

CURRICULUM VITAE
TIMOTHY M. YOUNG
(Revised: May 2008)

Business Address

Research Associate Professor
The University of Tennessee
Forest Products Center
2506 Jacob Drive
Knoxville, TN 37996-4570
865.946.1119
865.387.5201 (cell)
865.946.1109 (fax)
tmyoung1@utk.edu

Home Address

8936 Colchester Ridge Rd.
Knoxville, TN 37922
865.691.1377
qualstat@bellsouth.net

EDUCATION

Ph.D.	The University of Tennessee	2007	Natural Resources (Statistics)
M.S.	The University of Tennessee	1993	Statistics (Operations Research)
M.S.	The University of Wisconsin	1983	Forest Economics
B.S.	The University of Wisconsin	1979	Natural Resources (Forestry)

EXPERIENCE

The University of Tennessee	Research Associate Professor	2003-present
The University of Tennessee	Research Assistant Professor	1998-2003
Georgia-Pacific Corporation	Continuous Improvement Director	1994-1998
The University of Tennessee	Research Associate	1983-1994
U.S. Forest Products Laboratory	Statistical Analyst	1982
Champion International Corporation	Resource Analyst	1981

MEMBERSHIP IN PROFESSIONAL SOCIETIES

American Society for Quality (ASQ)
American Statistical Association (ASA)
Forest Products Society (FPS)
Tennessee Forestry Association (TFA)
Xi Sigma Pi (Forestry Honorary)
Gamma Sigma Delta (Agricultural Honorary)

ELECTED POSITIONS AND PROFESSIONAL OFFICES

Faculty Senate	The University of Tennessee	2008-2010
President	Forest Products Society, Mid-South Section	2006
Chairman	Forest Products Society, Quality Control, Process Control and Production Management Group	2002-present
President	Wonderware Industrial Group, South Carolina	1997
Vice President	Wonderware Industrial Group, South Carolina	1996
Secretary	TAPPI, Fiber Raw Materials Supply Committee	1996

AWARDS AND NOMINATIONS

Awarded “Outstanding Section Performance for Mid-South Section” of the Forest Products Society 2006-2007 (Mid-South President 2006).

Awarded Meritorious Effort in Preparing and Presenting Scientific and Industrial Information at the Technical Workshop at 41st International Wood Composites Symposium. Washington State University. Seattle, WA. March 26, 2007.

George G. Mara Award of Excellence in Research and Writing, Society of Wood Science and Technology. Wang, S., P.M. Winistorfer and T.M. Young. 2005. Fundamentals of vertical density profile formation in wood composites. Wood and Fiber Science 36(1):17-25.

Awarded Meritorious Effort in Preparing and Presenting Scientific and Industrial Information at the Technical Workshop at 33rd International Wood Composites Symposium. Washington State University. Seattle, WA. 1999.

Nominated for The University of Tennessee B. Otto and Kathleen Wheeley Award for Excellence in Technology Transfer. May 25, 2004.

Nominated in 2007 for International President, Forest Products Society.

SERVICE TO THE UNIVERSITY

Committee Chair, 2007 Advisory Board Meeting, The University of Tennessee, Department of Forestry, Wildlife and Fisheries.

Committee Member, 2006 Faculty Leadership Development Committee, The University of Tennessee, Institute of Agriculture.

Committee Chair, 2006 Advisory Board Meeting, The University of Tennessee, Department of Forestry, Wildlife and Fisheries.

Committee Chair, 2005 Search Committee for Assistant Professor, Biomass Conversion Chemist, The University of Tennessee, Department of Forestry, Wildlife and Fisheries.

Committee Member, 2005 Search Committee for Assistant Professor, Biomass Value Added, The University of Tennessee Department of Forestry, Wildlife and Fisheries.

Committee Chair, 2005 Advisory Board Meeting, The University of Tennessee, Department of Forestry, Wildlife and Fisheries.

Committee Member, 2005 Society of American Foresters Accreditation Committee, The University of Tennessee, Department of Forestry, Wildlife and Fisheries.

Committee Member, 2004 Search Committee for Extension Faculty Position, The University of Tennessee, Department of Forestry, Wildlife and Fisheries.

Committee Chair, 2004 Faculty Retreat Committee, The University of Tennessee, Department of Forestry, Wildlife and Fisheries.

Committee Member, 2003, Selection Committee for Director of Alumni and Development Position, The University of Tennessee, Institute of Agriculture.

Co-chairman, 2002 Faculty Retreat Committee, The University of Tennessee, Department of Forestry, Wildlife and Fisheries.

Committee Member, 2001 Academic Program Review Committee, The University of Tennessee, Department of Forestry, Wildlife and Fisheries.

Committee Member, 2001 Search Committee for Professor and Director Forest Products Center, The University of Tennessee Department of Forestry, Wildlife and Fisheries.

Committee Chair, 2000 Faculty Retreat Committee, The University of Tennessee, Department of Forestry, Wildlife and Fisheries.

Committee Chair, 1998 Faculty Retreat Committee, The University of Tennessee, Department of Forestry, Wildlife and Fisheries.

Committee Chair, 1998 Departmental Newsletter, The University of Tennessee, Department of Forestry, Wildlife and Fisheries.

Committee Member, 1998, Search Committee Research Assistant Professor, The University of Tennessee Department of Forestry, Wildlife and Fisheries.

SERVICE TO THE PROFESSION

Participated in the 2008 Poster Session for Land Grant Universities, Senate Offices, Washington, D.C. March 5 2008

Attended 2008 12-Multistate Wood Utilization Meeting, March 4-5, 2008, Lansdowne, VA

General Chair, 2007, Forest Products Society 61st International Meeting, June 10-13, 2007, Knoxville, TN.

Moderator, 2007, “Industry Focus Day” 61st Forest Products Society Annual International Meeting. June 12. Knoxville, TN.

Workshop Instructor, 2007, 41st International Wood Composites Symposium. March 25. “Real-time process and predictive modeling of wood composite manufacturing processes. Seattle, WA.

