

Scott A. Leavengood

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A. EDUCATION AND EMPLOYMENT INFORMATION

1. Education

PhD, Portland State University, 2011.

Major: Systems Science

Supporting Areas of Emphasis: Engineering Management

Dissertation Title: Identifying Best Quality Management Practices for Achieving Quality and Innovation Performance in the Forest Industry

MS, Oregon State University, 1994.

Major: Forest Products

Supporting Areas of Emphasis: Industrial Engineering

Dissertation Title: Performance Analysis of the Hardware and Software Components of an Optical Scanning System for Monitoring Lumber Sizes

BS, Colorado State University, 1992.

Major: Wood Science & Technology

2. Employment history

(2005 - Present) Associate Professor and Director, Oregon Wood Innovation Center, Oregon State University, Dept. of Wood Science & Engineering.

(2001 - 2005) Associate Professor and Wood Products Extension Agent, Oregon State University, Dept. of Wood Science & Engineering.

(2000 - 2001) Associate Professor and Wood Products Extension Agent, Oregon State University, Dept. of Wood Science & Engineering.

(1994 - 2000) Assistant Professor and Wood Products Extension Agent, Oregon State University, Dept. of Forest Products.

(1992 - 1994) Graduate Research Assistant, Oregon State University, Department of Forest Products.

B. TEACHING, ADVISING AND OTHER ASSIGNMENTS

1. Instructional Summary

a. Credit Courses

- WSE462/562 Advanced Manufacturing 1 (4 cr) – Winter term 2016-2022
- WSE 520 Global Context of the Forest Sector (3 cr) – Fall term 2019
- WSE 465 Renewable Materials Manufacturing Experience (2 cr) – Fall term 2013, 2016, 2019

- b. Guest Lectures since last promotion
- FOR 111 – Renewable Materials
 - WSE 111 – Intro to Lumber Manufacturing
 - WSE 599 – Intro to Wood Technology: Being a Wood Detective
 - WSE 520 – Sawmilling 101; Global Forest Products Markets
 - WSE 520 – Forests – Global and Local
- c. Non-Credit Courses and Workshops
Workshops Presented

Class Series/Short Course

Wood-Based Composites Online Short Course Series, Online, January 2009 - December 31, 2019, (345 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter.

Field Day/Tour

Growing and Harvesting Poplar, Eugene, OR, June 13, 2019, (24 adult educational contacts) **Collaborative Effort**, My Role: Coordinator/Organizer/Facilitator.

Meeting

Growing Redwoods Science Meeting, Zoom Meeting, October 12, 2021 - October 13, 2021, (67 adult educational contacts) **Collaborative Effort**, My Role: Coordinator/Organizer/Facilitator.

Presentation

Episode 21: Mass Timber - Mass plywood mill tour, In The Woods Podcast, June 17, 2022, My Role: Presenter.

Episode 17: Mass Timber, In The Woods Podcast, April 9, 2022, (95 adult educational contacts)

State-of-the-Art in Sawmilling: Scanning & Optimization demo. Orange & Black Day 2022, Corvallis, March 26, 2022, (20 adult educational contacts)

Lumber Manufacturing: State-of-the-Art, Oregon Forest Resources Institute: Natural Resource Educators Virtual Conference, Corvallis, January 12, 2022, (9 adult educational contacts)

The Oregon Wood Innovation Center: fostering innovation in Oregon's forest sector, OSU Extension Annual Conference: Current Research Panel, Corvallis, December 8, 2021, (41 adult educational contacts) **Collaborative Effort**

Community-Scale Wood Enterprises: Where to Begin?, Sierra Forest Entrepreneurs Program: Workshop #4, Corvallis, December 3, 2021, (17 adult educational contacts) **Collaborative Effort**

Lean Principles in Forest Products Manufacturing - Demonstration of the Blast Game, Forest Products Management Development, Corvallis, 2015 - October 6, 2021, (7 adult educational contacts) **Collaborative Effort**

Episode 10: Forest Products, In The Woods Podcast, September 2021, (95 adult educational contacts), My Role: Author/Presenter.

Oregon's Forest Products Industry - Species, Products & Innovation, Future Leaders in Forest-Based Bioeconomy: Collaborative Professional Development Program, Moscow School of

Management (Skolkovo), Corvallis, April 12, 2021, (52 adult educational contacts) **Collaborative Effort**

Becoming a Competent Presenter, Forest Products Management Development, Corvallis, 2019 - 2020 **Collaborative Effort**

The Forest Sector in Context: Oregon's Forest Products Industry, Forest Products Management Development, Corvallis, 2012 - 2020 **Collaborative Effort**

The Oregon Forest Industry Directory - Intro and Update, December 10, 2020, (5 adult educational contacts), My Role: Presenter.

The Oregon Forest Industry Directory - Intro and Update, April 23, 2020, (18 adult educational contacts), My Role: Presenter.

Illustrating Decision Support Systems, Forest Products Management Development, Corvallis, 2018 - 2019 **Collaborative Effort**

Lean Principles in Forest Products Manufacturing - Demonstration of the Blast Game, Forest Products Management Development, Corvallis, 2015 - 2019 **Collaborative Effort**

Daily Wood station, Portland Wood Magic, Portland, OR, 2002 - 2016, (30 adult educational contacts, 800 youth educational contacts) **Collaborative Effort**

Daily Wood, Oregon Wood Magic, Corvallis, OR, 1999 - 2016, (30 adult educational contacts, 1100 youth educational contacts) **Collaborative Effort**

Wood Magic - Rock Stars and Bubbling Bazookas, Coburg Community Charter School, February 12, 2016, (17 youth educational contacts) **Collaborative Effort**

Expanding use of wood in large building design and construction, Monmouth, January 20, 2016, (24 adult educational contacts) **Collaborative Effort**, My Role: Coordinator/Organizer/Facilitator.

Daily Wood, Lincoln Elementary School, Corvallis, March 18, 2015, (20 adult educational contacts, 80 youth educational contacts) **Collaborative Effort**

Introduction to Statistical Process Control (SPC), Lumber Quality Leadership, Corvallis, OR, 1999 - 2014, My Role: Coordinator/Organizer/Facilitator.

What's a Tree Done for You Lately?, Timberrr! A Nostalgic Look Back at Working in the Woods, World Forestry Center, Portland, August 18, 2012, (6 adult educational contacts, 2 youth educational contacts) **Collaborative Effort**

Marketing: Using the Oregon Forest Industry Directory 'Hands-On', Tree School, March 2005 - March 2012, (65 adult educational contacts) **Collaborative Effort**

Innovations in Forest Products, Master Woodland Manager Mini-College, Corvallis, September 8, 2011

Internet Marketing Resources, Master Woodland Manager Mini-College, Corvallis, September 8, 2011 **Collaborative Effort**

What's a Tree Done for You Lately?, Connecting to the Natural World, University of Portland, May 21, 2011 **Collaborative Effort**

The Oregon Wood Innovation Center, Forest Products Management Development, Corvallis, February 28, 2006 - March 1, 2006, (46 adult educational contacts) **Collaborative Effort**

Forest Products Station, Forest Camp, Various, May 2003 - May 2005, (200 adult educational contacts, 400 youth educational contacts) **Collaborative Effort**

Who Says Money Doesn't Grow on Trees?, Oregon Small Woodlands Association Annual Meeting, Albany, OR, April 8, 2005, (66 adult educational contacts) **Collaborative Effort**, My Role: Presenter.

Market Connections, Understanding Changing Market Opportunities for Oregon Forest Products and Services, Various, April 3, 2004 - June 22, 2004, (186 adult educational contacts) **Collaborative Effort**, My Role: Presenter.

Total Quality Management at OSU, Corvallis, March 30, 2004, (10 adult educational contacts)

Marketing: Connecting Landowners and Manufacturers, Tree School, Clackamas Community College, Oregon City, OR, March 27, 2004, (26 adult educational contacts) **Collaborative Effort**

Business Systems Innovation: A Stepwise Approach, Forest Products Management Development, Corvallis, February 25, 2004, (7 adult educational contacts) **Collaborative Effort**

Statistical Process Control: Part 1 - A Key Tool for Improved Veneer and Plywood Production and Value and Part 2 - Practical Applications of SPC, Plywood Manufacturing, Corvallis, 2000 - 2003, (170 adult educational contacts) **Collaborative Effort**, My Role: Presenter.

Log Markets and Marketing, Master Woodland Manager Mini-College, Corvallis, October 24, 2003, (63 adult educational contacts), My Role: Presenter.

Forest Products Marketing: Finding Suppliers and Partners, Tree School, Clackamas Community College, Oregon City, OR, April 5, 2003, (21 adult educational contacts) **Collaborative Effort**

Processing Red Alder for Maximum Local Benefit, Uses and Markets for Alaska Yellow Cedar and Red Alder, Alaska, March 4, 2003 - March 6, 2003, (60 adult educational contacts) **Collaborative Effort**

The Changing Forest Products Industry, Oregon Forest Institute for Teachers, Mehama, OR, August 2001 - August 2002, (77 adult educational contacts) **Collaborative Effort**

Changing Markets for Oregon Wood Products, Columbia County Small Woodlands Association meeting, Vernonia, OR, May 8, 2002, (50 adult educational contacts) **Collaborative Effort**

Wood 101: An Introduction to Wood Anatomy, Tree School, Clackamas Community College, Oregon City, OR, April 6, 2002, (22 adult educational contacts) **Collaborative Effort**

Wood 201: Wood Identification, Tree School, Clackamas Community College, Oregon City, OR, April 6, 2002, (11 adult educational contacts) **Collaborative Effort**

Changing Markets for Oregon Wood Products (Part 1) & Forest Products Extension in Metro Portland (Part 2), Washington County Small Woodlands Association meeting, Beaverton, OR, May 15, 2001, (25 adult educational contacts) **Collaborative Effort**

Changing Markets for Oregon Wood Products, Forest Sustainability, Assessment, and Certification Options: Maximizing Return on Investment, Corvallis, April 5, 2001, (300 adult educational contacts) **Collaborative Effort**, My Role: Presenter.

Developing a new forest product market for western juniper, Regional Forest Resources Forum, Rogue Valley Civic League, Medford, OR, January 25, 1999, (34 adult educational contacts) **Collaborative Effort**

Wood Products Overview: Entry Level Training Program for the Secondary Wood Products Industry, Secondary Wood Products Training System, Various, 1996 - 1997, (142 adult educational contacts) **Collaborative Effort**

Pay Attention to Your Wood Moisture Content, Gluing Workshop for Secondary Wood Products, Bend, OR, June 4, 1997 - June 5, 1997, (24 adult educational contacts), My Role: Coordinator/Organizer/Facilitator,

Drying Western Juniper, Western Juniper Forum '97, Bend, OR, April 21, 1997, (150 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter.

Recovery of Western Juniper Products, Western Juniper Forum '97, Bend, OR, April 21, 1997, (150 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter.

The Eastern Redcedar Industry - Moderated Panel Discussion, Western Juniper Forum '97, Bend, OR, April 21, 1997, (150 adult educational contacts) **Collaborative Effort**, My Role: Coordinator/Organizer/Facilitator.

Lumber Manufacturing and Sawmill Tour, Resources and People Career (RAP) Camp, Klamath Falls, OR, July 11, 1996, (65 youth educational contacts) **Collaborative Effort**

Identification of Klamath County Tree Species and Their Utilization by the Local Wood Products Industry, Basic Forestry Short Course, Klamath Falls, OR, February 23, 1996 - February 24, 1996, (11 adult educational contacts) **Collaborative Effort**, My Role: Presenter.

Mechanical and Physical Properties of Western Juniper and Implications for Manufacturers, Desert Arts Co-Op Introductory Meeting, Lakeview, OR, October 14, 1995, (50 adult educational contacts) **Collaborative Effort**

Summary of the Missouri Eastern Redcedar Industry and Applications to Commercializing Western Juniper, Western Juniper Steering Committee Meeting, Klamath Falls, OR, December 13, 1994, (6 adult educational contacts) **Collaborative Effort**

School, Conference or Symposium

Overview of Statistical Process Control, Southern Oregon Quality Conference, Klamath Falls, OR, August 11, 2000, (20 adult educational contacts) **Collaborative Effort**, My Role: Coordinator/Organizer/Facilitator.

Workshop

Statistical Quality Control in Wood Products Manufacturing (for Hampton Lumber), Astoria, OR, August 23, 2022 - August 24, 2022, (21 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter.

Statistical Quality Control in Wood Products Manufacturing (for Roseburg Forest Products), Dillard, OR, June 29, 2022 - June 30, 2022, (11 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter.

Statistical Quality Control in Wood Products Manufacturing, Eugene, OR, February 20, 2020 - February 21, 2020, (10 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter.

Statistical Quality Control in Wood Products Manufacturing, Dillard, OR, September 25, 2019 - September 26, 2019, (18 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter.

Poplar Markets: Discussion Panel, Poplar Tree Harvesting Workshop, Eugene, OR, June 13, 2019, (20 adult educational contacts) **Collaborative Effort**, My Role: Coordinator/Organizer/Facilitator.

Statistical Quality Control in Wood Products Manufacturing, Dillard, OR, April 10, 2019 - April 11, 2019, (18 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter.

Structural Plywood and Veneer-Based Products Workshop, Corvallis, OR, March 27, 2019 - March 28, 2019, (58 adult educational contacts) **Collaborative Effort**, My Role: Coordinator/Organizer/Facilitator.

Quality Control in Wood Products Manufacturing, Dillard, OR, October 24, 2018 - October 25, 2018, (15 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter.

Quality Control in Wood Products Manufacturing, Morton, WA, September 5, 2018 - September 6, 2018, (10 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter.

Structural Plywood and Veneer-Based Products Workshop, Corvallis, OR, March 27, 2018 - March 28, 2018, (71 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter.

Introduction to Statistical Process Control, Bay City, OR, June 15, 2017, (5 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter.

Quality Control in Wood Products Manufacturing, Banks, OR, May 10, 2017 - May 11, 2017, (17 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter.

Quality Control in Wood Products Manufacturing, Dillard, OR, April 18, 2016 - May 20, 2016, (28 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter.

Lumber Size Control - Demonstration & Training, Bay City, OR, March 24, 2016, (5 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter.

Introduction to Statistical Process Control, Bay City, OR, February 25, 2016, (25 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter.

Quality Control in Wood Products Manufacturing, Taupo, New Zealand, December 14, 2015, (11 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter.

Quality Control in Wood Products Manufacturing, Red Bluff, CA, August 10, 2015 - August 13, 2015, (43 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter.

Quality Control in Wood Products Manufacturing, Corvallis, OR, 2011 - 2014, (52 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter.

Drying Lumber: Why and How - and Why Things Sometimes Don't Go the Way You Plan, Small-Scale Sawing & Drying (and Tree School), Multiple, May 14, 1997 - April 26, 2014, (425 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter.

Quality Control @ Accsys Technologies, Arnhem, The Netherlands, February 25, 2014 - February 27, 2014, (15 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter.

Wood Products Overview, Chiloquin, OR, April 27, 2010 - April 28, 2010, (20 adult educational contacts) **Collaborative Effort**, My Role: Coordinator/Organizer/Facilitator.

Forest Biomass Utilization, Corvallis, OR, May 14, 2007, (31 adult educational contacts) **Collaborative Effort**, My Role: Coordinator/Organizer/Facilitator.

Lumber Grading – The ‘Who, Why, & How’, Tree School, Clackamas Community College, Oregon City, OR, September 25, 2006, (12 adult educational contacts) **Collaborative Effort**

Lumber Grading – The ‘Who, Why, & How’, Albany, OR, September 13, 2005, (17 adult educational contacts) **Collaborative Effort**

Wood Tech 101, Eugene, OR, July 28, 2005, (20 adult educational contacts)

Wood Tech 101, Klamath Falls, OR, April 5, 2005, (10 adult educational contacts) **Collaborative Effort**

Understanding Changing Market Opportunities for Oregon Forest Products and Services, Multiple, 2004, (186 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter.

Wood Technology 2004: Working with Wood as a Raw Material, Oregon City, OR, November 18, 2004 - November 19, 2004, (8 adult educational contacts)

Technical Assistance and Research State Panel Discussions, Forest Products Technical Assistance Providers and Facilitators Forum, Fort Collins, CO, November 6, 2003 - November 8, 2003, (43 adult educational contacts) **Collaborative Effort**, My Role: Coordinator/Organizer/Facilitator.

Wood Technology 2003: Working with Wood as a Raw Material, Beaverton, OR, October 27, 2003 - October 28, 2003, (28 adult educational contacts)

Capturing Forest Product Values for Landowners and Manufacturers, Oregon City, OR, March 8, 2003, (150 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter.

Wood Technology, Redmond, OR, October 29, 2002, (34 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter.

Wood Identification, Klamath Falls, OR, September 20, 2002, (25 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter.

Wood Technology 2002: Working with Wood as a Raw Material, Beaverton, OR, July 8, 2002 - July 9, 2002, (28 adult educational contacts)

Technical Assistance and Research State Panel Discussions, Forest Products Technical Assistance Providers and Facilitators Forum, Corvallis, OR, May 16, 2002 - May 17, 2002, (25 adult educational contacts) **Collaborative Effort**, My Role: Coordinator/Organizer/Facilitator.

Understanding the Raw Material - Part 2, White City, OR, March 19, 2002, (13 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter.

