

**CURRICULUM VITAE**

**TEMESGEN HAILEMARIAM**

**Oct. 12, 2010**

**Department of Forest Engineering, Resources and Management  
College of Forestry  
Oregon State University**

## CV - TEMESGEN HAILEMARIAM

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# CV - Temesgen Hailemariam

Temesgen Hailemariam  
Associate Professor  
Department of Forest Engineering, Resources and Management  
Oregon State University (OSU), USA

## EDUCATION AND EMPLOYMENT INFORMATION

### Education

Ph.D. Forest Biometrics. 1999. University of British Columbia (UBC), Canada.  
M.Sc. Forest Management. 1992. Lakehead University, Ontario, Canada.  
B.Sc. Plant Sciences (honors) 1986. Alemaya University of Agriculture, Ethiopia.

### Employment

07/2009-Present **Associate Professor** in Forest Measurements and Biometrics, Department of Forest Engineering, Resources and Management, OSU.

08/2003-06/2009 **Assistant Professor** in Forest Measurements and Biometrics, Department of Forest Resources, OSU.  
Graduate Faculty in Forest Measurements and Biometrics, OSU.

2003 **Visiting Scientist** at the Institute of Forest Management and Yield studies at the University of Göttingen, Germany.

1999-2003 **Research Associate** in Forest Measurements and Biometrics, Faculty of Forestry, University of British Columbia (UBC), Canada.  
Graduate Faculty in Forest Measurements and Biometrics, UBC.

1999-2003 **Instructor** in Forest Mensuration and Photogrammetry, Distance Education & Technology Department, UBC.

1999 **Instructor** for applied statistics and growth and yield modeling in mixed tropical forests, Mozambique. Contracted by the Food and Agricultural Organization of the United Nations (FAO/UN).

1997 **Sessional Lecturer** in Forest Mensuration, Faculty of Forestry, UBC.

1995 **Research Subcontractor**, J.S. Thrower and Associates. Vancouver, BC.

1992-1996 **Teaching Assistant** in Forest Biometrics, Spring Field School, Forest Mensuration and Photogrammetry, Faculty of Forestry, UBC.

1990-1991 **Teaching Assistant** in Forest Measurements, Lakehead University, School of Forestry, Thunder Bay, Ontario, Canada.

1987-1990 **Assistant Lecturer** in Forest Management at Alemaya University of Agriculture, Ethiopia.

## TEACHING, ADVISING AND OTHER ASSIGNMENTS

### Instructional Summary

#### Credit Courses

##### At Oregon State University

###### FOR321 – Forest Mensuration

Fall, 2003	26 enrolled	5 cr. quarter
Fall, 2004	34 enrolled	5 cr. quarter
Fall, 2005	33 enrolled	5 cr. quarter
Fall, 2007	48 enrolled	5 cr. quarter
Fall, 2008	45 enrolled	5 cr. Quarter
Fall, 2010	64 enrolled	5 cr. quarter

###### FOR524 – Advanced Forest Mensuration

Winter, 2005	8 enrolled	3 cr. quarter
Winter, 2007	7 enrolled	3 cr. Quarter
Winter, 2007	6 enrolled	3 cr. quarter

###### FOR599 – Problems in Forest Mensuration

Fall, 2003, 2005	2, 3 enrolled	5 cr. quarter
Winter, 2005	3 enrolled	3 cr. quarter

##### At University of British Columbia (UBC)

###### FOR 237 – Introduction to Forest Mensuration and Photogrammetry

Fall 2000	18 enrolled	3 cr. semester
Fall 2001	15 enrolled	3 cr. semester
Fall 2002	21 enrolled	3 cr. semester

###### FOR 238 – Forest Mensuration

Winter 1997	44 enrolled	3 cr. semester
Fall 2000	20 enrolled	3 cr. semester
Fall 2001	25 enrolled	3 cr. semester
Fall 2002	22 enrolled	3 cr. semester

#### Non-Credit Courses and Workshops

##### IDMS – Inventory/Monitoring and Decision Support Fall 2007

Fall, 2007	35 enrolled	SAF credits
Fall, 2008	36 enrolled	SAF credits

IDMS is a short course organized by Dr. J. D. Bailey at OSU. I taught the Forest Monitoring (1 day) and Data Quality (0.5 day) modules of the course.

Mixed models/R workshop for Forest Value network researchers, Vancouver, B.C. Course was organized by Prof. Valerie LeMay and taught by leading R and Statistics experts including Drs. Andrew Robinson of university of Melbourne, Frank Berninger (University de Quebec), Bianca Eskelson of OSU. June 10-12.

