

CURRICULUM VITAE

University of Idaho

NAME: Gorman, Thomas M.

DATE: January 17, 2015

RANK OR TITLE: Associate Dean, College of Natural Resources; Professor, Forest Products; Adjunct Professor of Architecture (UI); Civil Engineering (UI); Composite Materials & Engineering Center (WSU)

DEPARTMENT: Forest, Rangeland and Fire Sciences

OFFICE LOCATION AND CAMPUS ZIP: CNR 202A, 1138

OFFICE PHONE: (208) 885-7402

DATE OF FIRST EMPLOYMENT AT UI: December 1, 1987

DATE OF TENURE: July 1, 1993

DATE OF PRESENT RANK OR TITLE: October 1, 2012

EDUCATION BEYOND HIGH SCHOOL:

Degrees:

Ph.D., Wood Products Engineering, December 1987, S.U.N.Y. College of Environmental Science and Forestry, Syracuse, New York. Dissertation: "Modeling attic humidity as a function of weather, building construction, and ventilation rates."

M.S., Wood Products Engineering, May 1984, S.U.N.Y. College of Environmental Science and Forestry, Syracuse, New York. Thesis: "Juvenile wood as a cause of seasonal arching in trusses."

B.S., Forestry/Wood Science (Cum Laude), May 1980, University of Massachusetts, Amherst, Massachusetts.

Certificates and Licenses:

Professional Engineer (Civil)
State of Idaho, February 1997-present
State of Washington, June 1998-present
State of Montana, December, 2011-present

EXPERIENCE:

Teaching and Research Appointments:

Associate Dean, College of Natural Resources, October 1, 2012 to present.

Professor and Program Director, Renewable Materials Program, July 2012 to present.

Professor and Program Director, Forest Products Program, July 2010 to June 2012.

Professor, Department of Forest Products, University of Idaho, December 2009-June 2010.

Professor and Department Head, Department of Forest Products, University of Idaho, August 1, 2000-December 2009.

Associate Professor, Department of Forest Products, University of Idaho, August 1, 1993-July 2000.

Assistant Professor, Department of Forest Products, University of Idaho, Moscow, Idaho, December 1987-July 1993.

Instructor, Wisconsin Union Mini Course Program, University of Wisconsin, Madison, Wisconsin, September-December 1986. Taught adult evening classes in advanced woodworking.

Teaching Assistant and Research Assistant, Wood Products Engineering Department, S.U.N.Y. College of Environmental Science and Forestry, Syracuse, New York, September 1982-December 1984.

Teaching Assistant and Research Assistant, Wood Technology Department, University of Massachusetts, Amherst, Massachusetts, September 1977-May 1982.

Non-Academic Employment including Armed Forces:

- Extension Intern, National Wood Products Extension Program, USDA Forest Products Laboratory, Madison, Wisconsin. Half-time position, September 1986-November 1987. Conducted technology transfer activities, primarily in exterior wood finishing and moisture problems in residential homes. Co-editor of national extension newsletter.
- Research Engineer, USDA Forest Products Laboratory, Madison, Wisconsin, part-time position, May 1986-November 1987. Investigated the effects of various ventilation strategies on reducing moisture accumulation in attics. Developed a computer simulation model for predicting seasonal moisture levels in roof system components.
- Conference Coordinator, Conservation and Renewable Energy, Inc., Anchorage, Alaska, October 1985-May 1986. Served as one of two coordinators for the 7th Alaska Energy Conference, a statewide conference on energy conservation and alternatives. Responsible for conference format, speaker selection, promotion, registration, and management of the \$50,000 budget. Compiled, edited and published conference proceedings.
- Research Engineer, USDA Forest Products Laboratory, Madison, Wisconsin, February-September 1985. Investigated performance of nailed joist-rafter connections in full-scale roof tests. Prepared results for publication; presented seminars. Developed educational demonstration for high school students.
- Trail Construction Supervisor, US Forest Service, Seward, Alaska, Summers 1981 and 1982.
- Wilderness Ranger, Bob Marshall and Scapegoat Wildernesses, US Forest Service, Augusta, Montana, Summers 1977-80.
- U.S. Navy, Third-class Radioman - Top Secret security clearance, 1972-74; Honorable Discharge, 1978.

Consulting:

- June 2010 to present. Engineering services for wooden light pole company.
- July 2007. Expert witness in wooden pallet investigation.
- January 2002. In-plant inspection for Gibson Guitar, Bozeman, Montana.
- November 2001. Expert witness in wooden bridge failure.
- November 1998. Inspected condominiums for decay damage in Sun Valley for Allstate Insurance Co.
- 1995 – 2007. Presented annual seminars on wood properties for Willow Creek Tool, Co., Willow Creek, Montana.
- Summer 1994. Presented seminars on wood properties for wood products companies in Idaho, Montana, Oregon and Washington.
- Fall 1991. Expert witness on wood construction for law firm.
- Fall 1983. Inspected commercial buildings for potential problems in parallel-chord roof trusses in New York City.

TEACHING ACCOMPLISHMENTS:**Courses Taught:**

- Wood Building Technology (3 credits, ForP 365) Simplified timber engineering for architecture, agricultural engineering and forest products students.
- Wood Properties (3 credits, ForP 337) Physical and mechanical properties of wood, including wood moisture relationships, dimensional change control strategies, and mechanical design stress assessment.
- Wood Deterioration and Protection (2 credits, ForP 450) Biological agents that deteriorate wood and control strategies, including design of structures.
- Biomaterial Product and Process Development Lab (2 credits, ForP 491, team-taught) New product prototype development, testing and evaluation.