Statistical Process Control Overview, Secondary Wood Products Training System, Multiple, 1998 - 2001, (116 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter.

Understanding the Raw Material, La Grande, OR, July 11, 2001, (20 adult educational contacts)
Collaborative Effort, My Role: Author/Presenter.

Statistical Process Control, Klamath Falls, OR, October 1999, (15 adult educational contacts)
Collaborative Effort, My Role: Author/Presenter.

Statistical Process Control, Klamath Falls, OR, June 1999, (18 adult educational contacts)
Collaborative Effort, My Role: Author/Presenter.

Western Juniper Commercialization: What have we done and what have we learned?, Paisley, OR, May 7, 1999, (11 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter.

Statistical Process Control, Bay City, OR, February 1999, (11 adult educational contacts)
Collaborative Effort, My Role: Author/Presenter.

Understanding the Raw Material, Medford and White City, OR, July 11, 1997 - January 28, 1998, (21 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter.

Klamath County Hybrid Poplar Research Plots and 1996 Results, Establishment of Hybrid Poplar Test Plots and Plantations, Klamath Falls, OR, November 12, 1996, (11 adult educational contacts) **Collaborative Effort**, My Role: Coordinator/Organizer/Facilitator.

Practical Wood Know-How, Several, October 28, 1996 - October 30, 1996, (8 adult educational contacts), My Role: Coordinator/Organizer/Facilitator.

Wood Technology for Forestry Extension, Corvallis, OR, October 22, 1996 - October 23, 1996, (21 adult educational contacts) **Collaborative Effort**, My Role: Coordinator/Organizer/Facilitator.

Results of Hybrid Poplar Research in Klamath County, Hybrid Poplar in Lake County?, Lakeview, OR, September 11, 1996, (15 adult educational contacts) **Collaborative Effort**, My Role: Coordinator/Organizer/Facilitator.

Klamath County Wood Products Industry Interest in Hybrid Poplar/ Properties of Cottonwood - Applicability to Hybrid Poplar?, Hybrid Poplar in Klamath County?, Klamath Falls, OR, June 6, 1996, (40 adult educational contacts) **Collaborative Effort**, My Role: Coordinator/Organizer/Facilitator.

Western Juniper Harvesting, Manufacturing, and Marketing, Monument, OR, March 27, 1996, (75 adult educational contacts) **Collaborative Effort**, My Role: Coordinator/Organizer/Facilitator.

Potential for Utilization of Western Juniper Based on Similarities with Eastern Redcedar, Bend, OR, August 9, 1995, (30 adult educational contacts) **Collaborative Effort**, My Role: Coordinator/Organizer/Facilitator.

Western Juniper Utilization, Western Juniper Ecology & Management Workshop, Dairy, OR, July 6, 1995, (40 adult educational contacts) **Collaborative Effort**, My Role: Coordinator/Organizer/Facilitator.

Wood Technology for the Secondary Wood Products Industry, Eugene, OR, June 23, 1995 - June 30, 1995, (10 adult educational contacts), My Role: Coordinator/Organizer/Facilitator.

Wood Tech 101, Working with Wood as a Raw Material: Professional Training for the Wood Products Industry, Several, February 8, 1995 - March 30, 1995, (19 adult educational contacts), My Role: Coordinator/Organizer/Facilitator.

World Wood Supply, Working with Wood as a Raw Material: Professional Training for the Wood Products Industry, Several, February 8, 1995 - March 30, 1995, (19 adult educational contacts), My Role: Coordinator/Organizer/Facilitator.

d. Curriculum Development

Credit

2016, WSE 462, Manufacturing with Renewable Materials II, 4.0 credit hours

The second of a two-term series exploring technologies and management practices associated with manufacturing products from renewable materials. Subjects covered include process automation, quality control, safety, and preventive maintenance programs.

I assumed responsibility for teaching this course when David Smith retired. To align better with my background in industrial engineering, I made significant changes to the course including adding numerous hands-on exercises in a computer lab. Computer lab-based exercises included developing material related to manufacturing systems simulation (continuous and discrete), linear programming, design of experiments, statistical process control, and Visual Basic for Applications (VBA) programming in Excel.

Non-Credit

2011, Quality Control in Wood Products Manufacturing.

Despite having the same title as the course developed and delivered in Mexico in 2007 this was a completely new course. Role: Developer and instructor.

2009, Plant Design and Quality Control in Furniture Manufacturing.

This program was developed as part of the project "Enhancing the Economic and Environmental Sustainability of Mexico's Forest Sector." Higher Education for Development, Mexico TIES. 2006 led by Eric Hansen et al. Role: Co-Developer and instructor.

2008, Wood and Water Relationships.

This course was developed as one of the first 3 modules in the Wood-Based Composites Distance Learning Program led by Fred Kamke and Bill Boehner. Role: Developer and instructor.

2007, California's New Formaldehyde Regulations: Impact on Wood Products Manufacturers.

This program was developed in collaboration with the Willamette Valley Chapter of the Forest Products Society (Charles Brunner, Chris Coleman, Chris Knowles, and Erwin Schutfort). Role: Program co-organizer.

2007, Quality Control in Wood Products Manufacturing.

This program was developed as part of the project "Enhancing the Economic and Environmental Sustainability of Mexico's Forest Sector." Higher Education for Development, Mexico TIES. 2006 led by Eric Hansen et al. Role: Developer and instructor.

2006, SPC: Path to Quality in Wood Products Manufacturing.

This program was developed in collaboration with Jim Funck, Jim Reeb, and Charles Brunner of OSU, and Kevin Cheung of the Western Wood Products Association. The Forest Products Society's Willamette Valley Chapter and TECO Corp. provided funding. The objective of the session was to introduce participants to Statistical Process Control and specific opportunities for applying SPC in various sectors of wood products manufacturing. Role: Program co-organizer and instructor.

2004, Understanding Changing Markets and Opportunities for Oregon Forest Products and Services.

This program was developed in collaboration with Forestry Extension faculty, Oregon Small Woodlands Association regional representatives, and Northwest Wood Products Association regional representatives. Funding was provided by the Oregon Forest Resources Institute (OFRI) to develop the web-based Oregon Forest Industry Directory and to develop and deliver workshops in 5 regions of Oregon. The objective of the workshops was to bring together private woodland owners and wood products manufacturers to improve connections between the two groups. Role: Project Manager, Program Co-Organizer and Co-Instructor.

2002, Wood Identification.

5-hour workshop. This workshop was developed at the request of Portland-area manufacturers wishing to solve problems unique to specific wood species. The program involved acquiring samples from 22 species, developing a wood ID key, use of a computer-based microscope combined with a hands-on exercise. Role: Program Organizer and Instructor.

2002, Wood Technology 2002.

12-hour workshop. This program was a complete revision of the Working with Wood as a Raw Material developed in 1994-95. Program development began with asking the question – Why would manufacturers come to this program? The focus was shifted from pure technology transfer to problem-solving. Significant new material was added including wood identification, finishing, machining, adhesion, and common problems that occur in-service. The workshop was designed by beginning from the manufacturers' viewpoint – Why would they come to this program/ What are the common problems they face (building on 8-years' experience helping Oregon wood products firms solve technical challenges). The program was then structured as one full day of basic wood structure followed by a ½-day session that built on that information and concentrated on common woodworking challenges. Role: Program Co-Organizer and Co-Instructor.

1999, Statistical Process Control (SPC).

20- and 32-hour program. Technicomp Inc. (Cleveland, OH) training materials (student workbooks, overheads, and videos) were used as foundation for course and comprised approximately 30 percent of the information presented. I developed the remaining 70 percent to supplement the materials using data from the client. Objective for the program: To provide participants with the hands-on skills to implement statistical process control (collect data, construct and interpret control charts, analyze process capability, and solve problems). Role: Organizer and Instructor.

1999, Statistical Process Control (SPC) at Columbia Forest Products (CFP).

24-hour program. I offered to conduct the training using the Technicomp materials as described above, however as extensive training materials had been developed by CFP, I felt the program would have greater chance for success if I adapted their in-house materials. Objective for the program: To provide participants with the hands-on skills to implement statistical process control (collect data, construct and interpret control charts, analyze process capability, and solve problems). Role: Co-Organizer and Co-Instructor.

1998, Statistical Process Control (SPC) Overview.

3- to 4-hour program developed at the request of the Secondary Wood Products Training System. Objective for the program: To develop an understanding of the techniques and benefits of SPC such that management personnel will commit to, and support formal SPC training and implementation in their company. Role: Co-Organizer and Instructor.

- 1997, Western Juniper Forum 97
8-hour conference. Objectives for the forum were to encourage discussion and networking among western juniper industry personnel; inform resource professionals of recent advances in western juniper ecology and management; inform industry members of recent advances in information regarding juniper utilization; and to allow for western juniper product displays. Extension cooperated with the USDA Forest Service, and the Wood Products Competitiveness Corporation, Inc. to develop the program. Role: Program Co-Organizer, Co-Moderator, and Co-Instructor.
- 1997, Gluing Workshop for Secondary Wood Products.
9-hour Continuing Education conference. Objectives for the conference were to provide research-based information to the secondary wood products industry to help them improve product and service quality and control production costs. Extension cooperated with secondary wood products industry personnel, technical representatives from adhesive companies, and equipment manufacturers to develop the program. Additional partners outside Extension included industry associations to help advertise the program. Role: Program Co-Organizer, and Co-Instructor.
- 1997, Small-Scale Sawing and Drying Workshop.
5-hour program offered in 8 locations around the state. Objectives for the program: To provide small wood products entrepreneurs with research-based information regarding low-cost sawing and drying technology to improve efficiency, yield, and product quality. Role: Co-Organizer and Co-Instructor.
- 1997, Understanding the Raw Material.
5-hour workshop. Program was conducted by invitation of Boise-Cascade's White City Lumber Mill. Objectives for the workshop were to provide quality control, drying, and management personnel with information to solve recurring problems with collapse and checking during drying. Role: Program Organizer and Instructor.
- 1996, Practical Wood Know-How.
4-hour workshop. The objectives of the workshop were to provide examples of common manufacturing problems and their causes, and to discuss solutions for minimizing these problems. Role: Program Co-Organizer and Co-Instructor
- 1996, Wood Products Overview: Entry Level Training Program for the Secondary Wood Products Industry.
Part of the statewide Secondary Wood Products Training System. 3-4 hour seminar offered at 5 community colleges. The broad objective for the Entry Level Training Program is to prepare participants for careers in the secondary wood products industry. The objectives for the Wood Products Overview (my portion of the program) are to familiarize participants with wood structure and variability; the manufacture and properties of lumber and composite wood products; wood and moisture relations, lumber measurement; and lumber grading. Role: Co-Instructor.
- 1996, Wood Technology for Forestry Extension.
12-hour seminar. Objectives of the workshop were to facilitate team-building between Forest Products and Forestry Extension faculty through mutual understanding and sharing of knowledge, and to introduce Forestry Extension faculty with a forest management focus to the expertise and activities of the Wood Products Extension faculty. Role: Program Organizer, Moderator and Co-Instructor.
- 1995, Wood Technology for the Secondary Wood Products Industry.
8-hour seminar. The objective of the workshop was to provide participants with information to aid in understanding and solving manufacturing problems. Role: Program Co-Organizer and Co-Instructor.

1995, Working With Wood as a Raw Material: Professional Training for the Wood Products Industry.

7- hour workshop. The objectives of the workshop were to 1) introduce participants to the practical implications of wood structure and variability and 2) discuss with participants alternative sources of raw material for Northwest companies. Role: Program Co-Organizer and Co-Instructor

e. Graduate and Undergraduate Students and Postdoctoral Trainees

Graduate students advised

Molina Iribarra, Luis, F. MS June 19, 2020, Wood Science, Dimensional Stabilization of Wood Composites.

Wilson, Elijah. MS January 19, 2018, Wood Science, Checking in Maple Plywood.

Burnard, Michael, D. MS October 23, 2012, Wood Science, Key factors influencing checking in maple veneered decorative hardwood plywood.

Orozco, Nadine, C. MS June 28, 2012, Wood Science, Oregon's forest sector innovation system: an investigation towards advanced performance.

Sichamba, Kennedy. MS March 5, 2012, Wood Science, Potential utilization of western juniper residues.

Mosier, R.D. MS 2011, Wood Science, Customer Relationship Management, A construct to promote Innovation in the Forest Products Industry: Insights from Pacific Northwest Companies.

Graduate students committee member

Onakpoma, Ighoyivwi. PhD, anticipated June 2024, Wood Science.

Stanton, Savannah. MS, anticipated December 10, 2022, Wood Science.

Kaltenbrunner, Matthias. PhD September 3, 2022, Social and Economic Sciences, Modelling the Multi-Tier Solid Hardwood Supply Chain. University of Natural Resources and Life Sciences, Vienna, Austria.

Davis, Kent, Jason. PhD July 1, 2021, Architecture and Design, Methods to increase the efficient utilization of hardwood lumber to produce high-value products. University of Tasmania, Australia.

Wind, Matthias. MS May 28, 2021, Wood Science, Effects of temperature and moisture content on bonding performance of mass plywood panels.

Liu, Ping. MS March 15, 2021, Wood Science, Open Innovation and Corporate Foresight Practices in Equipment and Technology Suppliers to the US Forest Sector.

Sutfin, Micah. MS December 30, 2020, Wood Science, Accelerated Weathering of Wood Composites.

Kühle, Sebastian. PhD April 3, 2020, Natural Resources and Life Sciences, Modelling the Multi-Tier Solid Hardwood Supply Chain. University of Natural Resources and Life Sciences, Vienna, Austria.

Hallbrook, Jeff. MF January 3, 2020, Forest Engineering Resources and Management, Testing the logistics of supplying wood chips over long distances using intermodal railroad transportation.

Portugal, Rodrigo, Salles e. MS November 26, 2019, Forest Engineering, Resources & Management, Scenario planning, a new path for the U.S. Pacific Northwest forest academy prepare for its role, in a fast paced and uncertain future.

Guerrero Martinez, José, Erlin. PhD November 25, 2019, Wood Science, Evaluation of cross-sector collaborations in transition toward the bioeconomy: Benefits, challenges, and opportunities in the forest sector.

Albee, Raquel. MS June 10, 2019, Wood Science. Global overview of the cross-laminated timber industry.

Trebelhorn, Daniel. MS June 1, 2017, Wood Science. Developing a standard to assess water repellency and dimensional stability of preservative treated railroad ties or other large timbers.

Wade, Alyson. MS June 11, 2015, Wood Science, Local Specialty and Niche Market Potential : Opportunities for Oregon's Small Woodland Owners.

Han, Xiaou. PhD October 1, 2014, Wood Science, Marketing sophistication in the forest products industry.

Yang, Hai. MS June 21, 2012, Wood Science, Modeling the Fix Bed Drying Characteristics of Biomass Particles.

Tokarczyk, John, A. PhD January 3, 2012, Wood Science, An examination of strategic challenges and opportunities in the wood-based building product industry.

Tibbets, Ashlee. MS November 28, 2011, Wood Science, Implications of the 2008 Lacey Act amendments: insights from the wood products industry.

Fonseca Tapia, Ana Lucia. MS December 10, 2010, Forest Resources, Exploring the Innovation Process in Rural Mexican Communities, the case of PRODESNOS.

Villavicencio Valdez, Gabriela, Valeria. MS September 24, 2009, Wood Science, Opportunities and limitations for community forest enterprises: case of TIP Muebles, Oaxaca, Mexico.

Leatherman, Louis, M. MF December 19, 2007, Wood Science, Log Cost Allocation for Multiple Mill Merchandising Systems.

Czabke, Jochen. MS February 8, 2007, Wood Science, Lean thinking in the secondary wood products industry: challenges and benefits.

Baker, Eric, S. MS October 28, 2002, Wood Science/Mechanical Engineering, Analyzing manufacturing system changes using discrete event simulation.

Graduate students graduate council representative

Bergstrom, Elsa. PhD anticipated June 2024, Business: Strategy, Entrepreneurship and Innovation, User innovations: what distinguishes them from producer (in firm) innovations.

Lawson, Stephanie. MS anticipated 2024, Industrial and Manufacturing Engineering.

Varyani, Asieh. PhD anticipated 2022, Industrial and Manufacturing Engineering, Toward a gender-inclusive design in online engineering education: Gender differences in cognitive styles.

Kriangkasem, Paween. PhD anticipated 2022, Industrial and Manufacturing Engineering.

Khajah, Abdullah. MS May 28, 2019, Industrial Engineering. The effect of process improvement practices on Kuwaiti manufacturing companies.

Ghanbartehrani, Saeed. PhD December 3, 2015, Industrial and Manufacturing Engineering, Efficient Algorithms for Solving the Median Problem on Real Road Networks.

Sims, Laura, L. PhD February 13, 2014, Botany, Phytophthora species and riparian alder tree damage in western Oregon.

Emami, Samin. MS July 29, 2013, Industrial and Manufacturing Engineering, Studying the application of learning and growth metrics in healthcare using analytic hierarchy process.

Lee, Jennifer, Joo-Yeon. MA May 29, 2013, Design and Human Environment, Deliver Knowledge or Touch the Mind? The Effect of Informational and Emotional Advertisement Strategy on Sportswear Brand Attitude and Recall.

Pawar, Supriya, V. MS March 21, 2013, Industrial and Manufacturing Engineering, Fabrication of precipitation-hardened aluminum microchannel cooling plates for adsorption-based hydrogen storage systems.