#### Graduate Students and Postdoctoral Trainees:

##### At Oregon State University

###### Chair for Postdoctoral Trainee:

Postdoctoral trainees: vacant position

Research Associate: Bianca Eskelson (since Jan 1, 2009), Jeremy Groom (since Oct. 1, 2009), Greg Latta (since July 1, 2007)

**Chair of Ph.D. committee for:**

Jacob Strunk, Forest Resources, (will complete Dec. 15, 2011)

Michael Goerndt, Forest Resources, (completed, 2010)  
Employed: Research Associate, University of Missouri, Columbia

Bianca Eskelson, Forest Resources, (completed, 2008)  
Employed: Research Associate, College of Forestry, Oregon State University

**Member of Ph.D. committee for:**

Mauricio Acuna, Forest Engineering (ch. Murphy)  
Employed: Assistant Prof. at the University of Tasmania, Australia

Aaron Weiskittel (ch. Maguire)  
Employed: Assistant Prof. at the University of Maine, USA

Jim Kiser (ch. Maguire)  
Employed: Assistant Prof. at OSU, USA

Joshua Clark, Forest Engineering (ch. Murphy)  
Employed: Research Associate at OSU, USA

**Chair of M.Sc. committee for:**

Donald Gagliasso, Forest Resources, (current, will complete Dec, 2009)

Zane Haxton, Forest Resources, (current, completed Sept. 1, 2010)  
Employed: Scientific Certification Systems, Richmond, CA

Theresa Marquardt, Forest Resources, (completed March, 2010)  
Employed: Riparian Easement Forester, Washington Department of Natural Resources

Timothy Drake, Forest Engineering, Resources & Management (completed, 2008)  
Employed: Timber Sale Coordinator, Washington Department of Natural Resources

Nicole Younger, Forest Resources, (completed, 2007), won third place (out of 100) in the 2006 SAF national poster symposia in Pittsburg, Philadelphia, for a poster titled "Can Sulfur Improve Tree Form?".

**Member of M.Sc. committee for:**

Bodie Dowding, Forest Engineering, Resources and Management (ch. Murphy completed May, 2010)

**Minor Professor on M.S. committee for:**

Jeff DeRoss (ch. Maguire)

**University Graduate Council representative for:**

Uran Chu, Statistics (PhD, current, ch. Smythe)  
Anna Maher, Environmental Sciences (PhD, current, ch. Tanaka)

**Graduate Committees at the University of British Columbia**

Badre Hassani, Forest Resource Management, (2001, ch. LeMay)  
Ann Wong, Forest Resource Management, (2002, ch. Bull)

**Undergraduate Students, Trainees, and Employees:**

Kaori Strunk, PhD in Forestry (Summer 2009, 2010)

Gus Gerrits, BSc in FOM (Summer 2009)  
Jake Wilson, BSc in FR (Summer 2009)  
Stephanie Larew, BSc in FR (Summer 2007)  
Alex Irving, High School Graduate (Summer 2005)

### **Team or Collaborative Efforts**

Collaborated with Prof. David Hann and others to enhance the quantitative skills of our undergraduate students.

### **International Teaching**

- 1999 **Instructor** for applied statistics and growth and yield modeling in tropical forests, Mozambique. Contracted by the Food and Agricultural Organization of the United Nations (FAO/UN).
- 1997 **Sessional Lecturer** in Forest Mensuration, Faculty of Forestry, UBC.

## **SCHOLARSHIP AND CREATIVE ACTIVITY**

### **1. Publications**

#### **Accepted or Published - manuscripts in peer-reviewed journals**

#### **Referred publications**

36. Temesgen, H., B. N.I. Eskelson, T. Maness, D. Adams, and H. Burkhart. (*minor revision*) Teaching in Contemporary Forestry Resources Curricula: Applications to the Teaching of Forest Measurements.. Journal of Forestry.
35. Eskelson, B.N.I., L. Madison, J. Hagar, and H. Temesgen. (*in press*) Estimating riparian understory vegetation cover with beta regression and copula models. Forest Science.
34. Temesgen, H., V.J. Monleon, A. R. Weiskittel, and D.S. Wilson. (*in press*) Sampling strategies for efficient estimation of tree foliage biomass. Forest Science.
33. Goerndt, M.E., V.J. Monleon, and H. Temesgen. 2010. Relating forest attributes with area- and tree-based LiDAR metrics for western Oregon. Western Journal of Applied Forestry. 25: 105-111.
32. Marquardt, T, H. Temesgen and P. Anderson. 2010. Examination of the accuracy and suitability of selected sampling methods to quantify selected stand attributes within riparian zones. Forest Ecology and Management. 260:313-320.
31. Latta, G., H. Temesgen, D.A. Adams, and T. Barrett. 2010. Analysis of potential impacts of climate change on forests of the United States Pacific Northwest. Forest Ecology and Management. 259: 720-729.
30. Eskelson, B.N.I., H. Temesgen, and T.M. Barrett. 2009. Imputing Mean Annual Change and Estimating Current Forest Attributes. Silva Fennica. 43:649-658
29. Eskelson, B.N.I, H. Temesgen, and T. Barrett. 2009. Estimating cavity tree and snag abundance using negative binomial regression models and nearest neighbor imputation methods. Can. J. For. Res. 39: 1749-1765.
28. Latta, G., Temesgen, H., and T. Barrett. 2009. Mapping and imputing potential productivity of Pacific Northwest Forests using climate variables. Can. J. For. Res. 39: 1197-1207.
27. Eskelson, B.N.I, H. Temesgen, T. Barrett, V. LeMay, A. Hudak, and N. Crookston. 2009. The roles of nearest neighbor methods in imputing missing data in forest inventory and monitoring databases. Scand. J. For. Res. 24:193-205.