General Chair, 2007, Forest Products Society Mid-South Section Meeting, January 17-18, 2007, Memphis, TN.

Committee Chair, 2007, Forest Products Society 61st International Meeting, Technical Interest Group, June 10-13, 2007, Knoxville, TN.

Committee Chair and Moderator, 2006, Forest Products Society 60th International Meeting, Technical Interest Group, June 25-28, 2006, Newport Beach, CA.

Committee Chair, 2005, Forest Products Society 59th International Meeting, Technical Interest Group, June 19-22, 2005, Quebec City, Canada.

Reviewer (Invited), 2005, USDA NRI Competitive Grant Proposals. May 23-26, 2005. Washington, D.C.

Reviewer (Invited), 2004, USDA NRI Competitive Grant Proposals. July 12-15, 2004. Washington, D.C.

Committee Chair and Moderator, 2004, Forest Products Society 58th International Meeting. June 27-30, 2004. Technical Interest Group. Grand Rapids, MI.

Co-Chair, 2004, Forest Products Society, “Manufacturing Competitiveness of the Forest Products Industry: Competing in Today’s Global Manufacturing and Consumer Marketplace.” Nov. 3-5, 2004. New Orleans, LA.

Moderator, 2004, 38th International Wood Composites Symposium, “Product and Process Control Strategies.” April 6-8, 2004. Pullman, WA.

Committee Chair and Moderator, 2003, Forest Products Society 57th International Meeting, Seattle, WA.

Moderator, 2003, International Particleboard/Composite Materials Symposium. Washington State University. Pullman, WA.

Committee Chair and Moderator, 2003, Forest Products Society 56th International Meeting, Technical Interest Group, Madison, WI.

RESEARCH ACTIVITIES

Current

- Title: Young, T.M. and N. André. **Real-time process analytics of wood composites manufacturing processes with multi-sensor data fusion**
- Funding: \$704,391
- Term: (1/05 to present)
- Sponsors: Georgia-Pacific Chemicals, LLC; USDA WUR; USDA SBIR Phase II Competitive Grants.
- Summary: The project is a fundamental investigation in mathematical, statistical and computational sciences, which examines the real-time prediction of the mechanical properties of wood composites. Real-time multi-sensor data fusion from data warehouses and predictive models using statistical and heuristic algorithms were developed and tested at MDF and OSB mills in the U.S. Both mills realized substantial costs savings from raw material input reductions from use of the system. An intellectual property statistical platform titled “EWood^{2.0}” was developed as part of the study. EWood^{2.0} had three components: (1) statistical modeling platform; (2) server data warehouse processor; and (3) client display application. An intellectual property heuristic platform titled MIGANN² was developed as part of the study. Project is expanding to include biofuels.
- Title: Young, T.M., J. Perdue, D.H. Hodges and R. Abt. **A web-based economic siting model for biofuels producers in the eastern U.S. (BioSAT)**
- Funding: \$210,425
- Term: (8/07 to present)
- Sponsors: USDOT Southeastern Sun Grant Center; US Forest Service.
- Summary: Essential to any industrial business loan or grant approval process is a defensible business plan that includes an optimum plant siting plan to support profitability of the plan over the term of the loan or grant. Research was conducted by Young et al. (1989) that resulted in the Industrial Fuel Chip Supply Simulator (IFCHIPSS). A new web-based biofuels siting model is being developed that will locate optimal sites for biofuels manufacturers in the eastern U.S. The model will develop real-time aggregate supply curves of delivered costs at the biofuels plant gate which include transport costs (truck and rail), harvesting costs and cellulosic standing and residual costs.
- Title: Young, T.M. **Real-time statistical process control applications for whiskey barrel stave blanks**
- Funding: \$103,571
- Term: (3/08 to present)
- Sponsor: Brown-Forman Corporation
- Summary: The effect of stave blank thickness variability on whiskey barrel quality is unknown. A key parameter for quality control of whiskey barrels is real-time control of stave blank thickness and final stave thickness. The objectives are: (1) collect a large data set during real-time manufacture of stave blanks; (2) quantify the effect of thickness variability on whiskey barrels; (3) develop a statistical model and SPC system that quantifies the natural variation of stave thickness; and (4) develop set of recommendations and guidelines for improvement.

Title: Young, T.M. **Wireless measurement of OSB flakes using real-time SPC**
Funding: \$60,520
Sponsor: USDA CSREES.
Term: (1/07 to present)
Summary: The effect of strand thickness variability on oriented strand board (OSB) product quality is well documented in the literature. Strand thickness variability may also affect the quality of the biochemical extraction process using such strands. The objectives are: (1) collect OSB strands for thickness ranges typical of industry specifications for four wood types used across North America, e.g., southern pine, western pine, mixed hardwoods and aspen; (2) quantify the effect of OSB strand thickness variability on the biochemical extraction process; (3) develop a statistical model of the effect of OSB strand thickness variability on the biochemical extraction process; and (4) develop set of recommendations and guidelines for the bioenergy and OSB industries.

Previous

Title: Young, T.M. and N. André. Real-time prediction of buffer capacity and formaldehyde (HCHO) emissions of medium density fiberboard (MDF) using real-time near infrared (NIR) spectroscopy (Georgia Chemicals, LLC).
\$35,125. 3/06 to 12/07.

Title: Young, T.M. Process modeling of wood composites.
Koch Industries (Georgia-Pacific Chemicals, LLC).
\$66,902. 1/06 to 12/06.

Title: Young, T.M. and N. André. Real-time multisensor data fusion and a genetic algorithm predictive modeling system for extruded wood composites.
USDA Special Wood Utilization Research Grant.
\$98,909. 1/02 to 12/05.

Title: Allen Jr., J. D., and T.M. Young. Predictive modeling of engineered wood properties using genetic algorithms with distributed data fusion.
USDA Small Business Innovation Research Phase I Competitive Grant with QMS, Inc.
\$80,000. 5/05 to 12/05.