Saeedi, Amirali. PhD February 22, 2013, Industrial and Manufacturing Engineering, Utilizing wireless-based data collection units for automated vehicle movement data collection.

Atichat, Tanawat. MS June 7, 2011, Industrial and Manufacturing Engineering, A wireless sensor network approach for estimating individual task time.

Bonnono, Mark, A. MS June 3, 2010, Industrial and Manufacturing Engineering, The impact of shared ownership on virtual team effectiveness.

Saeedi, Amirali. MS May 25, 2010, Industrial and Manufacturing Engineering, A computer-assisted qualitative data analysis framework for the engineering management domain.

Laddha, Sachin. MS November 21, 2008, Industrial and Manufacturing Engineering, The effect of feedstock composition on defect evolution in powder injection molded ceramic microarrays using simulations and experiments.

Visiting scientists hosted/trained

Isaac Nyarko, Czech University of Life Sciences, Prague, Czech Republic. March 1, 2022 – July 1, 2022.

Alejandra Maria Ramirez Arango. University of Guadalajara, Guadalajara, Mexico. September 30, 2009 - December 13, 2009

Raul Rodriguez Anda. University of Guadalajara, Guadalajara, Mexico. July 5, 2009 - July 18, 2009

f. Team or Collaborative Outreach Efforts

Non-Credit

Statistical Quality Control in Wood Products Manufacturing (for Hampton Lumber), Author/Presenter, Astoria, OR, August 23, 2022 - August 24, 2022

Statistical Quality Control in Wood Products Manufacturing (for Roseburg Forest Products). Author/Presenter, Dillard, OR, June 29, 2022 - June 30, 2022

The Oregon Wood Innovation Center: fostering innovation in Oregon's forest sector-OSU Extension Annual Conference: Current Research Panel, Corvallis, December 8, 2021

Community-Scale Wood Enterprises: Where to Begin?-Sierra Forest Entrepreneurs Program: Workshop #4. Corvallis, December 3, 2021

Growing Redwoods Science Meeting Daniel Stark, Coordinator/Organizer/Facilitator, Lauren Grand, Moderator, Norma Kline, Moderator, Glenn Ahrens, Moderator, Stephen Fitzgerald, Moderator, Alicia Christiansen, Moderator, David Shaw, Moderator, Shannon Murray, Coordinator/Organizer/Facilitator/Moderator, Zoom Meeting, October 12, 2021 - October 13, 2021

Lean Principles in Forest Products Manufacturing - Demonstration of the Blast Game-Forest Products Management Development, Corvallis, 2015 - October 6, 2021

Oregon's Forest Products Industry - Species, Products & Innovation-Future Leaders in Forest-Based Bioeconomy: Collaborative Professional Development Program, Moscow School of Management (Skolkovo), Corvallis, April 12, 2021

Becoming a Competent Presenter-Forest Products Management Development, Corvallis, 2019 - 2020

The Forest Sector in Context: Oregon's Forest Products Industry-Forest Products Management Development, Corvallis, 2012 - 2020

Statistical Quality Control in Wood Products Manufacturing, Author/Presenter, Eugene, OR, February 20, 2020 - February 21, 2020

Illustrating Decision Support Systems-Forest Products Management Development, Corvallis, 2018 - 2019

Lean Principles in Forest Products Manufacturing - Demonstration of the Blast Game-Forest Products Management Development, Corvallis, 2015 - 2019

Wood-Based Composites Online Short Course Series Fred Kamke, Author/Presenter, Scott Leavengood, Author/Presenter, Christopher Knowles, Author/Presenter, William Boehner, Author/Presenter, Bruce Broline, Author/Presenter, Charles Frazier, Author/Presenter, Richard Baldwin, Author/Presenter, Online, January 2009 - December 31, 2019

Statistical Quality Control in Wood Products Manufacturing, Author/Presenter, Dillard, OR, September 25, 2019 - September 26, 2019

Growing and Harvesting Poplar. Lauren Grand, Coordinator/Organizer/Facilitator, S. Leavengood, Author/Presenter, Eugene, OR, June 13, 2019

Poplar Markets: Discussion Panel-Poplar Tree Harvesting Workshop Todd Miller, Coordinator/Organizer/Facilitator, Scott Leavengood, Panelist, Rick Stonex, Panelist, Michael Roemen, Panelist, Eugene, OR, June 13, 2019

Statistical Quality Control in Wood Products Manufacturing, Author/Presenter, Dillard, OR, April 10, 2019 - April 11, 2019

Structural Plywood and Veneer-Based Products Workshop Linda Caudill, Coordinator/Organizer/Facilitator, S. Leavengood, Author/Presenter, Corvallis, OR, March 27, 2019 - March 28, 2019

Quality Control in Wood Products Manufacturing, Author/Presenter, Dillard, OR, October 24, 2018 - October 25, 2018

Quality Control in Wood Products Manufacturing, Author/Presenter, Morton, WA, September 5, 2018 - September 6, 2018

Structural Plywood and Veneer-Based Products Workshop S. Leavengood, Author/Presenter, Fred Kamke, Coordinator/Organizer/Facilitator, Richard Baldwin, Coordinator/Organizer/Facilitator, Corvallis, OR, March 27, 2018 - March 28, 2018

Introduction to Statistical Process Control, Author/Presenter, Bay City, OR, June 15, 2017

Quality Control in Wood Products Manufacturing, Author/Presenter, Banks, OR, May 10, 2017 - May 11, 2017

Daily Wood station-Portland Wood Magic, Portland, OR, 2002 - 2016

Daily Wood-Oregon Wood Magic, Corvallis, OR, 1999 - 2016

Quality Control in Wood Products Manufacturing, Author/Presenter, Dillard, OR, April 18, 2016 - May 20, 2016

Lumber Size Control - Demonstration & Training, Author/Presenter, Bay City, OR, March 24, 2016

Introduction to Statistical Process Control, Author/Presenter, Bay City, OR, February 25, 2016

Wood Magic - Rock Stars and Bubbling Bazookas, Coburg Community Charter School, February 12, 2016

Expanding use of wood in large building design and construction Bradford Withrow-Robinson, Coordinator/Organizer/Facilitator, Scott Leavengood, Coordinator/Organizer/Facilitator, Brad Huggins, Presenter, Monmouth, January 20, 2016

Quality Control in Wood Products Manufacturing, Author/Presenter, Taupo, New Zealand, December 14, 2015

Quality Control in Wood Products Manufacturing, Author/Presenter, Red Bluff, CA, August 10, 2015 - August 13, 2015

Daily Wood Scott Leavengood, Auna Godinez, Presenter, Undergraduate, Patricia Vega, Presenter, Graduate, Sarath Vega, Presenter, Graduate, Lincoln Elementary School, Corvallis, March 18, 2015

Quality Control in Wood Products Manufacturing, Author/Presenter, Corvallis, OR, 2011 - 2014

Drying Lumber: Why and How - and Why Things Sometimes Don't Go the Way You Plan-Small-Scale Sawing & Drying (and Tree School) Scott Leavengood, Author/Presenter, James Reeb, Author/Presenter, Multiple, May 14, 1997 - April 26, 2014

Quality Control @ Accsys Technologies, Author/Presenter, Arnhem, The Netherlands, February 25, 2014 - February 27, 2014

What's a Tree Done for You Lately?-Timberrr! A Nostalgic Look Back at Working in the Woods, World Forestry Center, Portland, August 18, 2012

Marketing: Using the Oregon Forest Industry Directory 'Hands-On'-Tree School, March 2005 - March 2012

Internet Marketing Resources-Master Woodland Manager Mini-College, Corvallis, September 8, 2011

What's a Tree Done for You Lately?-Connecting to the Natural World, University of Portland, May 21, 2011

Wood Products Overview, Coordinator/Organizer/Facilitator, Chiloquin, OR, April 27, 2010 - April 28, 2010

Forest Biomass Utilization, Coordinator/Organizer/Facilitator, Corvallis, OR, May 14, 2007

Lumber Grading – The 'Who, Why, & How'-Tree School Scott Leavengood, Skeet Rominger, Presenter, Clackamas Community College, Oregon City, OR, September 25, 2006

The Oregon Wood Innovation Center-Forest Products Management Development, Corvallis, February 28, 2006 - March 1, 2006

Lumber Grading – The 'Who, Why, & How', Albany, OR, September 13, 2005

Forest Products Station-Forest Camp, Various locations, May 2003 - May 2005

Who Says Money Doesn't Grow on Trees?-Oregon Small Woodlands Association Annual Meeting Scott Leavengood, Presenter, Steven Bowers, Presenter, Albany, OR, April 8, 2005

Wood Tech 101 Scott Leavengood, Jack Nicholson, Coordinator/Organizer/Facilitator, Klamath Falls, OR, April 5, 2005

Understanding Changing Market Opportunities for Oregon Forest Products and Services, Author/Presenter, Multiple, 2004

Market Connections-Understanding Changing Market Opportunities for Oregon Forest Products and Services, Presenter, Various locations, April 3, 2004 - June 22, 2004

Marketing: Connecting Landowners and Manufacturers-Tree School, Clackamas Community College, Oregon City, OR, March 27, 2004

Business Systems Innovation: A Stepwise Approach-Forest Products Management Development, Corvallis, February 25, 2004

Statistical Process Control: Part 1 - A Key Tool for Improved Veneer and Plywood Production and Value and Part 2 - Practical Applications of SPC-Plywood Manufacturing, Presenter, Corvallis, 2000 - 2003

Technical Assistance and Research State Panel Discussions-Forest Products Technical Assistance Providers and Facilitators Forum, Coordinator/Organizer/Facilitator, Fort Collins, CO, November 6, 2003 - November 8, 2003

Forest Products Marketing: Finding Suppliers and Partners-Tree School, Clackamas Community College, Oregon City, OR, April 5, 2003

Capturing Forest Product Values for Landowners and Manufacturers, Author/Presenter, Oregon City, OR, March 8, 2003

Processing Red Alder for Maximum Local Benefit-Uses and Markets for Alaska Yellow Cedar and Red Alder, Alaska, March 4, 2003 - March 6, 2003

Wood Technology Scott Leavengood, Author/Presenter, Justice Hoffman, Coordinator/Organizer/Facilitator, Redmond, OR, October 29, 2002

Wood Identification Scott Leavengood, Author/Presenter, Randy Clark, Coordinator/Organizer/Facilitator, Klamath Falls, OR, September 20, 2002

The Changing Forest Products Industry-Oregon Forest Institute for Teachers, Mehama, OR, August 2001 - August 2002

Technical Assistance and Research State Panel Discussions-Forest Products Technical Assistance Providers and Facilitators Forum, Coordinator/Organizer/Facilitator, Corvallis, OR, May 16, 2002 - May 17, 2002

Changing Markets for Oregon Wood Products-Columbia County Small Woodlands Association meeting, Vernonia, OR, May 8, 2002

Wood 101: An Introduction to Wood Anatomy-Tree School, Clackamas Community College, Oregon City, OR, April 6, 2002

Wood 201: Wood Identification-Tree School, Clackamas Community College, Oregon City, OR, April 6, 2002

Understanding the Raw Material - Part 2, Author/Presenter, White City, OR, March 19, 2002

Statistical Process Control Overview-Secondary Wood Products Training System, Author/Presenter, Multiple, 1998 - 2001

Understanding the Raw Material, Author/Presenter, La Grande, OR, July 11, 2001

Changing Markets for Oregon Wood Products (Part 1) & Forest Products Extension in Metro Portland (Part 2)-Washington County Small Woodlands Association meeting, Beaverton, OR, May 15, 2001

Changing Markets for Oregon Wood Products-Forest Sustainability, Assessment, and Certification Options: Maximizing Return on Investment Scott Leavengood, Presenter, Steve Lawton, Presenter, Corvallis, April 5, 2001

Overview of Statistical Process Control-Southern Oregon Quality Conference, Coordinator/Organizer/Facilitator, Klamath Falls, OR, August 11, 2000

Statistical Process Control, Author/Presenter, Klamath Falls, OR, October 1999

Statistical Process Control Scott Leavengood, Author/Presenter, Shane Hancock, Coordinator/Organizer/Facilitator, Klamath Falls, OR, June 1999

Western Juniper Commercialization: What have we done and what have we learned? Author/Presenter, Paisley, OR, May 7, 1999

Statistical Process Control Scott Leavengood, Author/Presenter, Ralph McRae, Coordinator/Organizer/Facilitator, Bay City, OR, February 1999

Developing a new forest product market for western juniper-Regional Forest Resources Forum, Rogue Valley Civic League, Medford, OR, January 25, 1999

Understanding the Raw Material, Author/Presenter, Medford and White City, OR, July 11, 1997 - January 28, 1998

Wood Products Overview: Entry Level Training Program for the Secondary Wood Products Industry-Secondary Wood Products Training System, Various locations, 1996 - 1997

Drying Western Juniper-Western Juniper Forum '97, Author/Presenter, Bend, OR, April 21, 1997

Recovery of Western Juniper Products-Western Juniper Forum '97, Author/Presenter, Bend, OR, April 21, 1997

The Eastern Redcedar Industry - Moderated Panel Discussion-Western Juniper Forum '97, Coordinator/Organizer/Facilitator, Bend, OR, April 21, 1997

Klamath County Hybrid Poplar Research Plots and 1996 Results-Establishment of Hybrid Poplar Test Plots and Plantations, Coordinator/Organizer/Facilitator, Klamath Falls, OR, November 12, 1996

Wood Technology for Forestry Extension Scott Leavengood, Coordinator/Organizer/Facilitator, John Panches, Presenter, Eric Hansen, Presenter, Steven Bowers, Presenter, James Reeb, Presenter, Corvallis, OR, October 22, 1996 - October 23, 1996

Results of Hybrid Poplar Research in Klamath County-Hybrid Poplar in Lake County? Coordinator/Organizer/Facilitator, Lakeview, OR, September 11, 1996

Lumber Manufacturing and Sawmill Tour-Resources and People Career (RAP) Camp, Klamath Falls, OR, July 11, 1996

Klamath County Wood Products Industry Interest in Hybrid Poplar/ Properties of Cottonwood - Applicability to Hybrid Poplar?-Hybrid Poplar in Klamath County? Scott Leavengood, Coordinator/Organizer/Facilitator, Dave Hibbs, Presenter, Klamath Falls, OR, June 6, 1996

Western Juniper Harvesting, Manufacturing, and Marketing Scott Leavengood, Coordinator/Organizer/Facilitator, Eric Hansen, Coordinator/Organizer/Facilitator, Monument, OR, March 27, 1996

Identification of Klamath County Tree Species and Their Utilization by the Local Wood Products Industry-Basic Forestry Short Course, Presenter, Klamath Falls, OR, February 23, 1996 - February 24, 1996

Mechanical and Physical Properties of Western Juniper and Implications for Manufacturers-Desert Arts Co-Op Introductory Meeting, Lakeview, OR, October 14, 1995

Potential for Utilization of Western Juniper Based on Similarities with Eastern Redcedar, Coordinator/Organizer/Facilitator, Bend, OR, August 9, 1995

Western Juniper Utilization-Western Juniper Ecology & Management Workshop Scott Leavengood, Coordinator/Organizer/Facilitator, Stephen Fitzgerald, Coordinator/Organizer/Facilitator, Dairy, OR, July 6, 1995

Summary of the Missouri Eastern Redcedar Industry and Applications to Commercializing Western Juniper-Western Juniper Steering Committee Meeting, Klamath Falls, OR, December 13, 1994

g. International Teaching

Oregon's Forest Products Industry - Species, Products & Innovation, Future Leaders in Forest-Based Bioeconomy: Collaborative Professional Development Program, Moscow School of Management (Skolkovo), Corvallis, April 12, 2021, (52 adult educational contacts) **Collaborative Effort**

Wood-Based Composites Online Short Course Series, Online, January 2009 - December 31, 2019, (345 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter

Structural Plywood and Veneer-Based Products Workshop, Corvallis, OR, March 27, 2019 - March 28, 2019, (58 adult educational contacts) **Collaborative Effort**, My Role: Coordinator/Organizer/Facilitator

Structural Plywood and Veneer-Based Products Workshop, Corvallis, OR, March 27, 2018 - March 28, 2018, (71 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter

Quality Control in Wood Products Manufacturing, Taupo, New Zealand, December 14, 2015, (11 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter

Quality Control @ Accsys Technologies, Arnhem, The Netherlands, February 25, 2014 - February 27, 2014, (15 adult educational contacts) **Collaborative Effort**, My Role: Author/Presenter

2. Student and Participant/Client Evaluation

- a. Citizen Evaluation of Teaching
None

3. Peer Teaching Evaluations

- a. Credit
None
- b. Non-Credit

Quality Control and Plant Design for Furniture Production-Guadalajara, Mexico of August 24, 2009, Urs Buehlmann, Virginia Polytechnic Institute & State University

C. SCHOLARSHIP AND CREATIVE ACTIVITY

1. Publications

a. Peer-reviewed

i. Refereed publications

Kamke, F., Irribarra, L. F. M., Leavengood, S. A. (2022). Dynamic Moisture Resistance of Chemical and Thermal Modified Plywood. *Taylor and Francis*, 6.
<https://www.tandfonline.com/doi/abs/10.1080/17480272.2022.2109990?journalCode=swoo20>

Irribarra, L. F. M., Kamke, F., Leavengood, S. A. Comparison of water resistance for modified MDF. *Forest Products Society*.