Students Advised:

Current graduate students and expected completion dates:

Students Advised (cont'd):

Graduate Students Advised to Completion:

Carl Morrow (Ph.D., December 2013)
 Christopher Bowers (Thesis M.S. Civil Engineering, December 2011)
 Brian Morris (Thesis M.S., May 2010)
 Carl Morrow (Thesis M.S., August 2009)
 Ian Chestnut (Thesis M.S., May 2009)
 Nathaniel Smith (Thesis M.S., December 2006)
 Sandeep Sudhakaran Nair (Thesis M.S., August 2006)
 Matthew Wheeler (Thesis M.S., May 2004)
 Roger Sathre (Thesis M.S., August 2002)
 Shih-yin Wu (Ph.D., May 2002)
 Roger Sathre (Thesis M.S., May 2002)
 Aldo Cisternas (Thesis M.S., May 2000)
 Bruce W. McFadden (Thesis M.S., December 1999)
 Robert G. Erikson (Thesis M.S., December 1997)
 Blair H. Wilding (Thesis M.S., May 1996)
 Derek A. Ratchford (Thesis M.S., December 1995)
 Daniel L. Rasmussen (Thesis M.S., May 1994)
 Peter C. Gomben (Thesis M.S., May 1993)
 Nathan Hesterman (Ph.D. Research advisor, October 1992)
 Dengane Mncube (Thesis M.S., May 1992)
 Shih-Yin Wu (Non-thesis M.S., May 1991)

Curriculum Development:

Renewable Materials program approved by Idaho State Board of Education spring 2012. This curriculum was developed to enhance the curriculum offerings of the forest products curriculum. Accredited by the Society of Wood Science and Technology, the program includes career directions in forest products business management, wood construction & design, bio-based material, bio-based energy and renewable materials acquisition

Wood Construction and Design option in Forest Products approved by Idaho State Board of Education spring 1989. This curriculum was developed at the request of the forest products industry and is a cooperative program that brings together courses in forest products, architecture, and business. The program was accredited by the Society of Wood Science and Technology, spring 1996. Courses taught include fundamental wood science and wood design, architecture design, and business management.

Non-credit classes, workshops, seminars, invited lectures, etc.:

Presentations at meetings, seminars, and workshops in Idaho, Montana and Oregon.

SCHOLARSHIP ACCOMPLISHMENTS:**Refereed Publications:**

- Morrow, C.D., T. M. Gorman, J. W. Evans, D. E. Kretschmann, and C.A. Hatfield. 2013. The prediction of wood quality in small diameter Douglas-fir using site and stand characteristics. *Wood and Fiber Science*, 45(1):49-61.
- Green, D.W.; Gorman, T.M.; Evans, J.W.; and Murphy, J.F. 2008. Grading and properties of small-diameter Douglas-fir and ponderosa pine tapered logs. *Forest Prod. J.* 58(11):33-41.
- Green, D.W., T.M. Gorman, J.F. Murphy, and M.B. Wheeler. 2007. Moisture content and the properties of lodgepole pine logs in bending and compression parallel to the grain. Research Paper, FPL-RP-639. USDA Forest Service, Forest Products Laboratory, Madison, WI.

Refereed Publications (cont'd):

Refereed Publications (cont'd):

- Gorman, T.M., D.W. Green, A.G. Cisternas, R. Hernandez, and E.C. Lowell. 2007. Structural lumber from suppressed growth ponderosa pine from northern Arizona. *Forest Prod. J.* 57(12):42-47.
- Green, D.W., T.M. Gorman, J.W. Evans, and J.F. Murphy. 2006. Mechanical grading of round timber beams. *Journal of Materials in Civil Engineering.* 18(1):1-10.
- Sathre, R. and T. Gorman 2005. Improving the performance of wooden journal bearings. *Forest Prod. J.* 55(11):41-47.
- Green, D.W., T.M. Gorman, J.W. Evans, and J.F. Murphy. 2004. Improved grading system for structural logs for log homes. *Forest Products J.* 54(9): 52-62.
- Wagner, F., T. Gorman, and S-Y. Wu. 2003. Assessment of intensive stress-wave scanning of Douglas-fir trees for predicting lumber MOE. *Forest Prod. J.* 53(3): 36-39.
- Wagner, F.G., T.M. Gorman, K.L. Pratt, and C.K. Keegan. 2002. Warp, MOE, and grade of structural lumber curve sawn from small-diameter Douglas-fir logs. *Forest Products J.* 52 (1):27-31.
- Gorman, T.M. Relationship between moisture changes and dimensional change in wood. 2000. *J. of Materials Education*, 20 (5 & 6): 1-5.
- Erikson, R.G., T.M. Gorman, D. Green, and D. Graham. 2000. Mechanical grading of lumber sawn from small-diameter lodgepole pine, ponderosa pine, and grand fir trees from Northern Idaho. *Forest Products J* (50(7/8): 59-65.
- Rippi, R.C., F.G. Wagner, T.M. Gorman, H.D. Layton, and T. Bodenheimer. 2000. Stress-wave analysis of logs for veneer properties. *Forest Products J.* 50(4): 49-52.
- Wagner, F.G., T.M. Gorman, R.L. Folk, H.P. Steinhagen, and R.K. Shaw. 1996. Impact of kiln variables and pre-sorting by weight on moisture content uniformity of grand fir lumber. *Forest Prod. J.* 46(11/12):43-46.
- Gorman, T.M., B.A. Caswell, and F.G. Wagner. 1996. Evaluation of reduced-thickness studs. *Forest Prod. J.* 46(11/12):63-66.
- Johnson, L.R., A.G. Campbell, F.G. Wagner, and T.M. Gorman. 1996. Wood...a remarkable fiber: a teacher shortcourse. *Forest Prod. J.* 46(3):27-29.
- Gorman, T.M., C.M. Hamanishi, and J.R. Callison. 1996. The laminated log industry: an overview of production and distribution. *Forest Prod. J.* 46(3):80-82.
- Hamanishi, C., F.G. Wagner, J. O'Laughlin, and T.M. Gorman. 1995. Idaho's timber harvest projections to 2000: an issue-based survey of resource managers. *Western J. of Applied Forestry* 10(3):109-113.
- Gorman, T.M. 1994. Observing and modeling creep behavior in wood. *J. of Materials Education* 16(2/3):231-238.
- Wu, S., J.S. Morris, and T.M. Gorman. 1994. A simulation analysis of the effectiveness of drum-buffer-rope scheduling in furniture manufacturing. *Computers in Ind. Engng.* 26(4):757-764.
- Gomben, P.C., and T.M. Gorman. 1994. Treatability of laminated veneer lumber (LVL) made from lodgepole pine. *Forest Prod. J.* 44(2):39-41.
- Hesterman, N.D., and T.M. Gorman. 1992. Mechanical properties of laminated veneer lumber made from interior Douglas-fir and lodgepole pine. *Forest Prod. J.* 42(11/12):69-73.