Title: Young, T.M. Predictive modeling of the physical properties of wood composites using genetic algorithms.
USDA Special Wood Utilization Research Grant.
\$77,800. 1/04 to 12/07.

Title: Young, T.M. Predictive modeling of the internal bond of medium density fiberboard (MDF).
Georgia-Pacific Resins, Inc.
\$63,688. 1/04 to 12/04.

- Title: Young, T.M. and C.E. Pope. Real-time distributed statistical process control for hardwood lumber manufacture using wireless measurement technology.
Anderson-Tully Corporation
\$33,500. 10/03 to 12/05.
- Title: Young, T.M. and C.E. Pope. Reducing thickness variation and targets using real-time statistical process control.
Georgia-Pacific Corp. - Princeton, WV.
\$21,463. 4/03 to 3/04.
- Title: Young, T.M. Predictive modeling of the internal bond of medium density fiberboard (MDF).
Georgia-Pacific Resins, Inc.
\$67,800. 1/03 to 9/03.
- Title: Young, T.M. The Tennessee Quality Lumber Initiative for small hardwood sawmills: reducing lumber thickness variation using real-time SPC.
USDA. Special Wood Utilization Research Grant.
\$81,386. 10/01 to 10/04.
- Title: Young, T.M. and D.H. Bond. Using real-time SPC to reduce hardwood lumber thickness variation, target sizes and improve lumber recovery.
U.S. Forest Service.
\$30,122. 3/00 to 12/01.
- Title: Young, T.M. Understanding sources of variability in hardwood flooring and cabinet manufacture.
USDA. Special Wood Utilization Research Grant
\$192,804. 09/00 to 09/03.
- Title: Young, T.M. Improving softwood lumber manufacturing systems using real-time statistical process control.
Boise Cascade Corporation.
\$62,156. 01/00 to 12/02.
- Title: Young, T.M. and P.M. Winistorfer. Feasibility study: modeling of the internal bond of medium density fiberboard (MDF).
Georgia-Pacific Resins, Inc.
\$56,967. 01/00 – 12/01.
- Title: Young, T.M. and P.M. Winistorfer. Application of “real-time” statistical process control to oriented strand board manufacture.
J.M. Huber Corporation
\$25,758. 10/98 to 12/00

- Title: Young, T.M. and P.M. Winistorfer. Application of “real-time” statistical process control to particleboard manufacture using human machine interface technology. Georgia-Pacific Corporation
\$21,500. 10/98 to 12/99.
- Title: Young, T.M. and P.M. Winistorfer. A statistical analysis of tree-harvesting worker safety. Amercian Pulpwood Association
\$2,500. 06/92 to 6/93.
- Title: Ostermeier, D.M. and T.M. Young. IFCHIPSS: Industrial Fuel Chip Supply Simulator. USDOE and Tennessee Valley Authority.
\$105,000. 01/89 to 12/91.
- Title: Ostermeier, D.M. and T.M. Young. Fossil-fuel-using industries: their awareness and perceptions of wood energy. Tennessee Valley Authority.
\$47,000. 01/88 to 12/88.

ENGAGEMENT AND OUTREACH ACTIVITIES

Industry Training Seminars

A continued highlight of my professional career is the continued success of the statistical process control and advanced statistical seminars for the North American and international forest products industries. Twenty-eight general industry seminars have been conducted since 2000 generating in excess of \$900,000 in conference funding. In addition to the general seminars, customized SPC training courses have been conducted for J.M. Huber Corporation, Georgia-Pacific Chemicals, LLC, Boise Corporation, Georgia-Pacific Corporation (Koch Industries) and Brown Forman Corporation. The private seminars have generated in excess of \$150,000 in conference funding. A new course in “designed experimentation for wood products manufacture” will be offered in December 2007. It is anticipated that the training seminars will continue to evolve to more customized courses for select companies.

Training Materials

Young, T.M. 2007. “Continuous Improvement using statistical process control in the forest products industry.” Fifth Edition. The University of Tennessee, Knoxville. 321p. Precursor for a potential textbook.

Young, T.M. 2007. “Advanced statistical methods for forest products manufacturers.” Fourth Edition. The University of Tennessee, Knoxville. 370p. Precursor for a potential textbook.

Young, T.M. 2007. “Designed Experimentation for Forest Products Manufacturers.” First Edition. The University of Tennessee, Knoxville. 440p. Precursor for a potential textbook.

Industrial Software

EWOOD ver 3.0 – Statistical-based software (C++ and Visual Net), which develops relational databases from industrial databases using real-time data fusion which models and predicts real-time the strength properties of engineered wood panels. Currently being used is six wood composite mills in U.S.

MIGANN ver. 1.0 – Genetic Algorithm and Neural Network software (C++ and Visual Net) which models and predicts models and predicts real-time the strength properties of engineered wood panels. Currently being used in one wood composite mill in U.S.

Workshops

Young, T.M. 2007. “Real-time process and predictive modeling of wood composite manufacturing processes.” Conducted Workshop at the 41st International Wood Composites Symposium. March 25. Seattle, WA.

Other Engagement

Developing Statistical “Webinar” Series for the APA – Engineered Wood Association. Tacoma, WA.

Advising CPA – Composite Panel Association on statistical testing procedures for HCHO emissions from engineered wood panels for the California Air Resources Board (CARB).

Recent visit to Salzburg University of Applied Sciences and BOKU University in Vienna, Austria involved industry and academic seminars including instruction for two days of undergraduate students in industrial statistics and manufacturing excellence.

Participate in the annual University of Tennessee “Ag Day” activities and booth for the Forest Products Center.

TEACHING ACTIVITIES

Undergraduate

Lecture in Forestry 331 (Wood Properties and Uses) on industrial applications of statistical methods.

Teach undergraduate students in statistical process control as part of industrial training seminar listed as FWF 493 (Topics in Forestry, Wildlife and Fisheries).

Graduate

Teach graduate students in statistical process control as part of industrial training seminar listed as course FWF 590 (Advanced Topics in Forestry, Wildlife and Fisheries).