Davis, K., Leavengood, S. A., Morrell, J. J. (2022). Effects of climate on exterior wood coating performance: a comparison of three industrial coatings in a warm summer Mediterranean and a semi-arid climate in Oregon, USA. *To appear in MDPI*, 12(85), 16. <https://doi.org/10.3390/coatings12010085>

Hansen, E. N., Beckwith, A., Lancaster, C., Leavengood, S. A. Factory-grown wood, the future of forestry?. *Society of Wood Science & Technology*, 1-13.

Irribarra, L. F. M., Kamke, F., Leavengood, S. A. (2021). Dimensional stability of modified wood composite panels. *Society of Wood Science & Technology*, 53(4), 247-259.
<https://wfs.swst.org/index.php/wfs/article/view/3133>

Himes, A., Leavengood, S. A., Polinko, A. (2021). Variation in Wood Properties of Hybrid Poplar Lumber by Radial and Vertical Position in Stem: A Case Study from Boardman, OR. *Society of Wood Science & Technology*, 53(3), 161-177.

Pipiska, T., Leavengood, S. A., Kamke, F., Kral, P. (2021). Properties of the western juniper (*Juniperus occidentalis*) strandboard. *Bioresources*, 16(2), 2853-2860.

Legg, B., Dorfner, B., Leavengood, S. A., Hansen, E. N. (2021). Industry 4.0 implementation in US primary wood products industry. *Faculty of Forestry, University of Zagreb*, 72(2), 143-153.

Pipiska, T., Cappellazzi, J., Leavengood, S. A., Kamke, F., Presley, G. N., Decky, D. (2021). Utilization of the western juniper (*Juniperus occidentalis*) in strandboards to improve the decay resistance. *Bioresources*, 16(2), 3886-3894.

Davis, K., Leavengood, S. A., Morrell, J. J. (2021). Performance of exterior wood coatings in temperate climates. *MDPI*, 11(325), 22. <https://www.mdpi.com/journal/coatings>

Rose, R., Leavengood, S. A., Morrell, J. J. (2019). Comparative performance of modified solid and composite wood samples in standard tests. *Forest Products Journal*, 69(4), 305-312.

Burnard, M. D., Leavengood, S. A., Muszynski, L., Ganio, L. M. (2019). Investigating face veneer check development in decorative plywood panels: The impact of four common manufacturing factors. *European Journal of Wood & Wood Products*, 77(6), 961-979.
<https://link.springer.com/article/10.1007/s00107-019-01455-2>

Burnard, M. D., Muszynski, L., Leavengood, S. A., Ganio, L. M. (2018). An optical method for rapid examination of check development in decorative plywood panels. *European Journal of Wood and Wood Products*, 76(5), 1367-1377.

- Li, X., Leavengood, S. A., Cappellazzi, J., Morrell, J. J. (2018). Laboratory decay resistance of palmyra palm wood. *Maderas. Ciencia y tecnologia*, 20(3), 353-358.
- Miyamoto, B. T., Sinha, A., Leavengood, S. A., Morrell, J. J., Devisser, D., Kruse, D. (2018). Mechanical Property Assessment for Establishing Design Values for Western Juniper. *Wood and Fiber Science*, 50(2), 167-179.
- Guerrero, J. E., Leavengood, S. A., Gutiérrez-Pulido, H., Fuentes-Talavera, F. J., Silva-Guzman, J. A. (2017). Applying Lean Six Sigma in the Wood Furniture Industry: A Case Study in a Small Company. *Quality Management Journal*, 24(3), 6-19.
<https://secure.asq.org/perl/msg.pl?prvurl=http://asq.org/quality-management/2017/06/lean/applying-lean-six-sigma-in-the-wood-furniture-industry-a-case-study-in-a-small-company.pdf>
- Laukkanen, V., Siimeksela, M., Leavengood, S. A., Hansen, E. N. (2017). Best practices in capturing employee creativity: Forest sector firms in the US and Finland.. *International Wood Products Journal*, 8(1), 10-17.
- Laukkanen, v., Siimeksela, M., Leavengood, S. A., Hansen, E. N. Best practices in capturing employee creativity: Forest sector firms in the US and Finland. *To appear in International Wood Products Journal*
- Leavengood, S., Anderson, T. R., Daim, T. (2012). Exploring Linkage of Quality Management to Innovation. *Total Quality Management & Business Excellence, Online Edition*.
<http://www.tandfonline.com/doi/abs/10.1080/14783363.2012.738492>
- Lamb, A. M., Daim, T., Leavengood, S. (2012). Wood pellet technology roadmap. *IEEE Transactions on Sustainable Energy*, 3(2), 218-230.
- Leavengood, S., Funck, J. W., Reeb, J. E. (2011). A note on face veneer checking in maple plywood. *International Wood Products Journal*, 2(2), 120-123.
<http://www.tandfonline.com/doi/full/10.1179/2042645311Y.0000000010>
- Knowles, C., Reeb, J. E., Leavengood, S. (2009). Needs Assessment of Oregon Forest Products Industry. *Forest Products Journal*, 59(4), 35-39.
- Kallioranta, S., Vlosky, R., Leavengood, S. (2006). Web-Based Communities: Tools for Forest Sector Outreach and Extension. *Journal of Extension*, 44(2).
- Pearson, E. G., Leavengood, S., Reeb, J. (2000). Comparison of the absorptive capacity of shavings of western juniper, western redcedar, and Douglas-fir for animal bedding. *Forest Products Journal*, 50(6), 57-60.
- Leavengood, S., Love, R. (1998). Trials and Triumphs of Expanded Extension Programs. *Journal of Extension*, 36(7).
- ii. Books or Book Chapters
- Leavengood, S., Hansen, E., Negro, F. 2022 *On the Hardwood: More Importantly Under It*. Newport Beach, California: World Wood Day Foundation
<https://www.swst.org/wp/publications/other-publications/books/>
- Leavengood, S., Bull, L., Hansen, E., Panwar, R., Vlosky, R. 2012 *Innovation in the Forest Sector* (pp. 377-404). Taylor and Francis Publishers

iii. Extension Publications

- Leavengood, S. A. 2015 *Operational Planning* (No. 3f, pp. 20). OSU College of Forestry, Contributions in Education and Outreach
<https://ir.library.oregonstate.edu/xmlui/handle/1957/55635>
- Leavengood, S. A. 2015 *Quality Management* (No. 3g, pp. 18). OSU College of Forestry, Contributions in Education and Outreach
<https://ir.library.oregonstate.edu/xmlui/handle/1957/56538>
- Leavengood, S., Reeb, J. 2015 *Statistical Process Control. Part 7 – Variables Control Charts* (EM 9109, pp. 19). <https://catalog.extension.oregonstate.edu/em9109>
- Leavengood, S., Reeb, J. E. 2015 *Statistical Process Control. Part 8 – Attributes Control Charts* (EM 9110, pp. 9). <https://catalog.extension.oregonstate.edu/em9110>
- Leavengood, S., Reeb, J. E. 2015 *Statistical Process Control. Part 9 – Process Capability Analysis* (EM 9111, pp. 9). <https://catalog.extension.oregonstate.edu/em9111>
- Leavengood, S., Reeb, J. 2015 *Statistical Process Control, Part 2: How and Why SPC Works* (EM 8733, pp. 17). <https://catalog.extension.oregonstate.edu/em8733>
- Bowers, S., Leavengood, S. 2012 *Producing and Selling Logs for Maximum Revenue* (EM 9047, pp. 15).
- Leavengood, S. 2012 *Understanding Names of Oregon Trees* (EC 1502, pp. 5).
<http://ir.library.oregonstate.edu/xmlui/bitstream/handle/1957/28721/ec1502.pdf>
- Leavengood, S., Reeb, J. E. 2011 *Statistical Process Control. Part 6 – Design of Experiments* (EM 9045-E, pp. 16). <https://catalog.extension.oregonstate.edu/em9045>
- Reeb, J. E., Leavengood, S. 2010 *Introduction to Lean Manufacturing* (EC 1636, pp. 7).
- Leavengood, S. 2009 *Managing for quality and innovation* (4th ed., vol. 7). Forest Business Solutions: Research Briefs
- Leavengood, S., Reeb, J. 2009 *Statistical Process Control. Part 5 – Cause-and-Effect Diagrams* (EM 8984-E, pp. 6). <https://catalog.extension.oregonstate.edu/em8984>
- Reeb, J., Leavengood, S. 2003 *Operations Research: Simulating a Manufacturing System: An Introduction* (EM 8837-E, pp. 11).
- Reeb, J., Leavengood, S. 2002 *Operations Research: Transportation problem: A special case for linear programming* (EM 8779, pp. 35).
- Reeb, J., Leavengood, S. 2000 *Operations Research: Solving linear programs - duality and sensitivity analysis* (EM 8744, pp. 24).
- Leavengood, S., Reeb, J. 2000 *Statistical Process Control. Part 3 - Starting a Program: Pareto Analysis and Check Sheets* (EM 8771, pp. 9). <https://catalog.extension.oregonstate.edu/em8771>
- Leavengood, S., Reeb, J. 2000 *Statistical Process Control. Part 4 – Flowcharts* (EM 8772, pp. 11). <https://catalog.extension.oregonstate.edu/em8772>
- Leavengood, S., Reeb, J. 1999 *Statistical Process Control, Part 1: An Introduction* (EM 8726, pp. 19). <http://ir.library.oregonstate.edu/xmlui/handle/1957/20082>

Leavengood, S. 1998 *Identifying Common Northwest Wood Species: A Woodworker's Guide* (EM 8688, pp. 16).

Reeb, J., Leavengood, S. 1998 *Operations Research: An introduction to models and probability concepts* (EM 8718, pp. 19).

Reeb, J., Leavengood, S. 1998 *Operations Research: Using the graphical method to solve linear programs* (EM 8719, pp. 21).

Reeb, J., Leavengood, S. 1998 *Operations Research: Using the simplex method to solve linear programming maximization problems* (EM 8720, pp. 27).

Leavengood, S., Reeb, J. 1997 *Product and Market Opportunities for Hybrid Poplar in Oregon* (EM 8667, pp. 4).

Leavengood, S. 1997 *The Dimensional Change Program* (EM 8668).

Leavengood, S. 1997 *User's Manual for the Dimensional Change Program* (EM8668, pp. 10).

iv. Proceedings articles

Leavengood, S., Anderson, T. R., Kocaoglu, D. F., Anderson, T. R. 2011 *Best Practices in Quality Management for Achieving Quality and Innovation Performance, In: Technology Management in the Energy-Smart World* (pp. 28).

Leavengood, S., Anderson, T. R. 2010 *Best Practices in Quality Management for Innovation Performance* (pp. 8). Society of Wood Science & Technology

Leavengood, S., Anderson, T. R., Kocaoglu, D. F., Anderson, T. R., Milosevic, D. 2009 *Best Practices in Quality Management for Achieving Quality and Innovation Performance*.

Lamb, A. M., Daim, T., Leavengood, S., Kocaoglu, D. F., Anderson, T. R., Milosevic, D. 2009 *Technology Roadmap: Wood/Bio-energy Pellet "Renewable Energy."* (pp. 18).

Leavengood, S., Hubbard, B. 2009 *Using the Web to Facilitate Extension Program Delivery and Management* (GTR-SRS-116, pp. 5). USDA Forest Service Southern Research Station

Leavengood, S. 2008 *Developing Markets for Lesser-Known Species: The Case of Western Juniper in Oregon* (pp. 9). Society of Wood Science & Technology

Nicholls, D., Leavengood, S., Gorman, B., Nicholls, D. 2003 *Processing Red Alder for Maximum Local Benefit* (pp. 5).

Leavengood, S., Kocaoglu, D. F., Anderson, T. R., Milosevic, D. 2001 *Increasing the Production Capacity of a Work Cell Using Modeling and Simulation* (pp. 2).

Leavengood, S. 1998 *The Western Juniper Commercialization Project: Building an Industry Through Collaboration* (pp. 34-35). Deerwood, MN: Association of Natural Resources Extension Professionals

Leavengood, S., Swan, L. 1998 *Western Juniper Debarking Project* (PNW-GTR-432, pp. 69-70). Portland, OR: USDA Forest Service, PNW Research Station

Leavengood, S., Swan, L. 1998 *Western Juniper Drying Project Summary: 1993-1996* (PNW-GTR-432, pp. 76-78). Portland, OR: USDA Forest Service, PNW Research Station

Leavengood, S., Swan, L. 1998 *Western Juniper Log Storage Project* (PNW-GTR-432, pp. 67-68).Portland, OR: USDA Forest Service, PNW Research Station

Leavengood, S., Love, R. 1997 *Educational Tactics Reaching Small- to Medium-Sized Wood Products Firms: What's Working, What's Not*. Vancouver, B.C.: University of British Columbia

Leavengood, S., Funck, J. W. 1994 *Measurement Capabilities of an Optical Imaging System for On-Line Size Control Analysis* (pp. 97-99).Madison, WI: Forest Products Society

b. Other Publications – Not peer reviewed

i. Proceedings articles

M., B., Muszynski, L., Leavengood, S. A., Ganio, L. M. 2013 *A Rapid Method for Assessing Check Development in Veneer Overlays* (pp. 287–295).

Leavengood, S., Swan, L. 1998 *Proceedings, Western Juniper Forum '97* (PNW-GTR-432, pp. 97).Portland, OR: USDA Forest Service, PNW Research Station

ii. Extension Teaching Material

Leavengood, S. 2002 *Wood Technology Workshop 2002: Working with Wood as a Raw Material* (pp. 90).

Leavengood, S. 2001 *Understanding the Raw Material* (pp. 32).

Leavengood, S. 1998 *Statistical Process Control Overview* (pp. 60).

Leavengood, S. 1997 *Small-Scale Sawing and Drying* (pp. 10).

Leavengood, S., Reeb, J. 1996 *Practical Wood Know-How* (pp. 30).

Leavengood, S., Swan, L. 1996 *Western Juniper Fact Sheet* (pp. 2).

Leavengood, S., Reeb, J. 1996 *Wood Products Overview* (pp. 40).

Leavengood, S., Kavanagh, K., Hansen, E. N., Reeb, J., Bowers, S., Panches, J. 1996 *Wood Technology for Forestry Extension*.

Leavengood, S., Reeb, J. 1995 *Wood Technology for the Secondary Wood Products Industry* (pp. 38).

Leavengood, S., Reeb, J. 1995 *Working With Wood as a Raw Material* (pp. 65).

iii. Newsletters

Leavengood, S. 2022 *Innovation in Wood Products* (pp. 2). Canopy View News
<https://extension.oregonstate.edu/newsletter/canopy-view-news>

Kallioranta, S., Vlosky, R., Leavengood, S. 2006 *On-line Communities Support Extension Professionals* (1st ed., vol. 14, pp. 1-4).Gatton: University of Queensland

iv. Websites

Leavengood, S. A. 2014 *Wood Products Extension at Oregon State University - the Oregon Wood Innovation Center*. <http://articles.extension.org/>

Leavengood, S. A. 2014 *Getting Technical: The Scoop on Wood Hardness*. <http://www.woodfloorbusiness.com/green-blog/getting-technical-the-scoop-on-wood-hardness-part-1-what-is-janka.html>

Leavengood, S. A. 2014 *The Pacific Northwest - Home to Douglas-fir and a Few 'New' Species*. <http://articles.extension.org/pages/70347/the-pacific-northwest-home-to-douglas-fir-and-a-few-new-species>

Leavengood, S. 2006 *Oregon Wood Innovation Center*. <http://owic.oregonstate.edu/>

Leavengood, S. 1999 *OSU Hybrid Poplar Working Group*. <http://dwp.bigplanet.com/poplargroup>

Leavengood, S. 1998 *Department of Forest Products, OSU*. <http://www.cof.orst.edu/cof/ftp/>

Leavengood, S. 1997 *The Western Juniper Commercialization project*. <http://juniper.oregonstate.edu/>

Leavengood, S. 1997 *Western Juniper Manufacturers*. <http://www.westernjuniper.org>

Leavengood, S. 1996 *OSU Klamath County Extension home page*. <http://extension.orst.edu/klamath/>

v. Other authored content not peer reviewed

Interview

Fitzgerald, M. A., Hansen, E. N., Leavengood, S. A. 2016 *Will the Internet of Trees be the Next Game Changer?*. MIT Sloan Management Review <http://sloanreview.mit.edu/article/will-the-internet-of-trees-be-the-next-game-changer/>

Journal Article

Miyamoto, B. T., Konkler, M. J., Leavengood, S. A., Morrell, J. J., Sinha, A. (2019). Durability assessment of Western Juniper from Five Different Growing Regions. *Wood and Fiber Science*, 51(1), 88--95.

Podcast

Grand, L., Putney, J. D., O'Brien, J. P., Fitzgerald, S. A., Berger, C. A., Leavengood, S. A. 2020 *In the Woods*. inthewoodspodcast.com

Research Report (client names confidential unless noted)

Leavengood, S. 2022 *Report for Results of Accelerated Weathering Trial 3* (pp. 12).

Leavengood, S., Vega, N. 2022 *Results of Accelerated Weathering Trial - new siding product* (pp. 15).

Leavengood, S., Vega, N. R., Bernart, L. 2021 *Results of Mechanical and Physical Property Testing of Interior Panel Products: Conducted for Sankofa Lumber* (pp. 17).