Refereed Publications (cont'd):

- Gorman, T.M., N.D. Hesterman, and R.D. Linderman. 1992. Bending strength of vertically laminated house logs. *Forest Prod. J.* 42(6):27-29.
- Gorman, T.M., and H.P. Steinhagen. 1992. Kiln drying of 9 x 9 cants for log home manufacturers. *Forest Prod. J.* 42(5):43-46.
- Gorman, T.M. 1991. Designing, engineering, and testing wood structures. *J. of Materials Education* 13(5/6):473-485.
- Gorman, T.M., and D.N. Reese. 1991. Roof system replacement on sports arena. *ASCE Journal of Performance of Constructed Facilities* 5(2): 125-133.
- Govett, R.L., R. DeGroot, R. Folk, and T.M. Gorman. 1991. Western whitewoods as a source material for shakes and shingles--grand fir and western white pine. *Forest Prod. J.* 41(1):21-26.
- McCarthy, M., and T.M. Gorman. 1990. Building excitement in the classroom: Students design and test engineered wood structures. *Science Teacher* 57(5):42-49.
- Gorman, T.M. 1985. Juvenile wood as a cause of seasonal arching in trusses. *Forest Prod. J.* 35(11/12):35-40.

Other Peer-Reviewed Publications:

- Gorman, T.M. 1997. Relationship between moisture changes and dimensional change in wood. In: National Educator's Workshop: Update 97. NASA Conference Publication. National Aeronautics and Space Administration, Washington, D.C.
- Green, D.W.; Evans, J.W.; Murphy, J.F.; Hatfield, C.A. and Gorman, T.M. 2005. Mechanical grading of 6-inch-diameter lodgepole pine logs for the travelers' rest and rattlesnake creek bridges. Research Note FPL-RN-0297. Madison, WI: U.S. Department of Agriculture, Forest Service, Forest Products Laboratory. 17 p.
- Keegan, C., D. Wichman, D. Van Hooser, T. Gorman, F. Wagner, and P. Polzin. 1997. Idaho's forest products industry: A descriptive analysis 1995. Bureau of Business and Economic Research, University of Montana, Missoula, Montana.
- Gorman, T.M. 1995. Modeling the thermal performance of log home walls. *Wood Design Focus* 6(3):12-16.
- Gorman, T.M. 1995. Observing and modeling creep behavior in wood. In: *National Educators' Workshop: Update 94*. NASA Conference Publication 3304. National Aeronautics and Space Administration, Washington, D.C.
- Keegan, C., D. Wichman, D. Van Hooser, T. Gorman, M. McClintick, and P. Polzin. 1992. Idaho's forest products industry: A descriptive analysis 1990. Bureau of Business and Economic Research, University of Montana, Missoula, Montana.
- Gorman, T.M. 1992. Designing, engineering, and testing wood structures. In: *National Educators' Workshop: Update 91*. NASA Conference Publication 3151. National Aeronautics and Space Administration, Washington, D.C.
- Gorman, T.M., and W. Feist. 1989. Chronicle of 65 years of wood finishing research at the Forest Products Laboratory. USDA Forest Products Laboratory General Technical Report FPL-GTR-60, 81 pp.

Other Publications:

- Gorman, T.M. and D.E. Kretschmann. 2012. Characterization of juvenile wood in lodgepole pine in the intermountain west. Proceedings of the 55th International Convention of Society of Wood Science and Technology, August 27-31, Beijing, China.
- Gorman, T.M., D.E. Kretschmann, M. Begel, S. Fishwild, R. Shilts, and T. Nelson. 2012. Assessing the capacity of three types of round-wood connections. Proceedings of the World Congress on Timber Engineering, July 16-19, Auckland, New Zealand.
- Gorman, T.M., D. Kretschmann, M. Begel, and D. Green. 2010. Structural Round Wood Research and Development. Proceedings of the International Convention of Society of Wood Science and Technology and United Nations Economic Commission for Europe – Timber Committee October 11-14, 2010, Geneva, Switzerland
- Wagner, F.G., T.M. Gorman, K.L. Pratt, and C.E. Keegan. 2002. Lumber from small diameter timber: Do attributes meet market demands? In: Small Diameter Timber: Resource Management, Manufacturing, and Markets Symposium, February 25-27, 2002, Spokane, Washington.
- Gorman, T.M. and D.W. Green. 2002. Characterizing wood properties of small-diameter northwest trees. *In*: Proceedings of the Small Diameter Timber Symposium, February 25-27, 2002, Spokane, Washington.
- Wagner, F., T. Gorman, and S-Y. Wu. 2002. Assessment of intensive stress-wave scanning of Douglas-fir trees for predicting lumber MOE. *In*: Proceedings of the 13th International Symposium on Nondestructive Testing of Wood, August 19-20, 2002, University of California at Berkeley, Berkeley, California.
- Gorman, T.M. 2002. Glued laminated beams: design and applications. *In*: Proceedings of the Wood Building Design Seminar, sponsored by the Korea Wood Building Design Association, June 19, 2002, Seoul, South Korea.
- Lee, S.Y. M.P. Wolcott, T.G. Rials, and T.M. Gorman. 2001. Influence of surface characteristics of TMP fibers to the growth of TCL on the linear fiber surface (I): aspect in the surface roughness. *In*: Sixth Annual International Conference on Woodfiber-Plastic Composites, May 15-16, 2001, Madison, Wisconsin.
- Gorman, T.M. and D.W. Green. 2001. Structural lumber from small diameter western U.S. softwood trees. *In*: *Proceedings of the 2001 ASCE Structures Congress and Exposition*, Washington, D.C., May 21-23, 2001.
- Gorman, T.M. and D.W. Green. 2000. Mechanical grading of lumber sawn from small-diameter Rocky Mountain species. *In*: *Issues Related to Handling the Influx of Small-Diameter Timber in Western North America*. FPS Publications, #7261, Forest Products Society, Madison, Wisconsin.
- Gorman, T.M. 1999. Non-destructive evaluation of structural logs for log homes. *In*: *Proceedings of the International Conference on Effective Utilization of Plantation Timber*, Chi-Tou, Taiwan, May 21-23, 1999. The Forest Products Association of the R.O.C. Bulletin No. 16.
- Gorman, T.M. 1999. Structural design and durability. *In*: *Proceedings of the International Conference on Effective Utilization of Plantation Timber*, Chi-Tou, Taiwan, May 21-23, 1999. The Forest Products Association of the R.O.C. Bulletin No. 16.
- Wagner, F.G., J. O’Laughlin, and T.M. Gorman. 1997. Idaho’s 1996 timber harvest. Idaho Forest, Wildlife and Range Experiment Station Contribution No. 838.
- Gorman, T.M., F.G. Wagner, and D.P. Wichman. 1997. Directory of wood products manufacturers. Idaho Forest, Wildlife and Range Experiment Station Miscellaneous Publication No. 19 (revised).