26. Weiskittel, A. R., P.J. Gould, and H. Temesgen. 2009. Sources of variation in the self-thinning boundary line for three ecologically-distinct species. *For. Sci.* 55 (1): 84-93.
25. Eskelson, B.N.I, H. Temesgen, and T. Barrett. 2009. Estimating current forest attributes from paneled inventory data using plot-level imputation: a study from the Pacific Northwest. *For. Sci.* 55 (1): 64-71.
24. Garber, S.M., Temesgen, H., V.J. Monleon, and D.W. Hann. 2009. Effects of height imputation strategies on stand volume estimation. *Can. J. For. Res.* 39: 694-703.
23. Temesgen, H., V.J. Monleon, and D.W. Hann. 2008. Analysis of nonlinear tree height prediction strategies for Douglas-fir Forests. *Can. J. For. Res.* 38: 553-565.
22. Temesgen, H., T. Barrett, and G. Latta. 2008. Estimating Cavity Tree Abundance Using Nearest Neighbor Imputation Methods for western Oregon and Washington Forests. *Silva Fennica.* 42(3): 337-354.
21. Younger, N., H. Temesgen, and S. Garber. 2008. Taper and volume responses to sulfur treatment in coastal Oregon Douglas-fir stands. *West. J. Appl. For.* 23(3): 142-148.
20. Eskelson, B.N.I, H. Temesgen, and T.M. Barrett. 2008. Comparison of Stratified and Non-stratified Most Similar Neighbour Approaches for Estimating Stand Tables. *Forestry: Int. J. For. Res.* 81: 125-134.
19. Weiskittel, A. R., H. Temesgen, D.S. Wilson, and Douglas A. Maguire. 2008. Sources of within- and between-stand variability in specific leaf area of three ecologically distinct conifer species. *Annals of Forest Science* 65: 103-113.
18. Temesgen, H., Goerndt, M.E., G. Johnson, D. Adams, and R.A. Monseurd. 2007. Forest measurements and biometrics in the pacific Northwest USA: status and future needs of the Pacific Northwest USA. *J. For.* 105: 233-238.
17. Temesgen, H., D.W. Hann, and V.J. Monleon. 2007. Regional height-diameter equations for major tree species of southwest Oregon. *West. J. Appl. For.* 22(3): 213-219.
16. Temesgen, H., P. Martin, D.A. Maguire, and J.C. Tappeiner. 2006. Quantifying effects of different levels of dispersed canopy tree retention on stocking and yield of the regeneration cohort. *Forest Ecology & Management.* 235: 44-53.
15. Temesgen, H. and A.R. Weiskittel. 2006. Leaf mass per area relationships across light gradients in hybrid spruce crowns. *Trees: Structure & Function.* 20: 522-530.
14. LeMay, V. and H. Temesgen. 2005. Connecting inventory information sources for landscape level analyses. *Forest Biometry, Modeling & Information Sciences.*1: 37-49.
13. LeMay, V. and H. Temesgen. 2005. Comparison of nearest neighbour methods for estimating basal area and stems per ha using aerial auxiliary variables. *For. Sci.* 51:109-119.
12. Temesgen, H., V.M. LeMay, and S. J. Mitchell. 2005. Tree crown ratio models for multi-species and multi-layered stands. *For. Chron.* 81(1): 133-141.
11. Temesgen, H. and S.J. Mitchell. 2005. An individual tree mortality model for South-eastern British Columbia. *West. J. Appl. For.* 20(2): 101-109.
10. Boisvenue, C., H. Temesgen, and P.L. Marshall 2004. Selecting a small tree height growth model for mixed-species stands in the Southern Interior of British Columbia, Canada. *Forest Ecology & Management.* 202:301-312.