Pipiska, T., Leavengood, S., Kamke, F. 2021 *Scaling Juniper Markets: Sustainable Solutions for Rangelands and Rural Communities* (pp. 45).

Leavengood, S. 2020 *Closet Pole Property Testing* (pp. 4).

Leavengood, S. 2019 *Testing of 1x3 mattress material in bending* (pp. 3).

Leavengood, S., Swenson, H. 2019 *Wood property testing of Red Grandis eucalyptus* (pp. 2).

Leavengood, S. 2019 *Performance testing of new hardwood plywood products* (pp. 4).

Leavengood, S. 2019 *Assessment of recycled wood products for hardwood/softwood fraction* (pp. 1).

Leavengood, S. 2019 *Assessment of new wax emulsions for particleboard* (pp. 6).

Leavengood, S. 2019 *Report for Results of Accelerated Weathering Trial 2* (pp. 14).

Leavengood, S., Rose, R. 2019 *Assessment of (Exterior Door) Thermal Performance, Cupping and Checking* (pp. 14).

Leavengood, S. A., Sinha, A., Miyamoto, B., Clauson, M. L. 2016 *Performance Assessment of Flooring: Effect of Substrate and Installation Method* (pp. 12).

Leavengood, S., Anderson, Q. 2016 *Measurement of bending properties and screw withdrawal strength of cross-laminated oak panels* (pp. 1).

Leavengood, S., Gee, C. 2016 *Assessment of engineered flooring performance* (pp. 13).

Leavengood, S., Vega, S. 2016 *Determination of cause of warp in laminated cabinet panels* (pp. 3).

Leavengood, S., Sinha, A., Miyamoto, B., Clauson, M. L. 2016 *Performance Assessment of Flooring: Effect of Substrate and Installation Method* (pp. 12).

Leavengood, S. 2016 *Development of time-lapse videos for evaluation of mold development on treated plywood.*

Leavengood, S. 2016 *Hardness and Impact Resistance of Flooring Materials* (pp. 5).

Leavengood, S., Robinson, S. C. 2016 *Chinaberry flooring testing* (pp. 2).

Leavengood, S. 2015 *Measurement of bending properties of hardwood plywood* (pp. 2).

Leavengood, S. 2015 *Comparison of hardness for hemlock and Douglas-fir flooring materials* (pp. 1).

Leavengood, S., Leavengood, K. 2015 *Measurement of bending properties of hardwood plywood* (pp. 3).

Leavengood, S. 2015 *Measurement of bending properties of hardwood plywood* (pp. 2).

Leavengood, S., Breedlove, C., Mitchell, W., Gueiros, J., Leavengood, K. 2015 *Assessment of wood quality of hybrid poplar* (pp. 16).

Leavengood, S., Breedlove, C. 2015 *Exploration of variability in post-pressing 'springback' in poplar veneer* (pp. 2).

Leavengood, S. 2015 *Investigating face veneer check development in decorative plywood panels* (pp. 2).

Leavengood, S., Davis, K. J. 2014 *Assessment of impact of grain orientation and species on bending strength of guitar necks* (pp. 2).

Leavengood, S. 2014 *Assessment of adhesive strength for earthquake straps on ceiling panels* (pp. 2).

Leavengood, S. 2014 *Measurement of hardness, screw withdrawal and glueline shear in rubberwood (stem and root wood)* (pp. 5).

Leavengood, S., Trebelhorn, D. 2014 *Assessment of bending strength and screw withdrawal strength of hardwood plywood* (pp. 2).

Leavengood, S. 2014 *Hardness, Impact Resistance and Stability of Flooring Materials* (pp. 13).

Leavengood, S., Trebelhorn, D. 2014 *Use of digital image correlation (DIC) to explore veneer checking on hardwood plywood* (pp. 5).

Leavengood, S. 2014 *Assessment of wood quality of hybrid poplar* (pp. 11).

Leavengood, S. 2014 *Development of time-lapse videos for veneer checking on hardwood plywood* (pp. 2).

Leavengood, S., Evensen, T. 2014 *Identification of insect damage in hardwood plywood* (pp. 1).

Leavengood, S., Evensen, T. 2014 *Determination of cause of discoloration in hardwood flooring in-service* (pp. 2).

Leavengood, S., Evensen, T., Gee, C. 2014 *Assessment of adhesive bond durability in exterior exposure* (pp. 2).

Leavengood, S., Evensen, T., Gee, C. 2014 *Assessment of adhesive bond durability in exterior exposure* (pp. 2).

Leavengood, S., Adams, D., Stuart, D. 2013 *New Product Assessment - bending strength, hardness, and screw withdrawal* (pp. 1).

Leavengood, S., Evensen, T. 2013 *Eucalyptus plywood discoloration assessment* (pp. 14).

Leavengood, S., Evensen, T. 2013 *Adhesive bond testing - comparing domestic and imported pine species* (pp. 6).

Leavengood, S., Evensen, T. 2013 *Determination of hardness and screw withdrawal strength for pine door jambs* (pp. 2).

Leavengood, S. 2012 *Assessment of dry and wet strength of 3 adhesives for laminated wood columns in exterior use* (pp. 1).

Leavengood, S. 2012 *Assessment of dry and wet strength of EPI adhesive for laminated wood columns in exterior use: Confirmation trial (of prior project)* (pp. 1).

Leavengood, S., Roth, T. 2012 *Comparison of hardness and screw withdrawal strength for poplar door jambs* (pp. 1).

- Leavengood, S., Wilson, J. 2012 *Dimensional stability of strand-woven bamboo flooring* (pp. 2).
- Leavengood, S., Wilson, J. 2012 *Evaluation of bending properties of 3 thin panel (2.7 mm) plywood constructions* (pp. 2).
- Leavengood, S., McCulloh, K. 2012 *Evaluation of staining in alder plywood* (pp. 2).
- Leavengood, S., Zumwalt, A., Harry, K. 2012 *Wood Quality of Hybrid Poplar: Within- and Between-Cultivar Variability in Slope of Grain, Hardness, and Machinability* (pp. 15).
- Leavengood, S. 2011 *Assessment of checking in maple veneer*.
- Leavengood, S. 2011 *Assessment of resin exudation in 2 species of tropical hardwoods used for decking*.
- Leavengood, S., Breed, G., Coury, A. 2011 *Color and glue joint test for eucalyptus: Project No. 0854 (Doha Airport)* (pp. 16).
- Leavengood, S. 2011 *Comparison of dimensional stability of fire-killed Douglas-fir lumber from Montana vs. lumber sawn from live trees in Oregon's Coast Range*.
- Leavengood, S. 2011 *Determination of causes of blotchy stain on hardwood plywood panels*.
- Leavengood, S. 2011 *Evaluation of bending properties of 3 thin panel (2.7 mm) plywood constructions* (pp. 2).
- Leavengood, S. 2011 *Evaluation of checking in maple veneer*.
- Leavengood, S. 2011 *Evaluation of wet and dry glue strength of 17 different adhesives for laminating purpleheart lumber*.
- Leavengood, S., Mosier, R.D., Roth, T. 2010 *Results of a designed experiment to minimize warp in unbalanced hardwood plywood panels*.
- Leavengood, S. 2009 *Assessing the causes of dimensional instability in polymer-infused wood* (pp. 5).
- Leavengood, S., Gates, J. 2009 *Mechanical properties of Pacific Coast Poplar* (pp. 1).
- Leavengood, S., Modzel, G. 2009 *Microscopic examination of incense-cedar pencils to identify causes of warp* (pp. 6).
- Leavengood, S., Knowles, C. 2007 *Black walnut veneer from plantations: perceptions of hardwood plywood professionals* (pp. 6).
- Knowles, C., Leavengood, S., Tokarczyk, J. 2007 *Market assessment, options, and opportunities for the Oregon Woodland Cooperative* (pp. 43).
- Leavengood, S., Knowles, C. 2007 *Utilization of woody biomass for bio-based products, biofuels, and bioenergy in Oregon: assessment of barriers, opportunities, and implications for research* (pp. 97).
- Leavengood, S., Knowles, C., Tokarczyk, J. 2006 *Market Assessment, Options and Opportunities for: the Oregon Woodland Cooperative* (pp. 43).

Leavengood, S. 2006 *Results of tests comparing new product to existing products on market* (pp. 4).

Reeb, J., Funck, J. W., Leavengood, S. 1999 *Environmental degradation testing of hardwood plywood* (pp. 5).

Leavengood, S., Swan, L., Breedlove, B. 1997 *Western Juniper Debarking Project* (pp. 4).

Leavengood, S., Swan, L., Breedlove, B. 1997 *Western Juniper Log Storage Project* (pp. 5).

2. Presentations to peers

Summary table of presentations to peers at professional meetings

| Year | Regional | National | International | Annual TOTAL |
|-------|----------|----------|---------------|--------------|
| 1994 | 0 | 0 | 0 | 2 |
| 1995 | 0 | 0 | 0 | 8 |
| 1996 | 2 | 0 | 0 | 13 |
| 1997 | 0 | 0 | 1 | 10 |
| 1998 | 0 | 1 | 0 | 9 |
| 1999 | 1 | 0 | 0 | 9 |
| 2000 | 2 | 0 | 0 | 8 |
| 2001 | 1 | 0 | 2 | 5 |
| 2002 | 0 | 0 | 0 | 2 |
| 2003 | 2 | 0 | 0 | 5 |
| 2004 | 5 | 1 | 3 | 12 |
| 2005 | 0 | 1 | 3 | 7 |
| 2006 | 0 | 1 | 1 | 10 |
| 2007 | 0 | 0 | 1 | 13 |
| 2008 | 2 | 0 | 0 | 5 |
| 2009 | 0 | 0 | 2 | 12 |
| 2010 | 0 | 0 | 3 | 8 |
| 2011 | 6 | 0 | 4 | 16 |
| 2012 | 3 | 0 | 4 | 16 |
| 2013 | 5 | 0 | 8 | 26 |
| 2014 | 10 | 0 | 4 | 14 |
| 2015 | 13 | 3 | 7 | 23 |
| 2016 | 3 | 2 | 4 | 9 |
| 2017 | 6 | 0 | 1 | 7 |
| 2018 | 3 | 3 | 3 | 9 |
| 2019 | 3 | 2 | 1 | 6 |
| 2020 | 4 | 0 | 4 | 10 |
| 2021 | 1 | 0 | 3 | 4 |
| Total | 72 | 14 | 59 | 278 |

a. National presentations

Oral Presentation

Leavengood, S. A. - Presenter, Timber Products Company lunch gathering, "Checking in Maple Plywood," Springfield, OR. (October 2, 2019).

Leavengood, S. A. - Author & Presenter, Hansen, E. N. - Author, The Future of Wood and Forest Products Extension in the United States: A National Workshop, "Wood Products Extension at

Oregon State University – Opportunities for Collaboration with Partners Across the U.S.," Madison, WI. (September 24, 2018).

Wilson, E. * - Author & Presenter, Leavengood, S. A. - Author & Presenter, WHPP Joint Suppliers Meeting, "OSU Update/Opportunities/New Study (maple veneer checking)," Eugene, OR. (September 29, 2016).

Leavengood, S. A. - Author & Presenter, Hansen, E. N. - Author, National Forestry and Wood Products Extension Conference, "The Forest Products Forecast," Cocodrie, LA. (November 2, 2015).

Leavengood, S. A. - Author & Presenter, Spring Meeting, "Veneer Checking Research - Causes and Cures," Monterey, CA. (May 19, 2015).

Leavengood, S. - Author & Presenter, Northeast U&M Council 2005 Meeting, "Forest Products Extension in Oregon," Clarksville, IN. (June 5, 2005).

Leavengood, S. - Author & Presenter, SmallWood 2004, "Community-Based Opportunities for Improved Log Markets," Sacramento, CA. (May 20, 2004).

Leavengood, S. - Author & Presenter, First Extension Natural Resources Conference, "The Western Juniper Commercialization Project: Building an Industry Through Collaboration," Deerwood, Minnesota. (May 19, 1998).

Panel

Leavengood, S. A. - Panelist, Mora, M. - Panelist, Lipke, M. - Panelist, Western Hardwood Association Annual Convention, "Wood Modification: Acetylation 101," Portland, OR. (September 12, 2019).

Leavengood, S. A., USDA Forest Service - National Wood Innovation Team Meeting, "Wood Products Extension - A National Overview," Columbia Falls, MT. (May 23, 2018).

Leavengood, S. A. - Moderator, Living Futures Conference 2018, "Restoring our Nation's Forests and Rangelands through Construction," Portland, OR. (May 4, 2018).

Paper

Leavengood, S. - Author & Presenter, A Southern Region Conference on Technology Transfer and Extension in Natural Resources, "Using the Web to Facilitate Extension Program Delivery and Management," Hot Springs, AR. (August 4, 2006).

Session

Leavengood, S. A. - Author & Presenter, Industry Advisory Board meeting, "Maple Veneer Checking Project Update," Atlanta, GA. (April 5, 2016).

Leavengood, S. A. - Author & Presenter, Industry Advisory Board meeting, "Maple Veneer Checking Project Update," Corvallis, OR. (October 14, 2015).

b. International presentations

Keynote/Plenary Address

Leavengood, S. A. - Author & Presenter, Expo Forestal, "Innovation in Forest Products: Successes and Lessons Learned," Guadalajara, Mexico. (October 30, 2014).

Lecture

Leavengood, S. A. - Author & Presenter, An Introduction to American Softwoods, "Introduction to Softwood Lumber Grading," Online; participants in Morocco. (October 5, 2020).

Leavengood, S. A., University of Primorska, "The Oregon Wood Innovation Center: Fostering Innovation in Oregon's Forest Sector," Koper, Slovenia. (August 2, 2018).

Leavengood, S. A., IUFRO Working Party 5.04.13 (Ind Eng, Oper Analysis, & Logistics), "Statistical Process Control (SPC): A Time-Tested Tool for Process Control and Improvement," Blacksburg, VA (via WebEx). (March 20, 2018).

Leavengood, S. A., University of Tasmania, Centre for Sustainable Architecture with Wood, "The Oregon Wood Innovation Center: Fostering Innovation in Oregon's Forest Sector," Launceston, Australia. (October 2, 2017).

Knowles, C. D. - Author, Leavengood, S. A. - Author & Presenter, Hansen, E. N. - Author & Presenter, Forestry Course at Nanjing Forestry University, "Applications in American Softwoods," Nanjing, China. (November 19, 2015).

Knowles, C. D. - Author, Leavengood, S. A. - Author & Presenter, Hansen, E. N. - Author & Presenter, Forestry Course at Beijing Forestry University, "Applications in American Softwoods," Beijing, China. (November 18, 2015).

Leavengood, S. A. - Author & Presenter, Tianjin Timber Industry Association, "Lumber Grading 101," Tianjin, China. (November 16, 2015).

Leavengood, S. A. - Author & Presenter, Forestry Course at University of Guadalajara, "Innovation in Forest Products: Successes and Lessons Learned," Guadalajara, Mexico. (October 31, 2014).

Leavengood, S. A. - Author & Presenter, Forestry Course at University of Guadalajara, "Wood Products Innovation: What Might the Future Hold?," Guadalajara, Mexico. (October 31, 2014).

Oral Presentation

Leavengood, S. - Author & Presenter, Processing Technologies for the Forest & Biobased Products Industries, "Teaching Lean Manufacturing Principles via Remote Instruction," St. Simons Island, GA. (November 2, 2021).

Gisip, J. - Chair, Leavengood, S. A. - Moderator, IUFRO World Day: Digital Forest Science Forum 2021, "Special Presentation on the Adoption of Industry 4.0 in the Wood Products Manufacturing Industry," Online. (September 28, 2021).

Pipiska, T. - Author & Presenter, Leavengood, S. A. - Author, Kamke, F. - Author, 10th European Conference on Wood Modification, "Impregnation of the strands with juniper essential oil for manufacturing strandboards," Nancy, France. (November 10, 2020).

Legg, B., Dorfner, B., Leavengood, S. A., Hansen, E. N., SWST 2019 International Convention, "Industry 4.0 Readiness in the US Forest Industry," Yosemite, California. (October 2019).

Wilson, E.* - Author, Leavengood, S. - Author & Presenter, Muszynski, L. - Author, Forest Products Society International Convention, "A Novel Method to Dynamically Identify and Measure Checking in Hardwood Plywood," Madison, WI. (June 13, 2018).

Leavengood, S. A. - Author & Presenter, Scion All-Staff Seminar, "The Oregon Wood Innovation Center: Fostering Innovation in Oregon's Forest Sector," Rotorua, New Zealand. (August 30, 2016).

Miyamoto, B.* , Sinha, A., Morrell, J. J., Leavengood, S. A., 70th Forest Products Society International Convention, "Utilization of western juniper in the pacific northwest," Portland, OR. (June 2016).

Hansen, E. N. - Author & Presenter, Leavengood, S. A. - Author & Presenter, International Week, "Industry-University Collaboration at Oregon State University," Kuopio, Finland. (February 11, 2015).

Leavengood, S. A. - Author & Presenter, Visiting faculty and students, "An Introduction to the Oregon Wood Innovation Center," Corvalls, OR. (April 2, 2014).

Hansen, E. N. - Author & Presenter, Leavengood, S. A. - Author, "The Role of the Forest Sector in a Bio-Based Economy: North American Perspective," Rovaniemi, Finland. (December 13, 2013).

