

Curriculum Vita
Stephen M. Shaler
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Education

Ph.D. Pennsylvania State University, 1986

Major: Forest Resources

Thesis: Prediction of mechanical properties of oriented strandboard by selected polymer composite theories

Academic and Professional Employment

Director - (2013-Present) - School of Forest Resources, University of Maine

Associate Director (1999-Present) - AEWG Advanced Structures and Composites Center, U of Maine

Professor of Wood Science (1998-Present) - School of Forest Resources University of Maine

Recent Awards

- 2012 L.J. Markwardt Wood Engineering Award - Presented annually by the Forest Products Society for the most outstanding paper in the field of wood as an engineering material.
- 2012 Marra Award - First Place - Society of Wood Science and Technology Award given for excellence in writing and research.
- 2008 L.J. Markwardt Wood Engineering Award - Presented annually by the Forest Products Society for the most outstanding paper in the field of wood as an engineering material.
- 2008 G. Peirce & Florence Pitts Webber Outstanding Research Award - College of Natural Sciences, Forestry, and Agriculture. University of Maine.
- 2004 L.J. Markwardt Wood Engineering Award
- 2003 Marra Award - First Place - Society of Wood Science and Technology Award given for excellence in writing and research.

Synergistic Activities

2009 - 2011: Member of ANSI Standing Committee on PS2: Performance Standard for Wood-Based Structural-Use Panels

2006 - 2009: Scientific Director of \$6.9 million NSF Program on Forest Bioproducts - responsible for development and nurturing of interdisciplinary activities in life cycle assessment (LCA) of forest products, nanocellulose composites, and the integration of social sciences (e.g. stakeholder perception) with hard science and engineering research.

1999 - Present: Associate Director of Advanced Engineered Wood Composites (AEWC) Center - responsible for basic research programs and wood based composites activities - with a focus on strand based composite modification, processing, and systems modeling

Patents

Gardner, DJ, S.M. Shaler, L Muszynski, C Pirvu, and J Son. 2009. Multifunctional Reinforcement System for Wood Composite Panels. U.S. Patent Number 7,547,470.

Dagher, H. and S.M. Shaler. 2001. Restart starved panel application for glulam beams. U.S. Patent Number 6,281,148.

Graduate Students

Melanie Blumentritt (PhD) Current, Nadir Yildirim (PhD) Current

Total number of graduate students advised: 22

Recent Publications

N. Yildirim, S. M. Shaler, D. J. Gardner, D. W. Bousfield and R. Rice. 2014. Cellulose Nanofibril (CNF) Reinforced Starch Insulating Foams, Accepted for Publication in Cellulose

M. Blumentritt, S. Howes and S.M. Shaler. 2014. Life Cycle Assessment of Exported Torrefied Wood Pellets (TOP) from Maine to the European Union. Manuscript in Preparation

N. Yildirim, S.M. Shaler, D.J. Gardner, R. Rice and D.W. Bousfield. 2014. Cellulose Nanofibril (CNF) Reinforced Starch Insulating Foams. MRS Proceedings, 1621, mrsf13-1621-d03-04 doi:10.1557/opl.2014.1.

Tamrakar, S, S.M. Shaler, R Lopez-Anido, DJ Gardner, CH West, Y Han, R Edgar. 2012. Mechanical property characterization of hybrid wood-polypropylene composite panels manufactured using double belt pressing technology. J. of Materials in Civil Engineering. 24(9):1193-1200.

Earles, JM, A. Halog, S.M. Shaler. 2011. Life cycle assessment of an oriented strandboard biorefinery. International Journal of Life Cycle Assessment. Environmental Science & Technology. 45(22):9743-9749.

Lagana, R, W.G. Davids, L. Muszynski, S.M. Shaler. 2011. Moment-curvature analysis of coupled bending and mechano-sorptive response of red spruce beams. Wood and Fiber Science. 43(3):280-292.

Perry, S, AD Pugel, W Haltemann, S.M. Shaler. 2011. Strand movement during oriented strand composite mat formation. Forest Products Journal. 60(7/8):567-574.

Paredes, JJ, S.M. Shaler, R Edgar, and B Cole. 2010. Selected volatile organic compound emissions and performance of oriented strandboard from extracted southern pine. Wood and Fiber Science. 42(4):1-10.

Cheng, Q. and S.M. Shaler. 2010. Moisture movement in wood polypropylene composites. Eur. J. Wood. Prod. 68:463-468.

Cheng Q., L Muszynski, S.M. Shaler and J Wang. 2010. Microstructural changes in wood plastic composites due to wetting and re-drying evaluated by X-ray microtomography. J. Nondestruct Eval. 29:207-213.