M.S. Theses Directed

Perhac, D.G. 2007. An applied statistical reliability analysis of the modulus of elasticity and modulus of rupture for wood-plastic composites. M.S. Thesis. The University of Tennessee. Knoxville. 102p. (download at <http://www.spcforwood.com>)

- Shaffer, L.B. 2007. Examining regression analysis beyond the mean of the distribution using quantile regression. M.S. Thesis. The University of Tennessee. Knoxville. 94p. (download at <http://www.spcforwood.com>)
- Wang, Y. 2007. Reliability analysis of oriented strand board's strength with a simulation study of the median censored method for estimating of lower percentile strength. M.S. Thesis. The University of Tennessee. Knoxville. 85p. (<http://www.spcforwood.com>)
- Steele, J.C. 2006. Function domain sets confidence intervals for the mean residual life function with applications in production in medium density fiberboard. M.S. Thesis. The University of Tennessee, Knoxville. 108p.
- Chen, W. 2005. A reliability case study on estimating extremely small percentiles of strength data for the continuous improvement of medium density fiberboard product quality. M.S. Thesis. The University of Tennessee, Knoxville. 69p.
- Edwards, D.J. 2004. An applied statistical reliability analysis of the internal bond of medium density fiberboard. M.S. Thesis. The University of Tennessee, Knoxville. 123p.
- Williams, T.N. 2001. A modified six-sigma approach to improving the quality of hardwood flooring. M.S. Thesis. The University of Tennessee, Department of Forestry, Wildlife & Fisheries. 190p.

PUBLICATIONS

Refereed Journals

1. Young, T.M., D.G. Perhac, F.M. Guess and R.V. León. 2008. Bootstrap confidence intervals for percentiles of reliability data for wood plastic composites. *Forest Products Journal*. *Submitted*.
2. Edwards, D.J., F.M. Guess, T.M. Young and H. Bensmail. 2008. Bootstrap confidence intervals for percentiles of reliability of modern engineered wood. *IIE Transactions*. *Submitted*.
3. Labbé, N., N. André and T.M. Young. 2008. Extraction of information from LIBS spectral data by multivariate analysis. *Applied Optics*. *Submitted*.
4. Kim, H., F.M. Guess and T.M. Young. 2008. An extension of regression trees to generate better predictive models. *IIE Transactions*. *In Press*.
5. Young, T.M., L.B. Shaffer, F.M. Guess, H. Bensmail and R.V. León. 2008. A comparison of multiple linear regression and quantile regression for modeling the internal bond of medium density fiberboard. *Forest Products Journal*. 58(4):39-48.

6. Clapp, N.E., Jr., T.M. Young and F.M. Guess. 2008. Predictive modeling the internal bond of medium density fiberboard using a modified principal component analysis. *Forest Products Journal*. 58(4):49-55.
7. Shaffer, L.B., T.M. Young, F.M. Guess, H. Bensmail and R.V. León. 2008. Using R software for reliability data analysis. *International Journal of Reliability and Application*. *In Press*.
8. André, N., H.W. Cho, S.H. Baek, M.K. Jeong and T.M. Young. 2008. Enhanced prediction of internal bond strength in a medium density fiberboard process using multivariate methods and variable selection. *Wood Science and Technology*. *In Press*.
9. Young, T.M., B.H. Bond and J. Wiedenbeck. 2007. Implementation of a real-time statistical process control system in hardwood sawmills. *Forest Products Journal*. 57(9):54-62.
10. Young, T.M., D.G. Hodges and T.G. Rials. 2007. The Forest Products Economy of Tennessee. *Forest Products Journal*. 57(4):12-19.
11. Wang, Y., T.M. Young, F.M. Guess and R.V. León. 2007. Exploring reliability of oriented strand board's tensile and stiffness strengths. *International Journal of Reliability and Application*. 8(1):113-126.
12. Perhac, D.G., T.M. Young, F.M. Guess and R.V. León. 2007. Exploring reliability of wood-plastic composites: stiffness and flexural strengths. *International Journal of Reliability and Application*. 8(2):153-173.
13. André, N., T.M. Young and T.G. Rials. 2006. On-line monitoring of the buffer capacity of particleboard furnish by near-infrared spectroscopy. *Applied Spectroscopy*. 60(10):1204-1209.
14. Guess, F.M., J.C. Steele, T.M. Young and R.V. León. 2006. Applying novel mean residual life confidence intervals. *International Journal of Reliability and Application*. 7(2):177-186.
15. Chen, W., R.V. León, T.M. Young and F.M. Guess. 2006. Applying a forced censoring technique with accelerated modeling for improving estimation of extremely small percentiles of strengths. *International Journal of Reliability and Application*. 7(1):27-39.
16. Guess, F.M., X. Zhang, T.M. Young and R.V. León. 2005. Using mean residual life functions for unique insights into strengths of materials data. *International Journal of Reliability and Application*. 6(2):79-85.
17. Gu, H., T.M. Young, W.W. Moschler and B.H. Bond. 2004. Potential sources of variation that influence the final moisture content of kiln dried hardwood lumber. *Forest Products Journal*. 54(11):65-70.