Leavengood, S. - Author & Presenter, 2nd Biennial International Conference on Processing Technologies for the Biobased Products Industries, "Case Examples in Process Improvement for Biobased Products Firms," St. Simons Island, GA. (November 7, 2012).

Leavengood, S. - Author & Presenter, Flagor, T. - Author, 2nd Biennial International Conference on Processing Technologies for the Biobased Products Industries, "Lean Manufacturing at Roseburg Forest Products: A Case Example," St. Simons Island, GA. (November 6, 2012).

Leavengood, S. - Author & Presenter, Funck, J. W. - Author, Reeb, J. - Author, 2nd International Symposium on Veneer Processing and Products, "Face Veneer Checking in Maple Plywood," Vancouver, B.C., Canada. (May 10, 2006).

Leavengood, S. - Author & Presenter, Forest Products Society Annual Meeting, "The Internet: 'One More Chore', or a Tool for Busy Extension Professionals?," Grand Rapids, MI. (June 30, 2004).

Leavengood, S. - Author & Presenter, Love, R. - Author & Presenter, International Value-Added Wood Processing Conference, "Educational Tactics Reaching Small to Medium Sized Wood Products Firms: What's Working, What's Not," Vancouver, B.C., Canada. (November 14, 1997).

Paper

Himes, A.* - Author & Presenter, Leavengood, S. A. - Author, Wood QC 2016: Modelling Wood Quality, Supply, and Value Chain Networks, "Within-tree and between-cultivar variability of poplar wood quality," Quebec, Canada. (June 17, 2016).

Leavengood, S. A. - Author & Presenter, IUFRO Extension Knowledge Exchange, "Integrating Extension with Teaching and Research," Galway, Ireland. (October 1, 2015).

Burnard, M. D.* - Author & Presenter, Leavengood, S. - Author, Muszynski, L. - Author, Ganio, L. M. - Author, Forest Products Society International Convention, "Assessing Check Development in Maple Veneer Plywood," Austin, TX. (June 10, 2013).

Burnard, M. D.* - Author & Presenter, Muszynski, L. - Author, Leavengood, S. - Author, Forest Products Society International Convention, "Rapid Assessment of Check Development in Veneer Overlays," Austin, TX. (June 10, 2013).

Burnard, M. D.*, Leavengood, S., Muszynski, L., Ganio, L., International Wood Composites Symposium, "State of the Art in Hardwood Veneer Checking Research," Seattle, WA. (April 3, 2013).

Burnard, M. D.*, Leavengood, S., Muszynski, L., Ganio, L., Forest Products Society International Convention, "Assessing Check Development in Maple Veneer Plywood," Washington D.C. (June 5, 2012).

Leavengood, S. - Author & Presenter, Anderson, T. R. - Author, Portland International Conference on Management of Engineering and Technology (PICMET), "Best Practices in Quality Management for Innovation Performance," Portland, OR. (August 1, 2011).

Burnard, M. D. - Author & Presenter, Muszynski, L. - Author, Leavengood, S. - Author, Ganio, L. - Author, Forest Products Society International Convention, "Automated Optical Method for Measurement and Characterization of Face Check Development in Maple Veneered Panels," Portland, OR. (June 19, 2011).

Leavengood, S. - Author & Presenter, Anderson, T. R. - Author, International Union of Forest Research Organizations (IUFRO) XXIII World Congress, "Best Practices in Quality Management for Innovation Performance," Seoul, Republic of Korea. (August 25, 2010).

Leavengood, S. - Author & Presenter, Anderson, T. R. - Author, Forest Products Society International Convention, "Best Practices in Quality Management for Achieving Innovation Performance.," Madison, WI. (June 22, 2010).

Leavengood, S. - Author & Presenter, Anderson, T. R. - Author, Portland International Conference on Management of Engineering and Technology (PICMET)., "Best Practices in Quality Management for Achieving Quality and Innovation Performance (preliminary results)," Portland, OR. (August 5, 2009).

Lamb, A.-M. - Author & Presenter, Daim, T. - Author, Leavengood, S. - Author, Portland International Conference on Management of Engineering and Technology (PICMET)., "Technology Roadmap: Wood/Bio-energy Pellet "Renewable Energy.," Portland, OR. (August 3, 2009).

Leavengood, S. - Author & Presenter, Swan, L. - Author, Forest Products Society International Convention, "Curve Sawing Douglas-fir Logs with Significant Sweep Using a Sash Gang," Knoxville, Tennessee. (June 13, 2007).

Bowe, S. - Author & Presenter, Leavengood, S. - Author, Dramm, J. - Author, Forest Products Society International Convention, "Efforts to Facilitate Communication among Utilization and Marketing Professionals in the U.S.," Quebec City, QC, Canada. (June 22, 2005).

Vlosky, R. - Author & Presenter, Kallioranta, S. M.* - Author, Leavengood, S. - Author, Forest Products Society International Convention, "Web-Based Forest Sector Communities as Drivers for Economic Development," Quebec City, QC, Canada. (June 20, 2005).

Vlosky, R. - Author & Presenter, Kallioranta, S. M.* - Author, Leavengood, S. - Author, Manufacturing Competitiveness Conference, "State-Level Forest Sector Web-Based Communities: Developing a Competitive Edge.," New Orleans, LA. (November 5, 2004).

Leavengood, S. - Author & Presenter, Portland International Conference on Management of Engineering and Technology (PICMET)., "Increasing Production Capacity of a Work Cell Using Modeling and Simulation," Portland, OR. (July 31, 2001).

Leavengood, S. - Author & Presenter, Forest Products Society Annual Meeting, "Increasing Production Capacity of a Work Cell Using Modeling and Simulation," Baltimore, MD. (June 26, 2001).

Poster

Pipiska, T. - Author & Presenter, Leavengood, S. A. - Author, Kamke, F. - Author, Society for Wood Science and Technology Annual Meeting, "Utilization of Juniper residues for strandboard manufacturing," Portoroz, Slovenia. (July 13, 2020).

Burnard, M.* - Author & Presenter, Muszynski, L. - Author, Leavengood, S. - Author, Joint Conference FP0904 and FP1006 "Characterization of modified wood in relation to wood bonding and coating performance," "Rapid Assessment of Check Development in Veneer Overlays," Rogla, Slovenia. (October 16, 2013).

Burnard, M. D.* - Author & Presenter, Muszynski, L. - Author, Leavengood, S. - Author, Ganio, L. - Author, MeMoWood, "An Automated Optical Method for Assessing Surface Check Development in Veneer Overlays," Nancy, France. (October 3, 2013).

Burnard, M. D. - Author & Presenter, Leavengood, S. - Author, Muszynski, L. - Author, Ganio, L. - Author, Forest Products Society International Convention, "Assessing Check Development in Maple Veneer Plywood," Austin, TX. (June 10, 2013).

Burnard, M. D.* - Author & Presenter, Muszynski, L. - Author, Leavengood, S. - Author, Forest Products Society International Convention, "Rapid Assessment of Check Development in Veneer Overlays," Austin, TX. (June 10, 2013).

Leavengood, S. - Author & Presenter, Knowles, C. - Author, Hansen, E. N. - Author, Divison 5: Forest Products Meeting, "The Oregon Wood Innovation Center: Lessons Learned in the First Six Years of Operation," Lisbon, Portugal. (July 8, 2012).

Burnard, M. D.* - Author & Presenter, Muszynski, L. - Author, Leavengood, S. - Author, Ganio, L. - Author, Forest Products Society International Convention, "Measuring and Characterizing Face Checking Development in Maple Veneered Panels using Digital Image Correlation," Portland, OR. (June 20, 2011).

Orozco, N. C., Hansen, E. N., Knowles, C., Leavengood, S., Forest Products Society International Convention, "The Innovation System of Oregon's Forest Product Industry.," Portland, OR. (June 20, 2011).

Leavengood, S. - Author & Presenter, Anderson, T. R. - Author, SWST International Convention, "Best Practices in Quality Management for Innovation Performance," Geneva, Switzerland. (October 12, 2010).

Vlosky, R. - Author & Presenter, Kallioranta, S. M.* - Author, Leavengood, S. - Author, Forest Products Society International Convention, "Web-Based Forest Sector Communities as Drivers for Economic Development," Quebec City, QC, Canada. (June 20, 2005).

Vlosky, R. - Author & Presenter, Kallioranta, S. M.* - Author, Leavengood, S. - Author, Manufacturing Competitiveness Conference, "State-Level Forest Sector Web-Based Communities: Developing a Competitive Edge," New Orleans, LA. (November 5, 2004).

Roundtable

Leavengood, S. A. - Author & Presenter, Chilean forestry delegation, "Developing markets for lesser-known species: The case of western juniper in Oregon," Corvallis, OR. (October 11, 2016).

Session

Leavengood, S. A. - Chair, Quesada, H. - Co-Chair, Forest Products Society Virtual International Conference 2021, "Operations Improvement in the Forest Products Industry," Online. (June 17, 2021).

Leavengood, S. A. - Chair, Quesada, H. - Co-Chair, Forest Products Society Virtual International Conference 2020, "Operations Improvement in the Forest Products Industry," Online. (July 27, 2020).

Leavengood, S. A. - Author & Presenter, Sylva Wood, "What's new in forest industry innovation?," Shanghai, China. (June 30, 2015).

Video-Recorded Presentation

Leavengood, S. A. - Author & Presenter, Hansen, E. N. - Author & Presenter, LIIDERi, Tekes program for business renewal, ""How do we do what we do?" - Presentation about OWIC and FNR Extension work with university-industry partnerships," Kuopio, Finland. (November 4, 2015).

c. Regional presentations

Demonstration

Leavengood, S. - Presenter, Maloney, A. - Coordinator/Organizer, Buck, D. - Coordinator/Organizer, Thomas, S. - Coordinator/Organizer, Sater, A. - Coordinator/Organizer, Howell, L. - Coordinator/Organizer, Project Learning Tree, "Demonstrations on Forestry and Wood Science," Hillsboro, OR. (January 27, 2004).

Lecture

Leavengood, S. A., Virginia Tech SBIO 3445-3446: Entrepreneurial wood design and innovation, "Intro to Quality Management and Quality Control," Blacksburg, VA (via WebEx). (October 23, 2018).

Leavengood, S. A., Virginia Tech SBIO 3445-3446: Entrepreneurial wood design and innovation, "Intro to Quality Management and Quality Control," Blacksburg, VA (via WebEx). (November 2, 2017).

Oral Presentation

Leavengood, S., SWERI Wood Utilization Team Webinar, "The Quality Management-Innovation Connection," Online. (March 2, 2021).

Leavengood, S. A. - Author & Presenter, 25th Annual Family Foresters Workshop, "Up and Coming Wood Products," Coeur d'Alene, ID. (January 20, 2017).

Leavengood, S. A. - Author & Presenter, Monthly evening lectures, "Innovation in Wood Use," McMinnville, OR. (February 24, 2016).

Leavengood, S. A. - Author & Presenter, Western Hardwood Association International Convention & Exposition, "Innovation in Wood Use," Portland, OR. (August 19, 2015).

Leavengood, S. A. - Author & Presenter, Friday evening interpretive presentations/lectures, "The Wonderful World of Wood Innovation," Loon Lake Campground, OR. (August 7, 2015).

Leavengood, S. A. - Author & Presenter, Tree School, "The Wonderful World of Wood Innovation/ Update on the Oregon Wood Innovation Center," Oregon City, OR. (March 21, 2015).

Leavengood, S. A. - Author & Presenter, Monthly evening lectures, "Log Markets of the Future: What's New in Wood Innovation?," Central Point, OR. (March 19, 2015).

Leavengood, S. A. - Author & Presenter, Monthly evening lectures, "Wood Innovation - Future Markets for Eastern Oregon Logs," La Grande, OR. (November 13, 2014).

Leavengood, S. A. - Author & Presenter, Monthly evening lectures, "Wood Innovation - Future Markets for Eastern Oregon Logs," Enterprise, OR. (November 12, 2014).

Leavengood, S. A. - Author & Presenter, Western Hardwood Association International Convention & Exposition, "Innovation in Wood Use," Portland, OR. (May 21, 2014).

Leavengood, S. A. - Author & Presenter, Tree School, "The Wonderful World of Wood Innovation/ Update on the Oregon Wood Innovation Center," Oregon City, OR. (March 22, 2014).

Lowell, E. C. - Author & Presenter, Leavengood, S. - Author & Presenter, Pilot Supply Chain meeting, "Regional Focus: Oregon and Washington potential study region - assets overview and stakeholder involvement.," Vancouver, WA. (May 21, 2013).

Leavengood, S., NARA Annual Meeting, "NARA Outreach Activities in Oregon," Missoula, MT. (September 14, 2012).

Leavengood, S., Seminar for WSE 507, "Curve-Sawing Douglas-fir Logs with Significant Sweep Using a Sash Gang," Corvallis, OR. (October 5, 2011).

Leavengood, S., StructureOregon, "Native Oregon wood species: Properties and applications," Portland, OR. (June 1, 2011).

Leavengood, S. - Author & Presenter, NWPAA Annual Meeting, "Small-Scale Drying: The solution to maximizing use of under-utilized species?," Eugene, OR. (December 6, 2001).

Leavengood, S. - Author & Presenter, Industry Advisory Council Annual Meeting, "Statistical Process Control (SPC). Part I: An Introduction and Part II: Practical Applications of SPC in Wood Products Manufacturing," Eugene, OR. (November 16, 2000).

Leavengood, S. - Author & Presenter, Southern Oregon Quality Conference, "Introduction to Statistical Process Control," Klamath Falls, OR. (August 11, 2000).

Leavengood, S. - Author & Presenter, Central Oregon Quality Conference, "Statistical Process Control: Measuring and Improving Your Bottom Line," Redmond, OR. (November 18, 1999).

Panel

Leavengood, S. - Panelist, Brock, D. - Panelist, Gaudern, M. - Panelist, Eastern Oregon Small Diameter Wood Products Fair, "Marketing Small Diameter and Under-Utilized Wood Products: Connecting Small Woodland Owners with Manufacturers," La Grande, OR. (March 3, 2004).

Leavengood, S. - Panelist, LeVan, S. - Panelist, Gorman, T. - Panelist, Eastern Oregon Small Diameter Wood Products Fair, "Product Development and Innovations: What You Need to Know," La Grande, OR. (March 2, 2004).

Roundtable

Leavengood, S. A. - Author & Presenter, Wood Lunch, "Intra-Ring Checking in Radiata Pine," Corvallis, OR. (January 18, 2017).

Leavengood, S., Western Wood Products Association (WWPA) inspection and audit staff, "Quality Control Intro," Portland, OR. (June 27, 2013).

Session

Leavengood, S. - Author & Presenter, Henley High School forestry class, "Hybrid Poplar: Overview and Research in Klamath County," Klamath Falls, OR. (November 25, 1996).

3. Grant and contract support

Grant support

| Years | Funder | Total Award | My Portion | My Role |
|--|--|-------------|------------|--------------|
| 2022 - Present | N/A - Bringing People onto the Extension Career Path | | | Supporting |
| November 2021 - Present | Oregon Forest Resources Institute - Get Ready for Opportunities at Work (GROW): Professional Development for FNR Extension | | | Supporting |
| August 2, 2017 - Present | University of Primorska, Slovenia - Innovation and Research Management for Improved Renewable Material Processing - Bilateral Project | | | Co-Principal |
| February 1, 2020 - September 15, 2021 | VertueLab - Materials Testing for Reclaimed Wood Panel Products | \$26,450 | | |
| August 6, 2021 - March 31, 2021 | Anonymous #2021-3 - Accelerated weathering tests of new siding products | \$37,800 | | Principal |
| July 2010 - July 2021 | Various corporations - WBC member fees | \$2,482,754 | \$121,000 | Co-Principal |
| September 27, 2018 - December 31, 2020 | Business Oregon (contract via Sustainable Northwest) - Scaling Juniper Markets: Sustainable Solutions for Rangelands and Rural Communities | \$244,741 | \$183,556 | Co-Principal |
| July 13, 2020 - August 13, 2020 | Anonymous #2020-9 - Measuring warp and checking in new mass LVL products | \$5,400 | | Principal |
| July 13, 2020 - August 3, 2020 | Anonymous #2020-10 - Measuring shrinkage, checking, and moisture penetration into mass timber columns | \$3,800 | | Principal |

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| June 3, 2020 - July 6, 2020 | Anonymous #2020-7 - Accelerated weathering tests of new siding products | \$9,000 | | Principal |
| February 11, 2020 - May 29, 2020 | Anonymous #2020-3 and 6 - Bending tests of new coated closet poles | \$3,100 | | Principal |
| January 23, 2020 - February 13, 2020 | Anonymous #2020-2 - Assessing warp and mold development in interior doors | \$1,920 | | Principal |
| December 12, 2019 - January 13, 2020 | Anonymous #2020-1 - Accelerated weathering testing of mass timber beams | \$1,800 | | Principal |
| December 12, 2019 - December 13, 2019 | Anonymous #2019-12 - Strength testing of mattress frame material (for patent application) | \$350 | | Principal |
| September 8, 2019 - September 30, 2019 | Anonymous #2019-10 - Durability testing of engineered wood flooring | \$320 | | Principal |
| May 1, 2019 - June 15, 2019 | Anonymous #2019-6 - Assessment of new hardwood plywood products | \$1,400 | | Principal |
| April 8, 2019 - April 12, 2019 | Anonymous #2019-5 - Assessment of new wax emulsions for particleboard | \$6,900 | | Principal |
| March 1, 2019 - March 15, 2019 | Anonymous #2019-3 - Evaluation of checking in phenolic-impregnated radiata pine panels | \$500 | | Principal |
| February 5, 2019 - March 12, 2019 | Anonymous #2019-2 - Accelerated weathering of door skin panels - Phase 2 | \$2,500 | | Principal |
| December 15, 2018 - February 28, 2019 | Anonymous #2019-1 - Testing of insulated exterior doors and door panels | \$1,250 | | Principal |
| November 6, 2018 - December 6, 2018 | Anonymous #2018-2 - Accelerated weathering of door skin panels | \$2,500 | | Principal |
| September 10, 2018 | Anonymous #2018-1 - Assessment of mechanical and physical properties of thermally modified pine | \$4,600 | | Principal |
| January 10, 2018 - January 17, 2018 | Anonymous #2017-16 - Internal wood stabilizer testing for western juniper | \$1,600 | | Principal |
| June 1, 2017 - December 31, 2017 | Anonymous #2017-3 - Assessment of properties | \$10,000 | | Principal |

