; **Fax:** (216) 831-4734  
**Email:** sales@itlcorp.com; **Website:** http://www.itlcorp.com

**Contacts:** Larry Evans, President

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**ISK Biocides, IBC manufacturing**
416 E. Brooks Road, Memphis, TN 38109-0158

**Phone:** (901) 344 5350; **Fax:** (901) 344 5387  
**Email:** info@ibio.com

**Contact:** Joe Ignatoski, President, COO; Lance Johnson, District Sales Supervisor

**Products:** sap stain and mold preventatives; industrial wood preservatives; WOODguard and Natural Home--wood protection for the homeowner.

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**Jim C. Hamer Company**
PO Box 418, Kenova, WV  25530

**Phone:** (304) 453-6381; **Fax:** (304) 453-6587  
**Email:** jdearing@jimchamer.com; **Website:** www.jimchamer.com

**Contacts:** Steve Hamer, President

**Products:** boards, common; boards, select; dimension, furniture

**Species:** ash, beech, hard maple, soft maple, red oak, white oak, poplar

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**Spartanburg forest Products, Inc.**
1431 Highway 101 South, Greer, SC 29651

**Phone:** (864) 699-3100; **Fax:** (864) 699-3101  
**Email:** smichael@gsponline.net; **Website:** www.sfpinc.biz

**Contact:** Stephan W. Michael, President/CEO

Spartanburg Forest Products, Inc. is a marketing and management organization, focusing in treated and engineered wood products.
T & S Hardwoods, Inc.
Harrisburg Road, PO Box 1233, Milledgeville, GA 31059

Phone: (478) 453-3492; Fax: (478) 453-9002
Email: dsmith@tshardwoods.com; Website: www.tshardwoods.com

Contacts: Larry N. Thompson III., President

Products: boards, common; boards, select; dimension, green; railroad ties; timbers

Species: brown ash, cherry, cottonwood, soft elm, sap gum, hickory, soft maple, red oak, white oak, pecan, yellow poplar, sycamore, black walnut, cedar, cypress

USDA Forest Service
Northern Research Station, 180 Canfield St., Morgantown, WV 26505

Phone: (304) 285 – 1500

Contact: Ed Cesa, Research Scientist

USDA Forest Service
Southern Research Station, 1650 Research Center Dr., Blacksburg, VA

Phone: (540) 231 – 5341

Contact: Phil Araman, Senior Research Scientist

Virginia Forest Products Association
220 East Williamsburg, PO Box 160, Sandston, VA 23150-0160

Phone: (804) 737-5625; Fax: (804) 737-9437
Email: vfpa@att.net; Website: www.vfpa.net

Contact: Susan Seward

VFPA is an association active in promoting state and local codes and regulations developed to provide safety to life and property from the hazards of fire.
W. M. Cramer Lumber Company
PO Box 2888, Hickory, NC  28603

Phone:  (828) 397-7481; Fax: (828) 397-3763
Email:  wmc@cramerlumber.com; Website:  www.cramerlumber.com

Contact:  Wendell Cramer, President

Products:  boards, common; boards, select

Species:  poplar, red oak, white oak, ash, hickory, beech, soft maple, cherry, hard maple, elm, basswood, chestnut, mahogany, white pine, ponderosa pine

Wood Preservers, Inc.
PO Box 158, Warsaw, VA  22572

Phone:  (804) 333-4022; Fax: (804) 333-9269
Email:  mwright@woodpreservers.com; Website:  www.woodpreservers.com

Contact:  Morgan Wright, President

Products:  boards; softwood dimension; timbers; ties

Species:  loblolly pine, longleaf pine, shortleaf pine