18. Wang, S., P.M. Winistorfer and T.M. Young. 2004. Fundamentals of vertical density profile formation in wood composites – Part 3. MDF density formation during hot-pressing. *Wood and Fiber Science*. 36(1):17-25.
19. Guess, F.M., D.J. Edwards, T.M. Pickrell and T.M. Young. 2003. Exploring graphically and statistically the reliability of medium density fiberboard. *International Journal of Reliability and Application*. 4(4):157-170.
20. Young, T.M. and F.M. Guess. 2002. Developing and mining higher quality information in automated relational databases for forest products manufacture. *International Journal of Reliability and Application*. 3(4):155-164.
21. Young, T.M. and F.M. Guess. 2002. A statistical analysis of tree-harvesting worker safety. *International Journal of Reliability and Application*. 3(2):59-79
22. Young, T.M. and P.M. Winistorfer. 2001. The effects of autocorrelation on real-time statistical process control with practical solutions for the forest products industry. *Forest Products Journal*. 51(12):70-77.
23. Wang, S., P.M. Winistorfer, T.M. Young, and C. Helton. 2001. Step-closing pressing of medium density fiberboard. Part 2: Influences on the panel performance and layer characteristics. *Holz als Roh-und Werkstoff*. 59(5):311-318
24. Wang, S., P.M. Winistorfer, T.M. Young, and C. Helton. 2001. Step-closing pressing of medium density fiberboard. Part 1: Influence on the vertical density profile. *Holz als Roh-und Werkstoff*. 59(1/2):19-26.
25. Young, T.M., P.M. Winistorfer and S. Wang. 1999. Multivariate control charts of vertical density profile attributes. *Forest Products Journal*. 49(5):79-86.
26. Young, T.M. and P.M. Winistorfer. 1999. Statistical process control and the forest products industry. *Forest Products Journal*. 49(3):10-17.
27. Winistorfer, P.M., T.M. Young and E. Walker. 1996. Modeling and comparing vertical density profiles. *Wood and Fiber Science*. 28(1):133-141.
28. Young, T.M. and F.M. Guess. 1994. Reliability processes and corporate structures. *Microelectronics and Reliability*. 34(6):1107-1119.
29. Idassi, J.O., T.M. Young, P.M. Winistorfer, D.M. Ostermeier and R.B. Woodruff. 1994. A customer-oriented marketing method for hardwood lumber companies. *Forest Products Journal*. 44(7/8):67-73.
30. Graveel, J.G., T.M. Young, M. Balbach, D.A. Munn and J.S. Panter. 1993. *Journal of Natural Resources and Life Sciences Education: why the new title and scope?* *Journal of Natural Resources and Life Sciences Education*. 22(2):81-86.

31. Young, T.M., D.M. Ostermeier, J.D. Thomas and R.T. Brooks. 1991. The economic availability of woody biomass for the Southeastern United States. *Bioresources Technology*. 37(1):7-16.
32. Young, T.M., D.M. Ostermeier and D.W. Domenech. 1988. Average wood chip trucking costs for the Southeastern United States. *Southern Journal of Applied Forestry*. 12(4):267-269.
33. Ostermeier, D.M., T.M. Young and L.A. Weaver. 1988. Fossil-fuel-using industries: their awareness and perceptions of wood energy. *Forest Products Journal*. 38(10):53-58.
34. Young, T.M. and D.M. Ostermeier. 1986. A survey of nonforest products industrial wood energy users. *Forest Products Journal*. 37(2):57-61.
35. Bongiorno, J.B. and T.M. Young. 1984. Statistical appraisal of timber with an application to the Chequamegon National Forest. *Northern Journal of Applied Forestry*. 1(4):72-76.

Refereed Proceedings

1. Steele, J.C., F.M. Guess, T.M. Young and R.V. León. 2008. Modern developments and applications of mean residual life in engineering. *Indian Statistical Institute 75th Anniversary Handbook on Reliability and Quality Control*. Eds. Anis. Calcutta, India. *In Press*.
2. Young, T.M. and A.M. Taylor. 2007. Real-time statistical process control and components of variance systems for reducing lumber thickness variation in hardwood sawmills. *International Scientific Conference on Hardwood Processing, September 24-26, 2007 Quebec City, Canada*. Pages 171-180. Proceedings on-line at www.ischp.ca/pdf/ISCHP_Proceedings.pdf
3. Taylor A.M., T.M. Young, C. Steiner and M.K. Jeong. 2007. Hardwood lumber manufacturing optimization using NIR spectroscopy. *International Scientific Conference on Hardwood Processing, September 24-26, 2007 Quebec City, Canada*. Pages 157-163. Proceedings on-line at www.ischp.ca/pdf/ISCHP_Proceedings.pdf
4. Young, T.M. and P.M. Winistorfer. 1999. Advanced information technology and chip quality improvement. *TAPPI 1999 Pulping Conference*. 3:871-880.

Proceedings

1. Young, T.M., Y. Wang, D.G. Hodges and F.M. Guess. 2008. Decision tree applications for forestry and forest products manufacturers. *Proc. of 2008 Southern Forest Economics Workshop*. Savannah, GA. Ed. Tommy Tye. Center for Forest Business, University of Georgia, Athens. *In Press*.

2. Young, T.M. and B.H. Bond. 2008. Applications of real-time statistical process control and other statistical methods for improved lumber drying quality. Proc. Quality Drying for the 21st Century: Energy and Market Realities. Bellingham, WA. November 15-17, 2006. Forest Products Society. Madison, WI. *In Press*.
3. Young, T.M. and T.G. Rials. 2005. Real-time statistical process control systems for sawmills. Proc. of the SawTech 2005. The 9th International Conference on Sawing Technology. Las Vegas, NV. p. 25-42.
4. Young, T.M., N. André and C.W. Huber. 2004. Predictive modeling of the internal bond of MDF using genetic algorithms with distributed data fusion. Proc. 8th European Panel Products Symposium. Llandudno, United Kingdom. p. 45-59.
5. Young, T.M. and C.W. Huber. 2004. Predictive modeling of the physical properties of wood composites using genetic algorithms with considerations for distributed data fusion. Proc. of the 38th International Particleboard/Composite Materials Symposium. Washington State University. Pullman, WA. p. 145-153.
6. Young, T.M. 2002. Statistical process control applications for pressline parameters and products. Composite Panels Association 2002 Pressline Technology Seminar Proceedings. Composite Panel Association. Gaithersburg, MD. p. 374-393.
7. Young, T.M., B.H. Bond and J. Wiedenbeck. 2002. Reducing lumber thickness variation using real-time statistical process control. Current Topics in the Processing and Utilization of Hardwood Lumber. Proc. of 30th National Hardwood Lumber Association Annual Meeting. Fall Creek Falls, TN. p. 103-113.
8. Young, T.M., B.H. Bond, P.M. Winistorfer and J.D. Cox. 2000. Statistical process control for sawmills. Proc. of the 28th Annual Hardwood Symposium. (West Virginia Now The Future for the Hardwood Industry?). National Hardwood Lumber Association. Canaan, WV. p. 31-42
9. Young, T.M., P.M. Winistorfer and T.A. McKinney 1999. Continuous improvement strategies for MDF manufacture. Proc. of the 33rd International Particleboard Composite Materials Symposium. Washington State University. Pullman, WA. p. 67-77.
10. Young, T.M. and P.M. Winistorfer. 1998. Recovering more from your hardwood lumber: reducing thickness variation. Proc. of the 26th Annual Hardwood Symposium (Technology and Market Information for the Next Millennium). National Hardwood Lumber Association. Cashiers, NC. p. 109-120.
11. Young, T.M. 1997. Estimation of variance components using control charts with applications in MDF manufacturing. Proc. 3rd South Carolina Statewide Quality Conference. Myrtle Beach, SC.