Other Publications (con't):

- Gorman, T.M. 1995. The thermal performance of log home walls. Final Report for Log Homes Council, National Association of Home Builders, Washington, D.C.
- Gorman, T.M. 1995. Feasibility of converting wood materials from county waste stream into value-added products. Final Report for Panhandle Area Council, Hayden, Idaho.
- Wagner, F.G., T.M. Gorman, and A.D. Dickson. 1994. Directory of Idaho Wood Products Manufacturers. Idaho Forest, Wildlife and Range Experiment Station Miscellaneous Publication No. 19, 58 pp.
- Gorman, T.M., and N.D. Hesterman. 1993. Producing LVL from interior Pacific Northwest species. In: Proceedings of the International Panel and Engineered-Wood Technology Exposition, Atlanta, Georgia, October 19-21, 1993. Miller Freeman, Inc., San Francisco, California.
- Uskoski, D.A., F. Bechtel, and T.M. Gorman. 1993. Ultrasonic stress graded veneer. In: Proceedings of the International Panel and Engineered-Wood Technology Exposition, Atlanta, Georgia, October 19-21, 1993. Miller Freeman, Inc., San Francisco, California.
- Gorman, T.M., ed. 1993. Log home design, engineering, and marketing. Conference Proceedings, Idaho Forest, Wildlife and Range Experiment Station, Wood Use and Design Publication No. 93-1.
- Gorman, T.M. 1993. Log homes and energy performance. In: Log Home Design, Engineering, and Marketing. Conference Proceedings, Idaho Forest, Wildlife and Range Experiment Station, Wood Use and Design Publication No. 93-1.
- Gorman, T.M., P.C. Gomben, and R.L. Folk. 1992. Directory of Idaho Wood Products Manufacturers. Idaho Forest, Wildlife and Range Experiment Station Miscellaneous Publication No. 17, 65 pp.
- Gorman, T.M. 1991. Value-added products derived from interior Douglas-fir. In: Interior Douglas-fir: The species and its management. Symposium proceedings, pp. 25-29, D.M. Baumgartner and J.E. Lotan, Eds. Cooperative Extension, Washington State University, Pullman, Washington.
- Gorman, T.M., and M.W. McClintick. 1991. New wood products and markets for the wood products manufacturers in Clearwater County, Idaho. Idaho Forest, Wildlife and Range Experiment Station, Wood Use and Design Publication No. 91-1.
- Meimban III, J.J., R.L. Govett, T.M. Gorman, and L.R. Johnson. 1991. An overview of cogeneration technologies. Idaho Forest, Wildlife and Range Experiment Station Technical Report No. 23, 13 pp.
- Gorman, T.M. 1989. Directory of Idaho Secondary Wood Processors. Idaho Forest, Wildlife and Range Experiment Station Miscellaneous Publication No. 14, 33 pp.
- Gorman, T.M. 1987. Technology transfer of wood products research at the Forest Products Laboratory. In: Proceedings of the First Congress on Housing Technology, Minnesota Coalition for Practical Energy, St. Paul, Minnesota, April 13-14, 1987.
- Peterson, T.A., and T.M. Gorman, eds. Extend (a national newsletter for cooperative extension offices and agricultural engineers). Prepared articles while serving as co-editor from September 1986 to November 1987. National Wood Products Extension Program, USDA Forest Products Laboratory, Madison, Wisconsin.
- Eareckson, L.A., and T.M. Gorman, eds. 1986. Energy Options 86 Sourcebook. Proceedings of the 7th Alaska Energy Conference, Anchorage, Alaska, March 20-23, 1986.

Professional Meeting Papers:

- Characterization of juvenile wood in lodgepole pine in the intermountain west. Presented (with D. Kretschmann) at the 55th International Convention of Society of Wood Science and Technology, August 27-31, 2012, Beijing, China.
- Assessing the capacity of three types of round-wood connections. Presented (with D.E. Kretschmann, M. Begel, S. Fishwild, R. Shilts, and T. Nelson) at the World Congress on Timber Engineering, July 16-19, 2012, Auckland, New Zealand.
- Use of a single, mid-span load to determine the MOE of small diameter structural logs. Technical forum presentation (with D. Kretschmann and J. Evans) at Small Wood – Forest restoration for a new economy, May 1-3, 2012, Flagstaff, Arizona.
- The influence of soil properties on growth ring morphology in small diameter Douglas-fir. Presentation (co-author, presented by C. Morrow) at the Forest Products Society 65th International Convention, June 19-21, 2011, Portland, Oregon.
- Structural round wood research and development. Technical forum presentation (with D. Kretschmann and M. Begel) at the International Convention of Society of Wood Science and Technology and United Nations Economic Commission for Europe – Timber Committee October 11-14, 2010, Geneva, Switzerland.
- Assessing round-wood connections. Technical forum presentation (with D. Kretschmann and M. Begel) at the Forest Products Society 64th Annual Meeting, June 20-22, 2010, Madison, Wisconsin.
- Structural round wood research and development. Technical forum presentation (with D. Kretschmann, D. Green and M. Begel) at the Small Wood 2010 Conference, April 20-22, 2010, Hot Springs, Arkansas.
- Wood quality prediction in small-diameter Douglas-fir trees. Presented (co-author, presentation by C. Morrow) at the Forest Products Society 63rd International Convention, June 21-23, 2009, Boise, Idaho.
- Assessing the Reliability of Stress Wave Speed Measurements as Predictors of Wood Quality in Standing Douglas-fir Trees. Presented (co-author, presentation by I. Chestnut) at the Forest Products Society 63rd International Convention, June 21-23, 2009, Boise, Idaho.
- Small diameter logs as structural floor joists. Presentation (with D. Green) at the Forest Products Society 62nd Annual Meeting, June 22-24, 2008, St. Louis, Missouri.
- Characterization of juvenile wood in lodgepole pine from Idaho Panhandle and Helena National Forests. Presentation (co-author, presented by D. Kretschmann) at the Forest Products Society 62nd Annual Meeting, June 22-24, 2008, St. Louis, Missouri.
- Small diameter logs as structural floor joists. Technical forum presentation (with D. Green) at the Small Wood 2008 Conference, May 13-15, 2008, Madison, Wisconsin.
- Shear tests for log home walls. Presented (co-author, presentation by D. Shrestha) at the Forest Products Society 56th Annual Meeting, June 23-26, 2002, Madison, Wisconsin.
- Engineering requirements of structural wood components for use in light-frame residential structures. Technical forum presentation (with A. Cisternas) at the Forest Products Society 56th Annual Meeting, June 23-26, 2002, Madison, Wisconsin.
- Improving the performance of hardwood bearings. Technical forum presentation (with R. Sathre) at the Forest Products Society 56th Annual Meeting, June 23-26, 2002, Madison, Wisconsin.
- Glued laminated beams: design and applications. Presented at the Korea Wood Building Design Association's Wood Building Design Seminar, June 19, 2002, Seoul, South Korea.