9. Temesgen, H. and K. v. Gadow. 2004. Generalized height-diameter models for major tree species in complex stands of interior British Columbia, Canada. *Europ. J. For. Res.* 123(1): 45-51.
8. Hassani, B.T., P.L. Marshall, V.M. LeMay, H. Temesgen, and Zumrawi. 2004. Regeneration imputation models for complex stands of southeastern British Columbia. *For. Chron.* 80(2): 271-278.
7. Temesgen, H. 2003. Evaluation of sampling alternatives to quantify tree leaf area. *Can. J. For. Res.* 33: 82-95.
6. Temesgen, H., V. LeMay, and I.R. Cameron. 2003. Bivariate distribution functions for predicting twig leaf area within hybrid spruce crowns. *Can. J. For. Res.* 33: 2044-2051.
5. Temesgen, H. 2003. Estimating tree-lists from aerial information: a comparison of a parametric and most similar neighbor approaches. *Scand. J. For. Res.* 18:279-288.
4. Temesgen, H., V.M. LeMay, P.L. Marshall, and K. Froese. 2003. Imputing tree-lists from aerial attributes for complex stands of British Columbia. *For. Ecol. & Manage.* 177: 277-285.
3. Rowan, C.A., S.J. Mitchell and H. Temesgen. 2003. Effectiveness of wind firming treatments in Coastal British Columbia. *Forestry: Int. J. For. Res.* 76: 55-65.
2. Mitchell, S.J., H. Temesgen and Y.P. Kulis. 2001. Empirical modeling of cutblock edge windthrow risk on Vancouver Island, Canada, using stand level information. *For. Ecol. & Manage.* 154: 117-130.
1. Howard, A.F. and H. Temesgen. 1997. Potential financial returns from alternative silvicultural prescriptions in second-growth stands of coastal British Columbia. *Can. J. For. Res.* 27:1483-1495.

**Abstract:**

1. Temesgen, H., T. Barrett, and G. Latta. 2005. Cavity tree abundance and stand characteristics in Western Oregon Forests: relationships and predictions. *The International Forestry Review* 7(5): 35.

**Peer-Reviewed publications**

8. Eskelson, B.N.I., H. Temesgen, and T.M. Barrett. 2009. Tree-level imputation techniques to estimate current plot-level attributes in the Pacific Northwest using paneled inventory data. In: McWilliams, Will; Moisen, Gretchen; Czaplewski, Ray, comps. 2008. *Forest Inventory and Analysis (FIA) Symposium 2008; October 21-23, 2008; Park City, UT. Proc. RMRS-P-56CD, 32. Fort Collins, CO: USDA, Forest Service, Rocky Mountain Research Station. 1 CD*
7. Hans-Erik Andersen, Tara Barrett, Ken Winterberger, Jacob Strunk, and H. Temesgen. 2009. Estimating forest biomass on the western lowlands of the Kenai Peninsula of Alaska using airborne lidar and field plot data in a model-assisted sampling design. *Proceedings for the Extending Forest Inventory and Monitoring over Space and Time, 19-22 May 2009, Quebec City, Quebec, Canada.*
6. Younger, N., H. Temesgen, and S. Garber. 2006. Taper and volume responses of Douglas-fir to aerially applied Sulfur and nutrients for control of Swiss needle cast disease. *Swiss needle cast cooperative 2006 annual report. Oregon State University, College of Forestry. Corvallis, OR. pp 47-53.*
5. Temesgen, H., P.J. Martin, D. A. Maguire, and J.C. Tappeiner. 2005. Effects of different levels of canopy tree retention on stocking and yield of regeneration cohort in the Southern interior British Columbia. pp. 215-225. *In* *Balancing ecosystem values: innovative experiments for sustainable forestry conference. USDA For. Serv., Gen. Tech. Rep. PNW-GTR-635.*
4. LeMay, V., and H. Temesgen. 2005. Nearest neighbor methods for imputing missing data within and across scales. pp 119-144. *In* *Proceedings of "Evaluation of quantitative techniques for deriving national scale data for assessing and mapping risk workshop". USDA FHTET-2005-12.*



3. Temesgen, H. and V. M. LeMay. 2001. Generating tree-lists from aerial attributes for sustainable resource management. *In* Proceedings of the "Forest modeling for ecosystem management, forest certification, and sustainable management" conference. Aug. 12–17, 2001, Vancouver, BC, Canada. pp. 409-421.
2. Mitchell, S. J., Y. Kulis, and H. Temesgen. 2001. Modeling and mapping cutblock edge windthrow risk using geographic information system. *In* Proceedings of the windthrow researchers' workshop. Windthrow assessment and management in British Columbia. Jan. 31 – Feb. 1, 2001, Richmond, BC, Canada. pp. 122-138.
1. Rowan, C., S. J. Mitchell, and H. Temesgen. 2001. Edge windfirming treatments in British Columbia. *In* Proceedings of the windthrow researchers workshop. Windthrow assessment and management in British Columbia. Jan. 31 – Feb. 1, 2001, Richmond, BC, Canada. pp. 205-222.