12. Young, T.M. 1996. Process improvement through “real-time” statistical process control in MDF manufacture. Proc. of Process and Business technologies for the Forest Products Industry. Forest Products Society, Madison, WI. p. 50-51.
13. Young, T.M., D.M. Ostermeier, J.D. Thomas and R.T. Brooks. 1989. Economic availability of woody biomass fuel chips for 13 southeastern United States. Proc. International Energy Agency (Task VI, Activity 2, Integrated Harvesting Systems Workshop). New Orleans, LA. p. 45-60.
14. Young, T.M., D.M. Ostermeier and R.W. Mulach. 1989. Simulation of harvesting systems for economic supply models. Proc. (Task VI, Activity 3, Harvesting Small Trees and Forest Residues). Auburn, AL. p. 170-183.
15. Young, T.M., J.D. Thomas and D.T. Curtin. 1988. Industrial fuel-chip supply simulator (IFCHIPSS). Proc. Harvesting Machines and Systems Evaluation Workshop. Blacksburg, VA. p. 82-91.
16. Young, T.M., R.W. Mulach and D.M. Ostermeier. 1987. IFCHIPSS: Industrial Fuel Chip Supply Simulator - An overview of its structure. Proc. Ninth Annual Southern Forest Biomass Workshop. Gulfport, MS. p. 186-201.
17. Weaver, L.A. and T.M. Young. 1986. Market constraints to industrial wood energy use in the southeastern United States. Proc. Eighth Annual Southern Biomass Research Conference. Knoxville, TN. p. 133-145.
18. Young, T.M. 1985. A market segmentation strategy for the industrial wood energy market. Proc. 15th Annual Southern Forest Economic Workshop. Athens, GA. p. 90-100.
19. Young, T.M., D.M. Ostermeier and D.F. Walsh. 1985. Energy market assessment for woody biomass. Proc. Energy from Biomass: Building on a Generic Technology Data Base. Argonne National Laboratory Pub. ANL/CNSV-TM-157. Argonne, IL. p. 223-234.
20. Young, T.M. and D.M. Ostermeier. 1984. Information sources available for evaluating changes in forest land ownership and forest land use. Proc. 14th Annual Southern Forest Economics Workshop. Memphis, TN. p. 131-142.

Technical Abstracts without Proceedings

1. Young, T.M. 2008. Regression tree models of the strength properties of oriented strand board (OSB) using real-time industrial data. OSB World Symposium IV. April 28-30, 2008. Structural Board Association. San Antonio, TX.
2. Young, T.M. 2008. Regression tree models of the strength properties of engineered wood panels using real-time industrial data. 42nd International Wood Composites Symposium and Technical Workshop. April 1-2, 2008. Washington State University. Seattle, WA.

3. Guess, F.M., J.C. Steele, T.M. Young and R.V. León. 2008. Modern developments and applications of mean residual life and engineering. International Conference on Present Practices and Future Trends in Quality and Reliability. Eds. Anis. Calcutta, India. January 22-25.
4. Guess, F.M., J.C. Steele, T.M. Young and R.V. León. 2008. Applying novel mean residual life confidence intervals. International Conference on Present Practices and Future Trends in Quality and Reliability. Eds. Anis. Calcutta, India. January 22-25.
5. Young, T.M. and A.M. Taylor. 2007. Target size and sawing variation reduction. Remaining Competitive in Hardwood Lumber Production. Princeton, WV. www.cpe.vt.edu/rchlp/index.html. (invited).
6. Perhac, D.G., T.M. Young, F.M. Guess and R.V. León. 2007. Exploring reliability of wood-plastic composites: stiffness, tensile, and flexural strengths. June 11. 61st Forest Products Society International Meeting.
7. Young, T.M. 2006. Quality control for the wood composite industry. 2006. Forest Products Society Mid-South Section Annual Meeting, March 27-28. Nacogdoches, TX. (invited).
8. André, N., T.M. Young and T.G. Rials. 2006. On-line buffer capacity prediction of particleboard furnish by near infrared (NIR) spectroscopy. 60th Forest Products Society International Meeting. June 25-28. Newport Beach, CA.
9. Kim, H., F.M. Guess and T.M. Young. 2006. Using data mining tools of decision trees in quality and reliability applications – brief example for modern engineered wood. 2006 Joint Research Conference on Statistics in Quality, Industry and Technology. June 7-9. Knoxville, TN. (invited).
10. Bensmail, H., L. Shaffer and T.M. Young. 2006. Using software R for statistical and reliability analysis of the internal bond of medium density fiberboard. 60th Forest Products Society International Meeting. June 25-28. Newport Beach, CA.
11. Rials, T.G., N. André and T.M. Young. 2006. Monitoring wood composites manufacture using near infrared spectroscopy. 33rd Annual FACSS Conference. September 24-28. Lake Buena Vista, FL. (poster)
12. Chen, W., R.V. León, F.M. Guess and T.M. Young. 2005. Applying the forced censoring technique to accelerated modeling for better and less expensive estimation of extremely small percentiles of strengths. SAS/JMP User Conference Annual Meeting, June 7-8. Cary, NC. (poster)
13. Guess, F.M., R.V. León, W. Chen and T.M. Young. 2005. Forcing a closer fit in the lower tails of a distribution for better estimating extremely small percentiles of strengths. 59th Forest Products Society International Meeting. June 19-22. Québec City, Canada.