Professional Meeting Papers (con't):

- Assessment of intensive stress-wave scanning of Douglas-fir trees for predicting lumber MOE. Presented (with F. Wagner and S-Y. Wu) at the 13th International Symposium on Nondestructive Testing of Wood, August 19-20, 2002, University of California at Berkeley, Berkeley, California.
- Structural lumber from small diameter trees. Technical forum presentation (with D. Green and E. Lowell) at the Small Wood 2002: Community and Economic Development Opportunities in Small Tree Utilization Conference, April 11-13, Albuquerque, New Mexico.
- Structural lumber from small diameter logs. Presented (with D. Green) at Small Wood 2002: Community and Economic Development Opportunities in Small Tree Utilization Conference, April 11-13, Albuquerque, New Mexico.
- Characterizing wood properties of small-diameter northwest trees. Presented (with D. Green) at the Small Diameter Timber Symposium, February 25-27, 2002, Spokane, Washington.
- Lumber from small-diameter timber: do attributes meet market demands? Presented (co-author, presentation by F. Wagner) at the Small Diameter Timber Symposium, February 25-27, 2002, Spokane, Washington.
- Wood engineering/mechanics education at the University of Idaho. Presented at the Forest Products Society 55th Annual Meeting, June 24-27, 2001, Baltimore, Maryland.
- Engineering requirements of structural wood composites for use in structures. Technical forum presentation (with A. Cisternas) at the Forest Products Society 55th Annual Meeting, June 24-27, 2001, Baltimore, Maryland.
- Transcrystallization initialized from surface characteristics of thermomechanical pulp (TMP) fibers and its influence on the interfacial strength. Technical forum presentation (with S. Lee, M. Wolcott, and T. Rials) at the Forest Products Society 55th Annual Meeting, June 24-27, 2001, Baltimore, Maryland.
- Structural lumber from small diameter western U.S. softwood trees, (with D. Green). Presented at the ASCE Structures Congress and Exposition, May 21-23, 2001, Washington, DC.
- Physical and mechanical properties of small wood. Presented at the 18th Annual Forest Engineering Conference, March 6-7, 2001, Moscow, Idaho.
- Stress-wave analysis of standing Douglas-fir trees to predict the MOE of lumber. Technical forum presentation (with S. Wu and F. Wagner) at the Forest Products Society 55th Annual Meeting, June 24-27, 2001, Baltimore, Maryland.
- Intensive stress-wave analysis of Douglas-fir trees may improve correlation with lumber MOE. Technical forum presentation (with S. Wu and F. Wagner) at the Forest Products Society 54th Annual Meeting, June 18-21, 2000, South Lake Tahoe, Nevada.
- Influence on the surface morphology on the growth of transcrystalline layer (TCL) on kraft pulp fibers. Technical forum presentation (with S. Lee) at the Forest Products Society 54th Annual Meeting, June 18-21, 2000, South Lake Tahoe, Nevada.
- Mechanical properties of ponderosa pine dimension lumber from small-diameter, overstocked stands in Arizona. Technical forum presentation (with A. Cisternas) at the Forest Products Society 54th Annual Meeting, June 18-21, 2000, South Lake Tahoe, Nevada.
- Mechanical grading of lumber sawn from small-diameter Rocky Mountain species. Presented at the Forest Products Society 53rd Annual Meeting, June 27-30, 1999, Boise, Idaho.
- Non-destructive evaluation of structural logs for log homes. Presented at the International Conference on Effective Utilization of Plantation Timber, May 21-23, 1999, Chi-Tou, Taiwan.

Professional Meeting Papers (con't):

- Structural design and durability. Presented at the International Conference on Effective Utilization of Plantation Timber, May 21-23, 1999, Chi-Tou, Taiwan.
- Structural design and durability. Presented at the USDA Forest Products Laboratory Research Conference, "A Forum on Durability Issues in Housing," September 23-25, 1998, Madison, Wisconsin.
- Use of small-diameter trees from the intermountain west for truss lumber. Presented at the Forest Products Society Regional Conference, "Forest Management into the Next Century," November 19-21, 1997, Spokane, Washington.
- Relationship between moisture changes and dimensional change in wood. Presented at the National Educator's Workshop: Update 97, Standard Experiments in Engineering Materials Science and Technology, November 2-5, 1997, Seattle, Washington.
- Use of small-diameter trees from the intermountain west for truss lumber. Presented at the USDA Forest Products Laboratory "Forest Biomass Conference," October 28-29, 1997, Madison, Wisconsin.
- Longitudinal penetration of borate into log ends: an alternative log branding method. Presented (with F. Wagner) at the Forest Products Society 1997 Annual Meeting, June 22-26, 1997, Vancouver, British Columbia, Canada.
- Potential uses and markets for wood residues. Presented at "Finding Value in Wood Residue" Conference, November 9-10, 1995, Boise, Idaho.
- Modeling the thermal performance of log walls. Presented at the Forest Products Society 49th Annual Meeting, June 25-28, 1995, Portland, Oregon.
- Evaluation of reduced-thickness stud-grade lumber. Presented (with B. Caswell) at the Forest Products Society 49th Annual Meeting, June 25-28, 1995, Portland, Oregon.
- University of Idaho's "Wood - A Remarkable Fiber." Presented (with F.G. Wagner, L.R. Johnson, and A.G. Campbell) at the Forest Products Society 49th Annual Meeting, June 25-28, 1995, Portland, Oregon.
- Observing and modeling creep behavior in wood. Presented at the National Educators' Workshop: Update 94, Standard Experiments in Engineering Materials Science and Technology, November 7-9, 1994, Gaithersburg, Maryland.
- Developments in laminated veneer lumber made from interior species. Presented at the 49th Northwest Wood Products Clinic, May 19-20, 1994, Spokane, Washington.
- Producing LVL from interior Pacific Northwest species. Presented at the International Panel and Engineered Wood Technology Exposition, October 19-21, 1993, Atlanta, Georgia.
- Ultrasonic stress graded veneer. Presented (with D. Uskoski and F. Bechtel) at the International Panel and Engineered Wood Technology Exposition, October 19-21, 1993, Atlanta, Georgia.
- Energy performance of log homes. Presented at the FPRS Inland Empire Section Fall Conference, September 17-18, 1992, Boise, Idaho.
- Mechanical properties of laminated veneer lumber made from interior Douglas-fir and lodgepole pine. Technical forum presentation (with N.D. Hesterman) at the Forest Products Research Society 46th Annual Meeting, June 21-24, 1992, Charleston, South Carolina.