### **Non-referred Publications**

22. Drake, T.P. and H. Temesgen. 2008. Empirical modeling of windthrow occurrence on streamside corridors using stream configuration and stand level information. Report submitted to the Fish and Wildlife Habitat in Managed Forests Research Program. 16 pp.
21. Temesgen, H. 2004. Juvenile tree height growth and tabular mortality models to extend the use Prognosis<sup>BC</sup> to young, even-aged stands. Internal report for the BC Ministry of Forests, Forest Practices Branch. Victoria, BC. 24 pp.
20. Temesgen, H. 2003. Distance sampling for estimating size and density of wildlife trees in dispersed shelterwood system: A numerical example. Report submitted to Riverside Forest Products Ltd. 10 pp.
19. Temesgen, H. 2003. Effects of alternative silviculture on growth and yield of Interior BC forests. A review of the literature. Report submitted to Riverside Forest Products Ltd. 14 pp.
18. Zumrawi, A.-A., V. LeMay, P. Marshall, H. Temesgen, B. Hassani, C. Lencar, B. Snowdon, and D. Robinson. 2003. Implementing a Prognosis<sup>BC</sup> regeneration submodel for the complex stands of southeastern and central British Columbia. Forestry Innovation Investment Final Report. 10 pp.
17. Zumrawi, A.A., V. LeMay, P. Marshall, H. Temesgen, B. Hassani, and B. Snowdon. 2003. Expanding Prognosis<sup>BC</sup> to the Chilcotin variant of the Interior Douglas-fir dry, cool subzone. -Forest Innovation Investment Final Report 7 pp.
16. Temesgen, H. 2002. Individual-tree mortality models for the interior-cedar and interior Douglas fir eco-zones. Report submitted to J.S. Thrower and Associates. 19 pp.
15. Temesgen, H. 2002. Analysis of growth and mortality rates in highly dense Lodgepole pine stands. Internal report for the BC Ministry of Forests, Forest Practices Branch. Victoria, BC. 28 pp.
14. Temesgen, H. 2001. Percent live crown models for Prognosis<sup>BC</sup> in the Interior Cedar-Hemlock and Interior Douglas-fir zones of Cariboo, Kamloops, and Nelson Forest Regions. Internal report for the BC Ministry of Forests, Forest Practices Branch. Victoria, BC. 14 pp.
13. Temesgen, H. and V. M. LeMay. 2001. Examination of tree list generation approaches for the Boundary timber supply area. Internal report for the BC Ministry of Forests, Forest Practices Branch. 15 pp plus Appendices.
12. Temesgen, H. and V. M. LeMay. 2000. Possible approaches for relating growth and yield models to aerial information. Part I – Literature review and data sources. Internal report for the BC Ministry of Forests, Forest Practices Branch. 20 pp plus Appendices.

11. Temesgen, H. and V.M. LeMay. 2000. Possible approaches for relating growth and yield models to aerial information. PART II – Example using existing audit data. Internal report for the BC Ministry of Forests, Forest Practices Branch. 20 pp. plus Appendices.
10. Temesgen, H. and V.M. LeMay. 2000. Tree List Generation Workshop. Proceedings of a workshop held on Jan. 21, 2000 at the University of British Columbia. 9 pp. plus Appendices.
9. Temesgen, H. 2000. Analysis of permanent sample plot data for differences in geographic locations and climatic amplitudes within selected zones. Internal report for the BC Ministry of Forests, Resources Inventory Branch. Victoria, BC. 12 pp.
8. Temesgen, H. and V.M. LeMay. 1999. Re-fitting the mortality model of Prognosis<sup>BC</sup>. Internal report for the BC Ministry of Forests, Forest Practices Branch. 20 pp. plus Appendices.
7. Temesgen, H. and V.M. LeMay. 1999. Examination of large tree height and diameter growth models modified for Prognosis<sup>BC</sup>. Internal report for the BC Ministry of Forests, Forest Practices Branch. 41 pp. plus Appendices.
6. Temesgen, H. 1999. Applied concepts in tree growth and yield modelling with a forest vegetation simulator. Internal report for the Food and Agricultural Organization of the United Nations, Accra, Ghana. 30 pp.
5. Temesgen, H. 1999. Statistical analysis of natural and environmental resources management data using SAS. Internal report for the Food and Agricultural Organization of the UN, Accra, Ghana. 56 pp.
4. Mitchell, S.J. and H. Temesgen 1999. Windthrow Management – operational trials for cutblock edge treatments: Data collation and analysis. Internal report for the BC Ministry of Forests, Vancouver Forest Region Office. 36 pp.
3. Temesgen, H. and V.M. LeMay 1998. Leaf area distribution and sampling designs for quantifying tree leaf area. Internal report for the BC Science Council. 47 pp.
2. Temesgen, H. 1997. Use of basal area to quantify site quality in uneven-aged stands. A synopsis of the literature review. Internal report for J.S. Thrower and Associates, Vancouver, BC. 24 pp.
1. LeMay, V.M. and H. Temesgen. 1996. Equations to estimate percent decay and waste by species, BEC zone, and risk group constrained across risk groups. Internal report for the BC Ministry of Forests, Resources Inventory Branch. 18 pp.