14. Kim, J., F.M. Guess, and T.M. Young. 2005. Using data mining tools of decision trees in reliability applications. 58th Forest Products Society International Meeting. June 30. Grand Rapids, MI.
15. Young, T.M. 2003. Forest products priorities for the future, Oct. 28-29. U.S. Forest Service Conference, Forest Products Laboratory. Madison, WI. (poster).
16. Young, T.M. 2003. Forest products in Tennessee. Governor's Conference on Economic Development, Sept. 3-4. Nashville, TN. (poster).
17. Young, T.M. 2003. Real-time predictive statistical modeling of the internal bond of medium density fiberboard (MDF) using commercial database platforms. IUFRO AI Division 5 Conference. Rotorua, New Zealand. (invited).
18. Edwards, D.J., F.M. Guess and T.M. Young. 2003. Improving and managing information quality in forest products. 8th International Conference on Information Quality (ICIQ). Massachusetts Institute of Technology Sloan School of Management. Boston, MA.
19. Kim, H., F.M. Guess and T.M. Young. 2003. Using data mining tools of decision trees in reliability Applications. International Workshop on Reliability and its Applications. Seoul, Korea.
20. Boston, C.E. and T.M. Young. 2003. Statistical failure models for the internal bond of medium density fiberboard. 57th Forest Products Society International Meeting. Seattle WA.
21. Gu, H., T.M. Young, W.W. Moschler and B.H. Bond. 2003. Potential sources of variation that influence the final moisture content of kiln dried hardwood lumber. 57th Forest Products Society International Meeting. Seattle WA. (poster)
22. F.M. Guess, T.M. Pickrell, T.M. Young and D.J. Edwards. 2003. Statistical reliability analysis of the internal bond of medium density fiberboard. 57th Forest Products Society International Meeting. Seattle WA. (poster).
23. van Houts, J., and T.M. Young. 2003. Advanced information technology systems for predictive modeling of wood composite properties. 57th Forest Products Society International Meeting. Seattle WA.
24. Young, T.M. 2002. Statistical process control applications for pressline parameters and products. 2002 Composite Panels Association Pressline Seminar Series. Composite Panel Association. Gaithersburg, MD. Three presentations at in: Charlotte, NC; Portland, OR; and Ottawa, Ontario. (invited).
25. Young, T.M. 2002. Real-time modeling of the internal bond of medium density fiberboard (MDF) using commercial software and database platforms. 6th European Panel Products Symposium. Llandudno, United Kingdom.

26. Young, T.M. 2002. Developing and mining higher quality information in automated relational databases for forest products manufacturers. C. Warren Neel Conference on Statistical Data Mining & Knowledge Discovery. Knoxville, TN. p. 25. (invited).
27. Rials, T.G. and T.M. Young. 2002. Efficient resource utilization through statistical process control in the forest products industry. Agriculture and Food Science in the 21st Century. A University Science Exhibit on Capitol Hill. Washington, D.C. (poster)
28. Young, T.M. and C.H. Huber. 2001. Modeling the core temperature gradient of MDF with control limits for data signatures. 35th International particleboard/Composite Materials Symposium. Washington State University. Pullman, WA. p. 183 (invited)
29. Young, T.M. and C.H. Huber. 2001. Process modeling of internal bond in MDF manufacture. Forest Products Society 55th International Meeting. Baltimore, MD. June 26. p. 56 (invited).
30. Young, T.M. and T.N. Williams. 2001. A modified six-sigma approach to improving the quality of hardwood flooring. Forest Products Society 55th International Meeting. June 25. Baltimore, MD.
31. Young, T.M. 2000. Advanced information technology for MDF manufacture. Forest Products Society 54th International Meeting. Lake Tahoe, NV. (invited).
32. Young, T.M. 2000. Statistical process control applications for improving chip quality using human machine interface technology. Summer 2000 Meeting of TAPPI MOTAG South. Atlanta, GA. (invited).
33. Young, T.M. and P.M. Winistorfer and C.H. Huber. 2000. Process modeling of internal bond in MDF manufacture. 34th International Particleboard/Composite Materials Symposium. Washington State University. Pullman, WA. (invited).
34. Young, T.M., P.M. Winistorfer and B.H. Bond. 1999. Human machine interface platforms for statistical process control in hardwood lumber manufacture. 53rd International Meeting of the Forest Products Society. Boise, ID.
35. Nieh, W.L.S., H.J. Kennedy, E. Walker and T.M. Young. 1995. Statistical analysis of the effects of face resin gel time on particleboard properties - a plant case. Proc. of the 29th International Particleboard/Composite Materials Symposium. Washington State University. Pullman, WA. (poster)
36. Winistorfer, P.M., T.M. Young and E. Walker. 1994. Modeling and comparing vertical density profiles. Proc. of the 28th International Particleboard/Composite Materials Symposium. Washington State University. Pullman, WA. (poster)

Trade Journals

1. Léon, R.V., F.M. Guess and T.M. Young. 2005. "JMP" into stats at the University of Tennessee at Knoxville. JMPer Cable. 19:7-8. Cary, NC

2. Young, T.M. 2000. The Tennessee Quality Lumber Initiative (TQLI). Article on front cover of the Hardwood Research Bulletin. No. 512, January 2000. National Hardwood Lumber Association. Memphis, TN. p1.
3. Young, T.M. 1999. Applying statistical process control to reduce hardwood lumber thickness target sizes. National Hardwood Lumber Association Newsletter. No. 501. December. p1.
4. Young, T.M. 1999. Efficiency technique hews new niche. InSites. 6(2):6-7.
5. Young, T.M. 1999. Tennessee Quality Lumber Initiative. National Hardwood Lumber Association Newsletter. No. 501. January. p1.
6. Young, T.M., D.M. Ostermeier, J.D. Thomas and R.T. Brooks, Jr. 1991. Computer model simulates supply, cost of chips. Forest Industries. 118(8): 20-21.
7. Wells, G.R., T.M. Young and K. Hoyt. 1989. Referrals to consulting foresters: policies of forestry agencies of seven states in the Tennessee Valley. The Consultant. 34(3):67-69.