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| | of acetylated wood and competitor products | | | |
| 2017 | Anonymous #2016-12 - Assessment of engineered flooring performance | \$13,800 | | Principal |
| 2017 | Anonymous #2016-14 - Measurement of bending properties and screw withdrawal strength of cross-laminated oak panels | \$500 | | Principal |
| 2017 | Anonymous #2016-15 - Measurement of bending properties of baseball bats | \$500 | | Principal |
| 2017 | Anonymous #2017-13 - Testing of bending properties of hardwood plywood | | | Principal |
| 2017 | Anonymous #2017-2 - Wood identification - face and back veneer of imported plywood | \$500 | | Principal |
| January 5, 2016 - December 31, 2017 | Wood-Based Composites Center - Checking in Maple Plywood | \$62,571 | \$31,057 | Co-Principal |
| December 10, 2017 - December 20, 2017 | Anonymous #2017-17 - Testing of bending and screw withdrawal properties of hardwood plywood | \$565 | | Principal |
| December 1, 2017 - December 7, 2017 | Anonymous #2017-18 - Comparison of Chinese vs. Japanese sugi | \$1,400 | | Principal |
| September 19, 2017 | Anonymous #2017-14 - Testing of Japanese sugi | \$730 | | Principal |
| February 8, 2017 - June 11, 2017 | Anonymous #2017-1 - Testing of palm products | \$4,460 | | Principal |
| May 31, 2017 - June 6, 2017 | Anonymous #2017-12 - Bending properties of hardwood plywood | \$440 | | Principal |
| February 5, 2017 - April 20, 2017 | Anonymous #2017-7, 9, 10, 11 - Hardwood plywood testing | \$1,725 | | Principal |
| February 5, 2017 - March 3, 2017 | Anonymous #2017-5 - Hardness and heartwood ID for southern yellow pine flooring specimens | \$395 | | Principal |
| 2016 | Anonymous #2016-4 - Chinaberry flooring testing | \$400 | | Principal |
| 2016 | Anonymous #2016-11 - Determination of cause of warp in laminated cabinet panels | \$400 | | Principal |
| 2016 | Anonymous #2016-8 - Development of time- | \$500 | | Principal |

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| | lapse videos for evaluation of mold development on treated plywood | | | |
| 2016 | Exquisite Surfaces - Floor panel reclaimability evaluation | \$10,000 | | Co-Principal |
| 2016 | Anonymous #2016-6 - Hardness and Impact Resistance of Flooring Materials | \$650 | | Principal |
| 2016 | Anonymous #2016-2 - Performance Assessment of Flooring: Effect of Substrate and Installation Method | \$3,200 | | Principal |
| December 2014 - December 2016 | Sustainable Northwest - Development of engineering design values for use of Western Juniper | \$93,000 | \$11,000 | Co-Principal |
| 2011 - 2016 | USDA AFRI NIFA - Extension and Outreach component of Northwest Advanced Renewables Alliance (NARA). | \$191,492 | | |
| 2015 | USDA Special Grant for Wood Utilization Research - Checking in Maple Plywood | \$62,571 | | Co-Principal |
| 2015 | Research Equipment Reserve Fund, Research Office - DIC/DVC Optical Measurement System: Increasing Access, Restoring Functionality and Upgrade | \$49,609 | | Co-Principal |
| 2015 | Anonymous #2015-16 - Exploration of variability in post-pressing 'springback' in poplar veneer | \$450 | | Principal |
| 2015 | Anonymous #2015-5 - Investigating face veneer check development in decorative plywood panels and cause of 'striped' pattern in panels | \$1,050 | | Principal |
| 2015 | 2015-20 - Measurement of bending properties of hardwood plywood | \$350 | | Principal |
| 2015 | Anonymous #2015-19 - Measurement of bending properties of hardwood plywood | \$470 | | Principal |
| 2015 | Anonymous #2015-18 - Producing innovative | \$7,000 | | Co-Principal |

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| | composite products from Oregon vineyard residues | | | |
| 2015 | Anonymous #2015-6 - Wood Quality of Pacific Albus | \$14,200 | \$14,200 | Principal |
| 2014 | 2014-5 - Assessment of adhesive bond durability in exterior exposure | \$800 | | Principal |
| 2014 | Anonymous #2014-14 - Assessment of adhesive bond durability in exterior exposure | \$600 | | Principal |
| 2014 | Anonymous #2014-26 - Assessment of adhesive strength for earthquake straps on ceiling panels | \$200 | | Principal |
| 2014 | Anonymous #2014-18 - Assessment of bending strength and screw withdrawal strength of hardwood plywood | \$800 | | Principal |
| 2014 | Anonymous #2014-27 - Assessment of impact of grain orientation and species on bending strength of guitar necks | \$200 | | Principal |
| 2014 | Anonymous #2014-25 - Assessment of wood quality of hybrid poplar | \$7,478 | | Principal |
| 2014 | Anonymous #2014-1 - Development of time-lapse videos for veneer checking on hardwood plywood | \$1,820 | | Principal |
| 2014 | Anonymous #2014-12 - Hardness, Impact Resistance and Stability of Flooring Materials | \$1,800 | | Principal |
| 2014 | Anonymous #2014-19 - Measurement of hardness, screw withdrawal and glueline shear in rubberwood (stem and root wood) | \$1,260 | | Principal |
| 2014 | Anonymous #2014-9 - Use of digital image correlation (DIC) to explore veneer checking on hardwood plywood | \$1,100 | | Principal |
| 2013 | Anonymous #2013-2 - Adhesive bond testing - comparing domestic and imported pine species | \$320 | | Principal |
| 2013 | Anonymous #2013-1 - Determination of hardness | \$240 | | Principal |

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| | and screw withdrawal strength for pine door jambs | | | |
| 2013 | Anonymous #2013-25 - Eucalyptus plywood discoloration assessment | \$8,700 | | Principal |
| 2013 | Anonymous #2013-21 - New Product Assessment - bending strength, hardness, and screw withdrawal | \$350 | | Principal |
| 2010 - 2012 | OSU Center for Wood Utilization Research - Key Variables Influencing Checking in Maple Veneer Plywood. | \$55,771 | | Principal |
| 2011 | Anonymous (same as for 2013-3) - Color and Glue Joint Test for Eucalyptus (Project No. 0854 – Doha Airport). | \$2,500 | \$2,500 | Principal |
| 2011 | Same as for 2013-22 - Wood Quality of Pacific Albus | \$5,000 | \$5,000 | Principal |
| 2010 | USDA Special Grant for Wood Utilization Research - An Assessment and Evaluation of Oregon's Wood Products Innovation System | \$51,224 | | Co-Principal |
| 2010 | USDA Special Grant for Wood Utilization Research - Minimizing Checking in Maple Plywood | \$55,771 | | Co-Principal |
| 2009 | USDA Special Grant for Wood Utilization Research - Identifying customer relationship management practices that foster innovation. | \$40,601 | | Principal |
| 2009 | Anonymous (same as for 2013-14) - Microscopic examination of incense-cedar pencils to identify causes of warp | \$955 | | Principal |
| 2008 | Enhanced Wood Products - Determination of mechanical properties of resin-impregnated wood | \$300 | | Co-Principal |
| 2008 | Anonymous (same as for 2013-14) - Identifying the causes of excessive shrinking & swelling in incense-cedar pencil slats | \$820 | | Principal |

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| 2008 | Identifying the Relevance of "Family Forest" and "Family Business" Wood Product Origin for Industrial and Final Consumers | | | |
| 2008 | Yuan Chang - Mechanical and physical properties of tauari wood | \$0 | | Co-Principal |
| 2007 | Anonymous #Older 2007-1 - Black walnut veneer from plantations: Perceptions of hardwood plywood professionals | \$1,970 | | Principal |
| 2007 | Totem Forest Products - Mechanical and physical properties of new plywood panel constructions in comparison with competitive products: Phase II | \$1,180 | | Principal |
| 2007 | Collins Products - Mechanical and physical properties of Pacific albus (hybrid poplar) wood | \$1,700 | | Principal |
| 2007 | Peterson Pacific - Moisture retention of 3 size classes of mulch produced by 2 machines | \$640 | | Co-Principal |
| 2007 | Woody Biomass in Oregon: Current Uses, Barriers and Opportunities for Increased Utilization, and Research Needs | | | |
| 2007 | Oregon BEST - Woody Biomass in Oregon: Current Uses, Barriers and Opportunities for Increased Utilization, and Research Needs | \$12,500 | | Co-Principal |
| 2006 | Market Assessment in Support of Business Plan Development for Oregon Woodland Cooperative | | | |
| 2006 | Oregon Woodland Cooperative - Market Assessment in Support of Business Plan Development for Oregon Woodland Cooperative | \$6,000 | | Co-Principal |
| 2006 | Totem Forest Products - Mechanical and physical properties of new plywood panel constructions in comparison with | \$2,584 | | Principal |

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| | competitive products: Phase I | | | |
| 2006 | Sustainable Northwest - Upgrades to Oregon Forest Industry Directory | \$3,600 | | Principal |
| 2005 - 2006 | Oregon WOOD FEST | | | |
| October 2003 - June 2004 | Oregon Forest Resources Institute - Understanding Changing Markets and Opportunities for Oregon Forest Products and Services Workshops | \$37,998 | | Co-Principal |
| 2002 - 2003 | Improving Markets for Large Logs | | | |
| November 2003 | OSU Extension Association - Funds for graduate coursework at Portland State University | \$400 | | |
| October 2002 - September 2003 | Northwest Oregon Economic Alliance - Improving Markets for Large Logs | \$34,212 | | Co-Principal |
| July 2001 | OSU Extension Association - Funds for the Forest Products Society's Annual Meeting | \$300 | | |
| January 2000 | OSU Extension Association - Funds for Experimental Design Made Easy workshop (Stat Ease Inc.) | \$450 | | |
| December 1998 - September 1999 | Northwest Oregon Economic Alliance - Training and assistance in Statistical Process Control | \$2,000 | | Principal |
| June 1996 - June 1997 | OSU Extension Association - AutoCAD 1, 2, and 3, Oregon Institute of Technology Continuing Education | | | Principal |
| September 1996 - December 1996 | OSU Forestry Extension - Wood Technology for Forestry Extension short course | \$3,000 | | Principal |
| May 1995 - May 1996 | OSU Forestry Extension - Library of Wood Products Information for Forestry Extension | \$10,000 | | Principal |
| TOTAL | | \$3,728,757 | \$368,313 | |

4. Patent awards, releases, and inventions.

None

5. Other information appropriate to the discipline.

Membership in Professional Societies

Forest Products Society. (1989 – present).

Society of Wood Science & Technology. (1992 - present).

American Society for Quality. (1989 - present).

Professional development:

New Beginnings for Tribal Students: Part 2 - Mentoring Indigenous Students in STEM. Workshop, Oregon State University. (April 26, 2022). Corvallis, OR, USA.

New Beginnings for Tribal Students: Part 1 - Introduction to Oregon's Indigenous History. Self-Study Program, Oregon State University. (March 15, 2022 - April 20, 2022). Corvallis, OR, USA.

Implicit Bias Module Series. Self-Study Program, Kirwan Institute for the Study of Race and Ethnicity, Ohio State University. (February 27, 2022 - February 28, 2022). Columbus, OH, USA.

DEI Hour. Conversation with coworkers, FNR Extension. (September 1, 2021 - November 1, 2021). Corvallis, OR, USA.

Quality 4.0 Summit. Conference Attendance, American Society for Quality. (October 25, 2021 - October 27, 2021). Milwaukee, WI, USA.

Mother to Son: Letters to a Black Boy on Identity and Hope (Jasmine L. Holmes, author). Book Study, Calvin Presbyterian Church. (February 3, 2021 - March 31, 2021). Corvallis, OR, USA.

Navigating Bias. Workshop, OSU Office of Institutional Diversity. (March 8, 2021). USA.

Groundwater Presentation on Structural Racism. Seminar, Racial Equity Institute (part of OSU Extension Annual Conference). (December 7, 2020). USA.

Arena Simulation Virtual Academic Symposium. Workshop, Rockwell Automation. (September 30, 2020). Pittsburgh, PA, USA.

Stat-Ease Academy. Workshop, Stat-Ease Corporation. (April 16, 2020 - May 11, 2020). Minneapolis, MN, USA.

Simulation Essentials. Workshop, ProModel Corporation. (July 18, 2017 - July 20, 2017). Orem, UT, USA.

Research study leave to explore causes of intra-ring checking in radiata pine. Self-Study Program, Scion. (June 8, 2016 - August 31, 2016). Rotorua, Bay of Plenty, New Zealand.

Portland International Conference on Management of Engineering & Technology (PICMET). Portland State University Department of Engineering & Technology Management. (2001 - 2009). Portland, OR.

Symposium on Quality Function Deployment (QFD). QFD Institute. (September 17, 2005).

Introduction to Food Business. OSU's Food Innovation Center. (September 15, 2005).

Discrete Systems Simulation (SySc 527). Systems Science/ Engineering & Technology Management at Portland State University. (2004).

Productivity Analysis (EMGT 637). Systems Science/ Engineering & Technology Management at Portland State University. (2004).

Technology Marketing (EMGT 655). Systems Science/ Engineering & Technology Management at Portland State University. (2004).

Forest Products Society Annual Meeting. Forest Products Society. (1995 - 2004).

Sabbatic Leave. (July 2004 - November 2004).

Communication & Team Building (EMGT 622). Systems Science/ Engineering & Technology Management at Portland State University. (2003).

Research Methods in Engineering & Technology Management (EMGT 665). Systems Science/ Engineering & Technology Management at Portland State University. (2003).

System Dynamics (SySc 514). Systems Science/ Engineering & Technology Management at Portland State University. (2003).

Systems Approach (SySc 513). Systems Science/ Engineering & Technology Management at Portland State University. (2003).

Total Quality Management (EMGT 660). Systems Science/ Engineering & Technology Management at Portland State University. (2003).

Forestry Cooperatives: What Today's Resource Professionals Need to Know. Satellite conference, University of Minnesota. (November 18, 2003). Hillsboro, OR.

Innovation in the Forest Products Industry: New Products, Business Systems, and Processes. OSU College of Forestry. (October 17, 2003). Corvallis, OR.

Forestry Extension: Building Capacity through Collaboration. IUFRO Extension Working Party Conference. (September 29, 2003 - October 3, 2003). Troutdale, OR.

Macromedia Contribute and Dreamweaver for Web Page Development and Maintenance. OSU Extension Computing Technology Unit. (September 3, 2003). Beaverton, OR.

Creativity & Innovation. Zeisler & Associates (sponsored by the American Society for Quality). (May 14, 2003). Beaverton, OR.

Measuring the Value and Impact of Workforce Diversity. Oregon Executive Forum. (April 16, 2003). Portland, OR.

GREAT (Grass Roots Economic Analysis Tool) Training. OSU Extension Service. (February 15, 2003). Oregon City, OR.

Decision Making in Engineering & Technology (EMGT 630). Systems Science/ Engineering & Technology Management at Portland State University. (2002).

Operations Research (EMGT 640). Systems Science/ Engineering & Technology Management at Portland State University. (2002).

Project Management in Engineering & Technology (EMGT 645). Systems Science/ Engineering & Technology Management at Portland State University. (2002).

Reengineering the Technical Enterprise (EMGT 663). Systems Science/ Engineering & Technology Management at Portland State University. (2002).

Annual Quality Congress. American Society for Quality. (May 20, 2002 - May 22, 2002). Denver, CO.

Western Wood Products Association Lumber Grading Competition. Willamina Lumber Company. (April 20, 2002). Willamina, OR.

Management of Engineering & Technology (EMGT 620). Systems Science/ Engineering & Technology Management at Portland State University. (2001).

Manufacturing Systems Simulation (EMGT 653). Systems Science/ Engineering & Technology Management at Portland State University. (2001).

Timber Engineering. Forest Products Society. (October 24, 2001). Portland, OR.

Environmental Management: A Systems Perspective. University of Washington. (October 19, 2001). Beaverton, OR.

Improving Quality Using Modeling & Simulation. American Society for Quality. (October 16, 2001). Portland, OR.

American Society for Quality Volunteer Leadership Training. (September 7, 2001 - September 8, 2001). San Jose, CA.

Advanced Microsoft Access. OSU Extension Computing Technology Unit. (March 27, 2001). Beaverton, OR.

Quality Function Deployment. American Society for Quality. (March 21, 2001). Beaverton, OR.