## **2. Presentations**

First author was the speaker.

### **Oral Presentations – Invited**

22. Temesgen, H., J. Strunk, and H.E. Andersen. 2010. Challenges and opportunities in estimating biomass change using successive remotely sensed and ground data in Coastal Alaska Forests. Presented at the 23<sup>rd</sup> IUFRO World Congress, August 27, Seoul, Korea.
21. Barrett, T., Latta, G., and H. Temesgen. 2010. Using imputation for risk mapping of disease when climate changes - an example from the temperate rainforest of Alaska, USA. Presented at the 23<sup>rd</sup> IUFRO World Congress, August 25, Seoul, Korea.
20. Latta, G., T. Barrett, and H. Temesgen. 2010. A Comparison of Spatial Regression Models in Determining the Influence of Climate on Productivity in Coastal Alaska Forests. Presented at the 23<sup>rd</sup> IUFRO World Congress, August 25, Seoul, Korea.

19. Temesgen, H., J. Strunk, and H.E. Andersen. 2010. Estimating Biomass Change in Coastal Alaska Forests: Statistical Issues. Presented at the "21<sup>th</sup> Annual The International Environmetrics Society Conference", June 20-24, Margareta Island, Venezuela.
18. LeMay, V., I. Moss, and H. Temesgen. 2010. Using Inventory and Forecast Models for Land Use Planning, Including Timber Volume, Climate Changes, Biomass, Carbon, and Habitat. Presented at the Science to Management Forum, Forest Science Chat Series, March 2, Vancouver, Canada.
17. Temesgen, H., V.J. Monleon, A. R. Weiskittel, and D.S. Wilson. 2009. A Tale of Two Phases: Design and Estimation Tree foliage Biomass. Presented at the "20<sup>th</sup> Annual The International Environmetrics Society Conference", July 5-9, University of Bologna, Italy.
16. Temesgen, H., G. Latta, T.M. Barrett, and B.N.I Eskelson. 2009. Analysis of nearest neighbor methods for imputing missing potential productivity data. Presented at the 2009 Western Mensurationists Meeting. June 21-22. Vancouver, WA.
15. Temesgen, H. 2009. Portfolio # 4: Science Delivery and Application. Presented at the USDA Forest Inventory and Analysis panel review. June 24. Bonneville, WA.
14. Eskelson, B.N.I., H. Temesgen, and T.M. Barrett. 2009. Estimating cavity tree and snag abundance using negative binomial regression models and nearest neighbor imputation methods. Department of Statistics Seminar, April 27, Corvallis, Oregon.
13. Eskelson, B.N.I., H. Temesgen, and T.M. Barrett. 2009. Estimating cavity tree and snag abundance using negative binomial regression models and nearest neighbor imputation methods. Growth Model Users Group Meeting, January 28, Portland, Oregon.
12. Temesgen, H., A. R. Weiskittel, and D.S. Wilson. 2008. Efficiency of some sampling alternatives to estimate tree- and stand-level foliage biomass. Presented at the "19<sup>th</sup> Annual The International Environmetrics Society Conference" at The University of British Columbia Okanagan, June 8-13, Kelowna, BC, Canada.
11. Eskelson, B.N.I, H. Temesgen, and T. Barrett. 2008. Estimating status of forest attributes from paneled inventory data using nearest neighbor imputation approaches. Presented at the 19<sup>th</sup> Annual Conference of "The International Environmetrics Society" at The University of British Columbia Okanagan, June 8-13, Kelowna, BC, Canada.
10. LeMay, V., H. Temesgen, A-A. Zumrawi, and P.L. Marshall. 2007. Ingrowths and Mortality in Partially Cut Complex Stands of South-Eastern BC, and Extensions to MPB-Affected Stands of Central BC. Presented at the "Complex stand research and management conference", Feb. 19-20, Smithers, BC, Canada.
9. Temesgen, H. and A.R. Weiskittel. 2006. Mixed Model Analysis of Leaf Area and Mass Data: Tales from the Dark Side of Tree Crowns. Presented at the Department of Forestry Seminar series at Oklahoma State University, Dec. 7, Stillwater, OK.
8. Temesgen, H. 2005. Imputing missing multivariate data to improve inference for natural resource planning. Presented at the Department of Statistics Seminar series at Oregon State University, Nov. 7, Corvallis, OR.
7. LeMay, V. and H. Temesgen. 2005. Nearest neighbor methods for imputing missing data within and across scales. Presented at the "Evaluation of quantitative techniques for deriving national scale data for assessing and mapping risk workshop", July 26-28, Denver, CO.
6. Temesgen, H. 2004. Partial cut yields. Presented at the quarterly "Growth Model User's Group" Meeting. Nov. 15, Vancouver, WA.
5. Temesgen, H. 2004. Estimating Tree-lists for Non-sampled polygons. Presented at the Oregon State Forestry Core Team Meeting. Feb. 5. Forest Grove, OR.