Final Reports

1. André, N., T.M. Young and C.W. Huber. 2008. Real-time prediction of buffer capacity and formaldehyde (HCHO) emissions of medium density fiberboard (MDF) using real-time near infrared (NIR) spectroscopy. The University of Tennessee and Georgia-Pacific Chemicals, LLC. *In Press*.
2. Dawson, C., J. Allen, Jr. and T.M. Young. 2006. MIGANN ver 1.0 machine intelligence genetic algorithm neural network system for the engineered wood industry. USDA SBIR Phase-I Final Report. 111p. with video DVD of system. Washington, D.C.
3. Young, T.M., C.W. Huber and J. van Houts. 2006. EWood version 3.0. A statistical process modeling system for optimizing the product quality of manufactured wood composites. The University of Tennessee and Georgia-Pacific Resins, Inc. 101p.
4. Young, T.M., C.E. Pope and S. Peskar. 2004. Tennessee Quality Lumber Initiative (TQLI). Reducing lumber thickness variation using wireless technology with real-time statistical process control. Final report for contract R112219-079. 212p.
5. Young, T.M., J. van Houts and C.E. Pope. 2003. Predictive modeling of the internal bond of medium density fiberboard (MDF). Georgia-Pacific Resins, Inc. Atlanta, GA.
6. Young, T.M., J. van Houts, R. Springer and M. Looslie. 2002. Tennessee Quality Lumber Initiative (TQLI) – Reducing lumber thickness variation and targets using real-time statistical process control. Final Report for Boise Corporation (Contract R112218-080) and The University of Tennessee Special Wood Utilization Grant (R112218-054). 203p.

7. Young, T.M., B.H. Bond, C. Boston, J. Wiedenbeck, R. James and S. Morgan. 2002. Tennessee Quality Lumber Initiative (TQLI) – Reducing lumber thickness variation and targets using real-time statistical process control. Final Report for Anderson-Tully Corporation (R112219-10) and U.S. Forest Service (Contract R112218-089) and The University of Tennessee Special Wood Utilization Grant (R112218-054). 282p.
8. Young, T.M., R. Shaw and J. Peterson. 2001. Tennessee Quality Lumber Initiative (Boise Cascade Corporation) – Phase I, reducing lumber target sizes and thickness variation for softwood lumber. Final Report for Boise Cascade Corporation (Contract R112218-80) and The University of Tennessee Special Wood Utilization Grant (R112218-54). 54p.
9. Buggeln, R. and T. Young. 2001. Wood waste generation by secondary wood products manufacturers. The University of Tennessee, Center for Industrial Services. Knoxville, TN. 26p.
10. Young, T.M., P.M. Winistorfer and J.D. Cox. 2000. Tennessee Quality Lumber Initiative (TQLI) – Phase I: reducing lumber target sizes using real-time statistical process control. Final Report for Wood Utilization Special Research Grant R112218-054. 124p.
11. Winistorfer, P.M., T.M. Young, and D.M. Ostermeier. 1993. The application of statistical process control to the logging industry. Final Report for American Pulpwood Association Timber Harvesting and Transportation Safety Foundation. 51p.
12. Young, T.M. and D.M. Ostermeier. 1989. IFCHIPSS – The Industrial Fuel Chip Supply Simulation Model. Final Report for Contract with Southeastern Regional Biomass Energy Program as administered by the Tennessee Valley Authority. 141p.
13. Young, T.M. and D.M. Ostermeier. 1986. Analyzing market constraints in woody Biomass energy production. Final Report for Contract TV-64566A through the Southeastern Regional Biomass Energy Program as administered by the Tennessee Valley Authority. 172p.

KEYNOTE PRESENTATIONS

1. Young, T.M. 2005. Louisiana-Pacific Corporations Annual Quality Meeting, April 12-13. Nashville, TN.
2. Young, T.M. and F.M. Guess. 2005. SAS/JMP User Conference Annual Meeting, June 7-8. Cary, NC.
3. Young, T.M. 2004. TECO Industry Advisory Council Meeting. March 7. Fort Lauderdale, FL.

4. Young, T.M. 2002. An introduction to statistical process control (SPC) as applied to sawmills. Virginia Forest Products Association, 44th Annual Convention. Williamsburg, VA.
5. Young, T.M. 2002. Successful applications of real-time statistical process control. American Society of Quality, 9th Annual Spring Quality Conference. Boise State University. Boise, ID.
6. Young, T.M. 2002. An introduction to statistical products control in hardwood flooring manufacture. Armstrong Industries. August 1. Nashville, TN.

INVENTION DISCLOSURES AND PATENT APPLICATIONS

Invention Disclosure

1. UTRF File No. CD 08072. Young, T.M. 2008. Data fusion SQL code for real-time process and laboratory data. (pending)
2. UTRF File No. PD06005. André, N., T.M. Young and T.G. Rials. 2005. Spectroscopic prediction of wood buffer capacity.

Patent Applications

1. METHOD FOR CONTROLLING A PRODUCT PRODUCTION PROCESS
Patent Application No. 11/088,651
Filing Date: 03/24/2005
LNG File No. 59176.US 7800.0 (denied)
2. SPECTROSCOPIC PREDICTION OF FORMALDEHYDE EMISSION AND THICKNESS SWELL OF WOOD PANELS
Patent Application No. 61037171
Filing Date: 03/17/2008
LNG File No. 3010509 (pending)