The BLAST game (Management game to simulate the concepts of JIT/ Lean manufacturing). American Society for Quality/ JELD-WEN Inc. (October 13, 2000). Klamath Falls, OR.

Experimental Design Made Easy. Stat Ease Inc. (May 16, 2000 - May 18, 2000). Seattle, WA.

Theory of Constraints - An Introduction. Oregon Manufacturing Extension Partnership. (November 17, 1999). Wilsonville, OR.

Working With Differences in Communities. OSU Extension Service Office of Personnel and Organization Development. (November 1, 1999). Redmond, OR.

Design, delivery, and evaluation of educational programs. OSU Extension Annual Conference. (September 13, 1999). Corvallis, OR.

Society of Wood Science & Technology Annual Meeting. (June 27, 1999). Boise, ID.

Society of Wood Science & Technology Annual Meeting. (June 25, 1999). Portland, OR.

Statistical Thinking Executive Briefing. American Supplier Institute. (June 21, 1999 - June 22, 1999). Klamath Falls, OR.

Training '99 Conference & Exposition. Lakewood Publications Training Magazine. (February 1, 1999 - February 3, 1999). Chicago, Illinois.

Lean Manufacturing. Oregon Manufacturing Extension Partnership/ Central Oregon Community College/ Secondary Wood Products Training System. (October 22, 1998). Redmond, OR.

Quality, Customer Service and the Bottom Line. American Society for Quality, Central Oregon Community College, and others. (May 7, 1998). Bend, OR.

International Value-Added Wood Processing Conference. University of British Columbia and the Swiss School of Engineering for the Timber Industry. (November 13, 1997 - November 14, 1997). Vancouver, BC.

Scholarly Writing Workshop. OSU Research Office. (October 30, 1997). Corvallis, OR.

Local Volunteer Network Training. OSU Computer Support Staff. (December 13, 1996). Corvallis, OR.

Issues of Validation and Scholarship, Windows 95, and Web page development. OSU Extension Annual Conference. (December 9, 1996 - December 11, 1996). Corvallis, OR.

Meetings Management. OSU Extension Service. (November 18, 1996). Silver Falls State Park, OR.

Statistical Process Control II: Implementation Techniques. Iowa Quality Systems. (June 18, 1996). Medford, OR.

Central Oregon Hybrid Poplar Tour. OSU Extension Service. (June 8, 1996). Madras, OR.

Secondary wood products manufacturing technology – finger-jointing, color scanning, and adhesives. Wood Technology Clinic & Show. (March 12, 1996 - March 15, 1996). Portland, OR.

Windows 95, Intermediate Windows, and evaluating educational programs. OSU Extension Annual Conference. (December 4, 1995 - December 7, 1995). Corvallis, OR.

Quality, Leadership, and Common Sense in Central Oregon. American Society for Quality Control. (November 10, 1995). Bend, OR.

Selling Forest Products. OSU College of Forestry. (November 2, 1995 - November 3, 1995). Corvallis, OR.

Quality Forum XI. American Society for Quality Control. (October 26, 1995). Medford, OR.

Workshops, seminars and machine show for the value-added wood products industry. Woodworking, Machinery & Furniture Supply Fair. (August 4, 1995 - August 7, 1995). Anaheim, CA.

Wood Adhesives 1995. Forest Products Society. (June 29, 1995 - June 30, 1995). Portland, OR.

Exporting Forest Products. (May 19, 1995). Portland, OR.

Plywood Manufacturing Workshop. OSU College of Forestry. (April 24, 1995 - April 26, 1995). Corvallis, OR.

Grant-Writing Basics. Pacific Non-Profit Workshop, Oregon Institute of Technology. (March 29, 1995). Klamath Falls, OR.

ISO9000 Speakers Panel. American Society for Quality Control. (March 21, 1995). Medford, OR.

Sawing Technology Workshop. OSU College of Forestry. (January 28, 1995). Corvallis, OR.

Introductory Spanish (nine-week course), Klamath County Community Education. (October 1994 - December 1994). Klamath Falls, OR.

Understanding diversity, portable offices, and performing literature searches using the Internet. OSU Extension Annual Conference. (November 28, 1994 - December 2, 1994). Corvallis, OR.

Statistical Process Control Applications. American Society for Quality Control workshop. (November 10, 1994 - November 11, 1994). Portland, OR.

Tour of Missouri Eastern Redcedar Industry. USDA Forest Service Winema National Forest and private firms involved in western juniper commercialization. (September 26, 1994 - September 30, 1994). Southern and Central MO.

Lumber Quality Control and Lumber Quality Leadership workshops. OSU College of Forestry. (September 12, 1994 - September 15, 1994). Corvallis, OR.

D. SERVICE

1. University Service

a. Service to the Department

(2021 - Present), Committee Member, Peer Teaching Committee.

(2019 - Present), Committee Member, Graduate Affairs Committee.

(2019 - Present), Committee Member, Promotion & Tenure Committee.

(2019 - 2022), Committee Member, Search Committee, Advanced Manufacturing.

(2011 - 2021), Committee Member, Promotion & Tenure Committee.

(2018 - 2019), Chairperson, Search Committee, Advanced Manufacturing.

(2015 - 2018), Committee Chair, Graduate Affairs Committee.

(2014), Committee Member, Search Committee, WSE Department Office Specialist 2.

(2011 - 2014), Committee Chair, Graduate Affairs Committee.

(2014), P&T Dossier Review, P&T Committee, West Virginia University.

(2010 - 2011), Committee Member, Graduate Admissions Committee.

(2010 - 2011), Committee Member, Graduate Affairs Committee.

(2011), P&T Dossier Review, P&T Committee, Virginia Tech.

(2009), P&T Dossier Review, P&T Committee, University of Tennessee.

(2005 - 2008), Committee Member, Technology Implementation Team - Goal 3 of OSU Extension Service Strategic Plan.

(2004 - 2008), Committee Member, Faculty Review Committee.

(2007), P&T Dossier Review, P&T Committee, Pennsylvania State University.

(2001), P&T Dossier Review, P&T Committee, North Carolina State University.

(1997 - 1998), Committee Chair, Coordinator, Forest Products Department website.

(1994 - 1998), Committee Member, Careers in Forest Products - Klamath County Career Fair/Training Opportunities.

b. Service to the College

(2015 - Present), Committee Member, Graduate Fellowships Committee.

(2021), Committee Member, Strategic Planning Board.

(2012 - 2018), Committee Member, Starker Lecture Committee.

(2014), Committee Member, Search Committee, FNR Extension, Klamath County.

(2013 - 2014), Committee Member, Search Committee, FNR Extension Continuing & Professional Education Manager.

(2007 - 2012), Committee Member, Forest Cluster Economic Development Strategy Committee.

(2008 - 2010), Committee Chair, Oregon Forest Biomass Working Group - Research Committee.

(2004), Committee Member, Interview Committee for Office Specialist 1, Washington County Extension.

(1999), P&T Dossier Review, Promotion & Tenure Committee.

c. Service to the University

(2020 - 2021), Committee Member, Vice Provost for Extension and Engagement Search Committee.

(2015 - 2017), University Senate Service, Faculty Senate.

(2015), Legislative testimony, Western juniper research at OSU.

(2013), Committee Member, Interview panel - Chief Start-Ups Officer, OSU Venture Accelerator.

(2012), Legislative testimony, Fostering innovation in Oregon's forest industry.

(2008 - 2010), University Senate Service, Faculty Senate.

(2006), Legislative testimony, Task force on alternative fuels.

d. Service to Students

(2016 - 2021), Faculty Advisor, Forest Utilization Society (FUSE).

2. Service to the Profession

Society of Wood Science and Technology, Membership Committee. (2011 - 2012).

Co-Chair, Forest Products Society, Student Program – 2011 International Convention, Portland, OR. (2011).

Director at-large, Northwest Wood Products Association. (February 2004 - February 2005).

Vice Chair, Forest Products Society, Technical Interest Group on Quality Control, Process Control, and Production Management. (June 2001 - June 2004).

Chair Elect, American Society for Quality, Portland Section. (June 2001 - June 2002).

Membership Chairman and Education Co-Chairman, American Society for Quality, Southern Oregon Section. (June 1996 - January 2001).

Board of Directors

Board of Directors, Western Hardwood Association, Camas, WA. (January 1, 2015 - Present).

Chairperson

Chairperson, Forest Products Society, Technical Interest Group on Extension and Technology Transfer. (June 2004 - June 2006).

Chairperson, American Society for Quality, Portland Section. (July 2002 - July 2003).

Chairperson, Forest Products Society, Technical Interest Group on Quality Control, Process Control, and Production Management. (June 1999 - June 2001).

Chairperson, American Society for Quality, Southern Oregon Section. (June 2000 - January 2001).

Committee Member

Committee Member, US Endowment for Forestry and Communities, Greenville, SC. (September 18, 2021 - November 10, 2021).

Development of needs assessment and top priorities for funding from USDA Forest Service

Committee Member, Western Wood Products Association, Quality Standards/Technical Services committee. (2012 - 2017).

Committee Member, Forest Products Society, International Nominating Committee. (June 2016 - June 2017).

Committee Member, Oregon Solutions Juniper Project Committee. (2011 - 2013).

Committee Member, Society of Wood Science & Technology, Critical Issues Committee Task Group. (1997 - 2000).

Member

Member, IEEE Engineering Management Society. (2001 - 2004).

Member, Society of Manufacturing Engineers. (2001 - 2004).

Member, Architectural Woodwork Institute. (1994 - 1997).

Member, Evergreen Foundation. (1994 - 1997).

Member, Society of Wood Science & Technology. (1995 - Present).

Member, American Society for Quality, Milwaukee, WI. (1993 - Present).

Member, Forest Products Society. (1989 - Present).

Officer, Other Officer

Vice Chair, Forest Products Society, Technical Interest Group on Processing, Operations, and Wood Quality, LaGrange, GA. (May 26, 2022 - June 2024).

Chair, Membership Committee, Society of Wood Science & Technology. (2013).

Co-Chair, Membership Committee, Society of Wood Science & Technology. (2013).

P&T Dossier Review

P&T Dossier Review, Pullman, WA. (July 22, 2021 - August 20, 2021).

Reviewer, Ad Hoc Reviewer

Reviewer, Ad Hoc Reviewer, Alaska Wood Energy website. (2006).

Reviewer, Ad Hoc Reviewer, University of Nevada – Reno Extension Service. (2005).

Reviewer, Ad Hoc Reviewer, OSU Extension Service. (2001).

Reviewer, Ad Hoc Reviewer, JELD-WEN Inc., Corporate Quality Department. (2000).

Reviewer, Book

Reviewer, Book, OSU Department of Wood Science & Engineering. (2001).

Reviewer, Book, USDA Forest Products Laboratory. (1997).

Reviewer, Conference Paper

Reviewer, Conference Paper, PICMET, Portland State University. (2004 - 2018).

Reviewer, Conference Paper, International Scientific Conference on Hardwood Processing. (2011).

Reviewer, Conference Paper, Proceedings: A Southern Region Conference on Technology Transfer and Extension in Natural Resources. (2007).

Reviewer, Grant Proposal

Reviewer, Grant Proposal, McIntire-Stennis Proposal. (2009).

Reviewer, Grant Proposal, South Central Oregon Economic Development District and Oregon Department of Forestry. Oregon Statewide Boiler Assessment for Potential Woody Biomass Retrofits and New Installations. (2008).

Reviewer, Grant Proposal, Sustainable Northwest, Healthy Forests – Healthy Communities Partnership Small Grants Fund. (2006).

Reviewer, Grant Proposal, IMPACT Center, Washington State University. (2005).

Reviewer, Grant Proposal, Sustainable Northwest, Healthy Forests – Healthy Communities Partnership Small Grants Fund. (2005).

Reviewer, Grant Proposal, USDA Small Business Innovation Research (SBIR) program. (1999 - 2005).

Reviewer, Grant Proposal, Sustainable Northwest, Healthy Forests – Healthy Communities Partnership Small Grants Fund. (2004).

Reviewer, Grant Proposal, USDA National Fire Plan Community Assistance Wildland Urban Interface Projects. (2004).

Reviewer, Grant Proposal, USDA National Fire Plan Community Assistance Wildland Urban Interface Projects. (2003).

Reviewer, Grant Proposal, USDA National Research Initiative Competitive Grants Program (NRICGP)- Improved Utilization of Wood and Wood Fiber program. (1998).

Reviewer, Journal Article

Reviewer, Journal Article, Materials. (2022).

Reviewer, Journal Article, Computers in Industry. (2021).

Reviewer, Journal Article, International Wood Products Journal. (2011 - 2021).

Reviewer, Journal Article, International Journal of Innovation and Technology Management. (2014 - 2019).

Reviewer, Journal Article, Bioproducts Business. (2016 - 2018).

Reviewer, Journal Article, Wood & Fiber Science. (2002 - 2018).

Reviewer, Journal Article, Forest Policy and Economics. (2017).

Reviewer, Journal Article, USDA Forest Products Laboratory. (2016).

Reviewer, Journal Article, Virginia Cooperative Extension. (2016).

Reviewer, Journal Article, Forest Products Journal. (2007 - 2016).

Reviewer, Journal Article, International Journal of Advances in Management Science. (2015).

Reviewer, Journal Article, Maderas – Ciencia y Tecnología. (2014 - 2015).

Reviewer, Journal Article, Technological Forecasting & Social Change. (2013 - 2015).

Reviewer, Journal Article, USDA Forest Service PNW Research Station. (2009 - 2015).

Reviewer, Journal Article, Wood Material Science and Engineering. (2014).

Reviewer, Journal Article, International Journal of Services Technology and Management. (2013).

Reviewer, Journal Article, Bioresources.com. (2012 - 2013).

Reviewer, Journal Article, Madroño, publication of the California Botanical Society. (2012).

Reviewer, Journal Article, OSU Extension Service. (2012).

Reviewer, Journal Article, Decision Support Systems. (2010).

Reviewer, Journal Article, Journal of Testing and Evaluation. (2009).

Reviewer, Journal Article, Forest Ecology and Management. (2008).

Reviewer, Journal Article, North Carolina University Extension Service. (2008).

Reviewer, Journal Article, Philippine Journal of Science. (2008).

Reviewer, Journal Article, Technovation: The International Journal of Technological Innovation, Entrepreneurship and Technology Management. (2008).

Reviewer, Journal Article, Journal of Forest Products Business Research. (2007).

Reviewer, Journal Article, USDA Forest Service, Northeastern Area. (2007).

Reviewer, Journal Article, Journal of Forestry. (2005).

Workshop Organizer

Workshop Organizer, International Wood Composites Symposium, Seattle, WA. (April 11, 2012 - April 13, 2012).

Other - Juror

Juror, l'École Supérieure du Bois/Canopée Challenge, Nantes. (January 1, 2022 - April 5, 2022).
Reviewed and ranked 11 innovative product and service submissions from teams in Europe, South America, and Africa.

Interviewer for 6 candidates for new Policy Analyst position, Oregon Department of Forestry. (July 19, 2012).

Editor, Western Juniper Newsletter. (1997 - 2000).

Deputy, International Union of Forestry Research Organizations, Working Party 5.04.13: Industrial Engineering, Operations Analysis and Logistics. (2016 - Present).

3. Service to the Public – Professionally-related

None

4. Service to the Public – Non-Professionally-related

Panel participant, World Forestry Center-Blazing New Trails: Forest Sector Career Conference, Portland, Oregon. (2008).

Volunteer, Roadside clean-up as part of 'Adopt-a-Road' program. (April 1, 2002 - September 14, 2005).

Participant, Oregon Executive Forum, Portland, Oregon. (2003).

Interviewer, Oregon Graduate Institute, Beaverton, Oregon. (2001).

Committee Member, Oregon Advanced Technology Consortium (OATC)/ Oregon Manufacturing Extension Partnership (OMEP) at Klamath Community College. (1998 - 2000).

Mock Interviewer, Henley High School, Klamath Falls, Oregon. (October 20, 1997).

Consultant, Klamath County Chamber of Commerce. (1996).

Committee Chair, Klamath County Chamber of Commerce - Chair, Ag & Forest Industry Committee. (1996).

Presenter, Klamath County Commissioners. (1996).

Volunteer, Klamath County Master Gardener Spring Fair - Assisted management staff, Klamath Falls, Oregon. (May 1995 - May 1996).

Judge, Henley High School, Klamath Falls, Oregon. (March 16, 1996).

Judge, Henley High School, Klamath Falls, Oregon. (March 11, 1995).

5. If service is a significant percentage of FTE, describe outcomes or impacts.

E. AWARDS

1. National and International Awards

May 9, 2018, Distinguished Educator Award, Society of Wood Science & Technology.

2014, Gold Award: Outstanding Educational Materials - Web/Social Media/Online Courses, Association of Natural Resources Extension Professionals.

2008, Silver Award for Excellence: Journal Publications, Southern Region Extension Forestry, Team Award.

2005, Gold Award: Outstanding Educational Materials - Computer software/application, Association of Natural Resources Extension Professionals.

2. State and Regional Awards

None

3. University and Community Awards

March 15, 2018, Dean's Award for Outstanding Achievement - Outreach & Continuing Education, College of Forestry.

September 19, 2016, Outreach and Engagement Award, Oregon State University.

May 12, 2016, Aufderheide Excellence in Teaching Award, College of Forestry.

2009, Awesome Force Award, OSU Forestry Extension.