4. Temesgen, H., P. Martin, B. Snowdon, E. McWilliams and S. Browne-Clayton. 2003. Adjusting future yield predictions to reflect the impacts of different levels and patterns of retention. Presented at the south interior silviculture committee meeting. March 10. Penticton, BC, Canada.
3. Temesgen, H. 2003. Integration of biometrics, silviculture, landscape analysis for sustainable resource management. Presented at the Institute of Tropical Forestry. March 28, Gottingen, Germany.
2. Temesgen, H. 2003. Using imputation methods in forest measurement and analysis. Presented at the Institute of Stochastic Statistics and Econometrics. June 16, Gottingen, Germany.
1. LeMay, V.M. and H. Temesgen. 2001. Nearest Neighbor methods for generating tree-lists from inventory data. Presented at the IUFRO 4.11 Forestry, Biometry, Modeling, and Information Science Conference. June 26 - 29, Greenwich, England.

### **Presentations - Volunteered**

33. Haxton, Z, T. Marquardt and H. Temesgen. 2010. N-tree-distance sampling in riparian forests of western Oregon: a simulation study. Presented at Western Mensurationists meeting. June 21 Missoula, Montana. USA.
32. Goerndt, M.E., V.J. Monleon, and H. Temesgen. 2009. Relating forest attributes with area-based and tree-based LiDAR metrics for western Oregon. Presented at The International Environmetrics Society (TIES), 2<sup>nd</sup> North American Regional Meeting Measuring, Monitoring, and Modeling Environmental Resources. June 15 – 17, 2009. Corvallis, OR, USA
31. Strunk, J., H. Temesgen, and Hans-Erik Andersen. 2009. Effects of Sample-Size and LIDAR Point-Density on the Performance of Forest Inventory with LIDAR. Presented at the 2009 Western Mensurationists Meeting. June 21-23, 2009. Vancouver, WA.
30. Hans-Erik Andersen, Tara Barrett, Ken Winterberger, Jacob Strunk, H. Temesgen. 2009. Estimating forest biomass on the Kenai Peninsula of Alaska using a lidar-based Double sampling design. Presented at the IUFRO conference on “Extending Forest Inventory and Monitoring over Space and Time”. 19-22 May, Quebec City, Canada.
29. Eskelson, B.N.I, H. Temesgen, and T. Barrett. 2009. Estimating cavity tree and snag abundance using negative binomial regression models and nearest neighbor imputation. Presented at the quarterly “Growth Model User’s Group” Meeting. Jan. 28, Portland, Oregon, USA.
28. Temesgen, H. and Drake, T. 2008. Analysis of windthrow occurrence on streamside corridors. Final Report presented to the Fish and Wildlife Habitat in Managed Forests Research Program Advisory Board. Dec. 9, 2008, Corvallis, OR.
27. Latta, G., D.M. Adams, Temesgen, H., and T. Barrett. 2008. Potential forest sector impacts of climate change on forests of the United States pacific northwest Douglas-fir forests. Forest sector modeling - state-of-the-art and future challenges in an expanding global marketplace. November 17-20. Seattle. WA.
26. Eskelson, B.N.I, Temesgen, H. and T. Barrett. 2008. Estimating status of forest attributes from paneled inventory data using nearest neighbor imputation approaches in the Pacific Northwest. Presented at the 2008 FIA symposium, Park City, Utah. Oct. 21-25.
25. Drake, T. and Temesgen, H. 2008. Empirical modeling of windthrow occurrence on streamside corridors using stream configuration and stand level information. Presented at the 2008 FIA symposium, Park City, Utah. Oct. 21-25.
24. Latta, G., Temesgen, H., and Tara Barrett. 2008. Imputing potential productivity of Pacific Northwest Forests using climate variables. Presented at the 2008 FIA symposium, Park City, Utah. Oct. 21-25.