Professional Meeting Papers (con't):

- Treatability of laminated veneer lumber (LVL) made from lodgepole pine. Technical forum presentation (with P.C. Gomben) at the 88th American Wood Preservers Association Annual Meeting, May 17-20, 1992, Washington, D.C.
- Designing, engineering, and testing wood structures. Presented at the National Educators' Workshop: Update 91, Standard Experiments in Engineering Materials Science and Technology, November 12-14, 1991, Oak Ridge, Tennessee.
- Identifying new wood products for the Rocky Mountain Region. Presented at the FPRS and RMFIC Fall Conference, September 12-13, 1991, Missoula, Montana.
- Secondary markets. Presented at the Idaho-Washington Resource Conservation and Development Area Conference, March 26-27, 1991, Moscow, Idaho.
- Value-added: Planning transition in the intermountain forest industries. Technical forum presentation at the USDA National Rural Development Workshop, March 26-28, 1991, Spokane, Washington.
- Size and distribution of the secondary wood products manufacturing industry in Montana and Idaho. Presented at the Western Forestry and Conservation Association Annual Meeting, December 3, 1990, Coeur d'Alene, Idaho.
- Value-added: Planning transition in the intermountain forest industries. Technical forum presentation at the USDA Forest Products Laboratory Research Conference, October 24, 1990, Madison, Wisconsin.
- Value-added products derived from interior Douglas-fir. Presented at the Interior Douglas-fir Symposium, February 27, 1990, Spokane, Washington.
- Size and distribution of secondary manufacturing in the Rocky Mountain region. Presented at the 33rd Annual Rocky Mountain Forest Industries Conference, October 11-13, 1989, Missoula, Montana.
- Juvenile wood as a cause of seasonal arching of trusses. Presented at the 1984 FPRS Annual Meeting, St. Louis, Missouri.

Presentations at Conferences/Workshops:

- Timber Measurements Society, Central Meeting, April 9, 2014, Coeur d'Alene, Idaho.
- Western Region Wood Building Workshop, March 29-30, 2012, Salt Lake City, Utah
- Timber Measurements Society, Central Meeting, April 11-13, 2012, Coeur d'Alene, Idaho.
- Idaho-Montana-North Dakota Resource Development Workshop, June 11-12, 1996, Bozeman, Montana.
- Wood Products Academy, April 8-12, 1996, Moscow, Idaho.
- Project Learning Tree Facilitators' Meeting, November 3, 1995, McCall, Idaho.
- Washington Science Teachers Association, Fall Conference, November 3, 1995, Pullman, Washington.
- Showcase '95 Convention and Trade Show, Building Systems Councils of the National Association of Home Builders, November 16-18, 1995, Pittsburgh, Pennsylvania.
- Columbia River Chapter American Society of Farm Managers and Rural Appraisers, Inc., Spring Meeting, May 12-13, 1995, Post Falls, Idaho.
- Wood Products Academy: Economics of lumber manufacturing, February 15-16, 1995, Moscow, Idaho.

Presentations at Conferences/Workshops (con't):

Idaho-Montana-North Dakota Resource Conservation and Development Associations' Annual Forestry/Rural Development Workshop, June 7, 1994, Bozeman, Montana.

Wood Products Academy, March 7-11, 1994, Moscow, Idaho.

Wood Products Academy: Economics of lumber manufacturing, February 16-17, 1994, Moscow, Idaho.

Idaho Housing Coalition and Latah County Housing Task Force - Region II Housing Summit, January 26, 1994, Moscow, Idaho.

International Exchange Conference, Lewis and Clark State College, Lewiston, Idaho, October 13-15, 1993.

Twelfth Annual Inland Empire Dry Kiln Workshop, October 11-15, 1993, Moscow, Idaho.

Wood Products Academy, March 8-12, 1993, Moscow, Idaho.

Eleventh Annual Inland Empire Dry Kiln Workshop, October 12-16, 1992, Moscow, Idaho.

New Wood Products and Markets for Clearwater County, Idaho, June 1992, Orofino, Idaho.

Adding Value to Wood (Pacific Northwest Economic Region and Northwest Policy Center, University of Washington), January 24-25, 1992, Portland, Oregon.

Tenth Annual Inland Empire Dry Kiln Workshop, October 14-18, 1991, Moscow, Idaho.

Wood Products Academy, April 8-12, 1991, Boise, Idaho.

Tenth Annual International Exchange Conference, Lewis and Clark State College, Lewiston, Idaho, October 9-12, 1990.

Ninth Annual Inland Empire Dry Kiln Workshop, October 8-12, 1990, Moscow, Idaho.

Wood Products Academy, September 17-21, 1990, Moscow, Idaho.

Tribal Forest Products Enterprise Training Shortcourse Series, Module II, April 23-27, 1990, Moscow, Idaho.

Economic Development Workshop (Idaho Department of Commerce and Boise State University), July 8, 1988, Council, Idaho.

Grants and Contracts Awarded:

"Low Thermal Bridge Building Components Structural Research." 2014. USDA-NIFA-SBIR (Principle Investigator) \$7,462.

"Quality assessment of small-diameter western species for improved utilization." 2012. USDA Forest Products Laboratory (Principle Investigator) \$100,000.

"Mechanically fastened cross laminated timber system feasibility." 2010. USDA Forest Products Laboratory (Principle Investigator) \$30,000.

"Inland Northwest Forest Products Research Consortium." 2010. USDA NIFA (Co-Principle Investigator) \$504,201.

"Inland Northwest Forest Products Research Consortium." 2009. USDA CSREES (Co-Principle Investigator) \$512,735.

Grants and Contracts Awarded (con't):

- “Sustainable building materials from at-risk intermountain species.” 2009. USDA Forest Products Laboratory (Co-Principle Investigator) \$100,000.
- “Inland Northwest Forest Products Research Consortium.” 2008. USDA CSREES (Co-Principle Investigator) \$505,190.
- “Assessing wood quality characteristics of the intermountain forest resource.” 2007. USDA Forest Products Laboratory (Co-Principle Investigator) \$130,000.
- “Inland Northwest Forest Products Research Consortium.” 2006. USDA CSREES (Co-Principle Investigator) \$520,885.
- “Utilization potential of the at-risk timber resource.” 2006. USDA Forest Products Laboratory (Principle Investigator) \$65,000.
- “Inland Northwest Forest Products Research Consortium.” 2005. USDA CSREES (Co-Principle Investigator) \$509,292.
- “Wood properties and resource characteristics of the at-risk timber resource of the intermountain west.” 2005. USDA Forest Products Laboratory (Principle Investigator) \$91,000.
- “Wood preservation treatments for Alaskan species.” 2004. USDA Forest Service (Principle Investigator) \$25,000.
- “Property evaluation of the at-risk timber resource of the intermountain west.” 2004. USDA Forest Products Laboratory (Principle Investigator) \$58,000.
- “Strength properties of small-diameter logs.” 2002. USDA Forest Products Laboratory (Principle Investigator) \$18,000.
- “Grading of structural logs for log homes – Phase II.” 2001. USDA Forest Products Laboratory. (Principle Investigator) \$11,300.
- “Seismic testing of log home walls.” 2001. Northwest Forest Products Research Consortium. (Co-Principle Investigator) \$13,375.
- “Characterizing structural lumber from small diameter trees.” 2001. Northwest Forest Products Research Consortium. \$32,800.
- “Alternative Wood Products Feasibility Study.” 2001. City of Cascade. (Co-Principle Investigator) \$14,897.
- “Feasibility study of small wood utilization on the Boise and Payette National Forests: Cascade, Council, Idaho City, and Emmett Ranger Districts.” 2001. Gem County Commissioners, Idaho. (Co-Principle Investigator) \$47,500.
- “Mechanical grading of logs from fire-killed trees.” 2000. USDA Forest Service. (Principle Investigator) \$15,000.
- “Impact of log sweep on grade, warp, strength/stiffness, and value of curve-sawn Douglas-fir lumber.” 1999. Northwest Forest Products Research Consortium. (Co-Principal Investigator) \$27,161.
- “Stress-wave analysis of standing trees to improve recovery of high-stiffness wood for engineered wood products.” 1999. Northwest Forest Products Research Consortium. (Co-Principal Investigator) \$17,617.
- “Engineered lumber products and requirements from Inland-Northwest species.” 1999. Northwest Forest Products Research Consortium. (Co-Principal Investigator) \$47,848.

Grants and Contracts Awarded (con't):

- “Analysis of the Inland-Northwest wood products industry. 1999. Northwest Forest Products Research Consortium. (Senior Investigator) \$39,459.
- “Travel grant to present at International Conference on Effective Utilization of Plantation Timber, Chi-Tou, Taiwan.” 1999. University of Idaho Travel Grant Committee. \$900.
- “Stress-wave analysis of standing trees.” 1999. Montana State University. \$35,000. (Co-Principal Investigator with F. Wagner).
- “Travel to present at USDA Forest Products Laboratory Conference, Madison, Wisconsin.” 1998. USDA Forest Products Laboratory. \$1,752.
- “Mechanical grading of structural logs for log homes.” 1998. USDA Forest Service. (Principal Investigator) \$21,000.
- “Assessment of non-destructive evaluation (NDE) techniques for determining veneer properties from standing trees.” 1997. Boise-Cascade Corporation. (Co-Principal Investigator) \$30,527.
- “Mechanical grading opportunities for Inland West, small-diameter, under-utilized species, Phase II.” 1997. USDA Forest Service. (Principal Investigator) \$30,000.
- “Feasibility of recycling construction site waste lumber into structural finger-jointed studs. 1997. USDA Forest Service. (Principal Investigator) \$10,000.
- “Idaho wood products manufacturers’ directory and electronic database.” 1996. USDA Forest Service. \$13,104. (Co-Principal Investigator with F. Wagner).
- “Mechanical grading opportunities for Inland West, small-diameter, under-utilized species.” 1996. USDA Forest Service. (Principal Investigator) \$15,000.
- “Determining the leachability of preservative-treated PSL.” 1996. Trus Joist MacMillan. (Principal Investigator) \$6,484.
- “Graduate student support.” 1995. Trus Joist MacMillan. (Principal Investigator) \$5,000.
- “Travel grant to present at the National Educators’ Workshop, Gaithersburg, Maryland.” 1994. University of Idaho Travel Grant Committee. \$900.
- “Determine impact of kiln factors on moisture uniformity of dried lumber.” 1994. Boise-Cascade Corporation. (Co-Principal Investigator) \$3,130.
- “Determining the ‘cross-over’ value of steel studs and wood studs when used in residential construction.” Potlatch Corporation. 1994. (Principal Investigator) \$3,575.
- “Feasibility of converting wood materials from county waste stream into value-added products.” 1994. Panhandle Area Council. (Principal Investigator) \$18,538.
- “Opportunities in affordable housing.” 1994. Wood Use and Design. (Co-Principal Investigator) \$2,000. (With J. Numbers and J. Reich).
- “Computer model to predict energy performance of log wall systems.” 1993. Log Home Council. (Principal Investigator) \$6,500.
- “Summer education for teachers in wood.” 1993. Idaho Forest Products Commission. (Co-Principal Investigator) \$38,030. (With L. Johnson, A. Campbell, and F. Wagner).

Grants and Contracts Awarded (con't):

- “Determine impact of kiln factors on moisture uniformity of dried lumber.” 1993. Boise-Cascade Corporation. (Co-Principal Investigator) \$31,594. (With F. Wagner and R. Folk).
- “Travel grant to present at American Wood Preservers Association Annual Meeting, Washington, D.C.” 1992. University of Idaho Travel Grant Committee, \$600.
- “Evaluate bending strength of laminated house logs.” 1991. Lodge Logs Homes, Inc., and Glu-Lam-Log, Inc. (Co-Principal Investigator) \$3,200.
- “Identify new markets and products for the wood products manufacturers in Clearwater County, Idaho.” 1991. Clearwater Economic Development Association. (Principal Investigator) \$20,000.
- “Costs associated with installation and maintenance of timber bridges in the northwest U.S.” 1990. USDA Forest Service Cooperative Research Study. (Principal Investigator) \$9,954.
- “Strategy, needs assessment, and program development for value-added increases in Idaho’s forest products industry.” 1988. Northwest Area Foundation. (Principal Investigator) \$221,105.
- “An assessment of value-added opportunities for the Idaho secondary wood products industry.” 1988. McIntire-Stennis Research Project. (Principal Investigator) \$12,000.
- “An assessment of value-added opportunities for the Idaho wood products industry.” 1988. A. Darius Davis Award for summer research, University of Idaho College of Business. (Principal Investigator) \$2,500.
- “An improved attic humidity model for evaluating ventilation strategies in roof systems.” 1986. USDA Competitive Grant Program. (Co-Principal Investigator) \$25,000.

Honors and Awards:

- Certificate of Appreciation and recognition of the achievement of Excellent Section Performance during the year 1991-92. Awarded to T. Gorman, Chairman, Inland Empire Section of the Forest Products Research Society. Presented at the 1992 FPRS Annual Meeting, Charleston, South Carolina.
- First Place, 1984 Forest Products Research Society (FPRS) Wood Award, “Juvenile wood as a cause of seasonal arching in trusses,” based on master’s thesis and presented at the 1984 FPRS Annual Meeting, St. Louis, Missouri. The FPRS Wood Award competition is open to graduate students in the U.S. and Canada. Awards are based on outstanding research papers determined by panel review.

SERVICE:**Major Committee Assignments:**

University of Idaho:

- External Review Redesign Committee, 2007-2011
- University Budget Advisory Committee, 2009-2010
- Department Chair Search Committee, Civil Engineering Department, 2008
- Faculty Search Committee, Civil Engineering Department, 2007, 2008
- Department Chair Search Committee, Architecture Department, 1999
- Graduate Council, August 1995-August 1998
- Juror for the Prichard Prize Award for the Department of Architecture, 1988, 1990
- Participated in Architecture Department accreditation review, 1991
- Promotions Committee, 2001
- Search Committee, Architecture Department, 1991, 1992

College of Natural Resources:

- CNR Silvaris Entrepreneurship fund manager, 2010-present
- Search Committee Chair, Forest Operations faculty position, 2011

Major Committee Assignments (cont'd):

College Strategic Planning: Leader of the Goal 4 (Workplace) objectives and strategies committee, 2008-2009

Petitions Committee, 1991-present

Committee on Committees, May 1989-May 1992, July 1999-June 2002

Dean Search Committee, November 1993-May 1995

Elections Officer for Fish and Wildlife Resources Department Head Election, 1989

Search Committee for Assistant Editor, CFWR, 1989

Search Committee, Department of Forest Products, 1991, 2001

Tenure Review Committee for the Forest Resources Department, 1988

Writing Contest Committee, CFWR, 1992

Professional and Scholarly Organizations:

Forest Products Society (FPS)

Chairman of Inland Empire Section, July 1997-present

Co-Chair of the 63rd International Convention, Boise, Idaho, June 21-23, 2009

Chairman of the Membership Standing Committee, June 2002-present

Chairman of the 2002 Wood Award Judging Committee, Spring 2002

Chairman of the Research Administrators and Members of the National Program Committee (NPC) of NAPFSC, June 2001-June 2002

Vice Chairman of Inland Empire Section, June 1996-July 1997

Secretary/Treasurer of Inland Empire Section, August 1995-June 1996

Trustee, Inland Empire Section, June 1992-August 1995

Chairman of Inland Empire Section, May 1991-June 1992

Secretary/Treasurer of Inland Empire Section, December 1987-May 1991

Society of Wood Science and Technology (SWST)

Member, 1984-present

National Association of Home Builders (NAHB)

Member, 2004-present

American Society of Civil Engineers (ASCE)

Member, 2010-present

American Solar Energy Association (ASEA)

Member 2009-2011

LEED Green Associate, 2010-2012

Outreach Service:

Conferences/Workshops Managed:

Forest Products Society 63rd Annual Meeting, June 21-23, 2009, Boise, Idaho. Co-Chair.

Small Wood 2004, May 18-21, 2004, Sacramento, California. Co-planner.

National Program Committee, Fall Meeting.

FPS 53rd Annual Meeting, June 27-30, 1999, Boise, Idaho. Annual meeting committee member, speaker.

Wood-A Remarkable Fiber, Co-planner, speaker.

June 21-25, 1999, Moscow, Idaho

November 13-14, 1998, Boise, Idaho

June 15-19, 1998, McCall, Idaho

November 7-8, 1997, Coeur d'Alene, Idaho

June 16-20, 1997, McCall, Idaho

October 18-19, 1996, Boise, Idaho

June 17-21, 1996, McCall, Idaho

July 10-14, 1995, Clark Fork, Idaho

June 19-23, 1995, McCall, Idaho

July 11-15, 1994, Clark Fork, Idaho

June 20-24, 1994, McCall, Idaho

July 12-16, 1993, Clark Fork, Idaho

June 27-July 1, 1993, McCall, Idaho
SmallWood '98, October 14-16, 1998, Lewiston, Idaho. Co-planner, moderator, speaker.
FPS Regional Conference, "Forest Management into the Next Century," November 19-21, 1997, Spokane, Washington. Co-chair, session chair, moderator, speaker.
Timber Harvest and Ecosystem Management, May 10-11, 1996, Kalispell, Montana. Co-planner, speaker.
Intermountain Idea Fair: Growing Sustainable Forest Enterprises, April 6-8, 1994, Missoula, Montana. Co-planner, moderator.
FPRS Inland Empire Section Fall Meeting, September 17-18, 1992, Boise, Idaho. Planning, coordination, organization, moderator, speaker.
FPRS/RMFIC Fall Meeting, September 12-13, 1991, Missoula, Montana. Planning of value-added manufacturing theme, coordination, organization, moderator, speaker.
46th Annual Northwest Wood Products Clinic, May 6-8, 1991, Spokane, Washington. Coordinator and moderator for topical session on value-added manufacturing.
Wood Products Academy, June 11-15, 1990, Moscow, Idaho. Organization, coordination, moderator, speaker.

Timber Bridge Workshop, October 5, 1989, Coeur d'Alene, Idaho. \$5,000 USFS funding. Coordination, organization, moderator.
Manufacturing and Marketing Log Furniture, August 21-22, 1989, McCall Field Campus, McCall, Idaho. \$1,500 RREA funding. Coordination, organization, moderator, speaker.
Designing with Wood, March 3, 1989, Post Falls, Idaho. Coordination, moderator.

Technical Assistance:

Numerous phone call responses, letters, and other information provided to federal, state, and private agencies and industries.
Dry kiln assessment for Idaho Veneer, Post Falls, Idaho, October 1991. Coordination of USDA Forest Service, USDA Forest Products Laboratory, and University of Idaho personnel to conduct weeklong evaluation of dry kiln operation.
New product evaluation for Washington State University's Small Business Development Center, August 1990.
Planning Committee for the Wood Construction Research and Curriculum Group of the Oregon Economic Development Department, Portland, Oregon, January 1990.
Idaho Department of Commerce GEM Community Mock Site Visits to Orofino (August 1989), Weippe (August 1989), St. Maries (May 1990), and Priest River (June 1992).