23. Latta, G., Temesgen, H., D.M. Adams, and Tara Barrett. 2008. Potential forest productivity impacts of climate change on forests of the United States Pacific Northwest. Conference on "Adaptation of Forests and Forest Management to Climate Change with Emphasis on Forest Health – Review of Science, Policies, and Practices" August 25-28, Umeå, Sweden.
22. Latta, G., Temesgen, H., and Tara Barrett. 2008. Mapping and imputing potential productivity of Pacific Northwest Forests. Presented at the quarterly "Growth Model User's Group" Meeting. Feb. 11, Vancouver, Washington, USA.
21. Gagliaso, D., H. Temesgen, and S. Hummel. 2008. A Comparison of Gradient Nearest Neighbor and Most Similar Neighbor Imputation Methods to Map Forest Cover Types of Western Oregon's Forest. Presented at the Silvilaser 2008: 8th international conference on LiDAR applications in forest assessment and inventory. September 17-19. Edinburgh, UK.
20. Temesgen, H., A.R. Weiskittel, D.S. Wilson, and D.A. Maguire. 2007. Analysis of within- and between-crown variability for mechanistic crown models. Presented at IUFRO scientific conference on "Forest Growth and Timber Quality: Crown Models and Simulation Methods for Sustainable Management" Aug. 7-10, Portland, Oregon, USA.
19. Temesgen, H., T. Barrett, V. LeMay, and Greg Latta 2007. Comparison of nearest neighbor imputation methods for estimating frequency of cavity trees for western Oregon and Washington forests. Presented at the 2007 Nearest Neighbors Workshop, Florence, Italy. July 5-7.
18. Weiskittel, A.R., S. Garber, and Temesgen, H. 2007. Modeling regional variation in the self-thinning boundary line. Presented at the quarterly "Growth Model User's Group" Meeting. June 19, Vancouver, Washington, USA.
17. Temesgen, H., B.N.I Eskelson, and T. Barrett. 2006. Variance estimation in the presence of nearest neighbor imputed data. Presented at the 2006 Nearest Neighbors Workshop. Aug. 28-30. Minneapolis, MN.
16. Eskelson, B.N.I., H. Temesgen, and T. M. Barrett. 2006. Estimating stand tables from aerial attributes: a Comparison of stratified and non-stratified most similar neighbor imputation approaches for western Oregon's forests. Presented at the 2006 Western Mensurationists Meeting. June 18-20. Fortuna, CA.
15. Temesgen, H. 2006. Empirical modeling of windthrow occurrence on streamside corridors using stream configuration and stand level information. Presented at the annual meeting of the Technical Advisory Committee of Fish and Wildlife Habitat in Managed Forest Research Program. Feb. 9, Corvallis, OR.
14. Temesgen, H., T. Barrett, and G. Latta. 2005. Cavity tree abundance and stand characteristics in western Oregon forests: relationships and predictions. Presented at the 22<sup>nd</sup> IUFRO world congress, August 8-13, Brisbane, Australia.
13. Temesgen, H., P.J. Martin, D. A. Maguire, and J.C. Tappeiner. 2004. Effects of different levels of canopy tree retention on stocking and yield of the regeneration cohort in the Southern Interior of British Columbia. Presented at IUFRO "Balancing Ecosystem Values Workshop: Innovative Experiments for Sustainable Forestry" Aug. 15-20, Portland, Oregon, USA.
12. LeMay, V. and H. Temesgen. 2003. Connecting inventory information sources for landscape level analyses. Presented at the modeling forests from leaves to landscape workshop. Dec.1-3, Melbourne, Australia.

11. LeMay, V., H. Temesgen, K. Froese, and C. Staudhammer. 2003. Stand structure at stand and landscape levels. Presented at the 2003 Canadian Forest Inventory Committee meeting, Cypress Hills, June 1-5, Saskatchewan, Canada.
10. Temesgen, H., P. Martin, B. Snowdon, E. McWilliams and S. Browne-Clayton. 2003. Adjusting future yield predictions to reflect the impacts of different levels and patterns of retention. Poster presentation at the South Interior Silviculture Committee Meeting. March 10. Penticton, BC, Canada.
9. Temesgen, H., and V.M. LeMay. 2002. Linking Prognosis<sup>BC</sup> to aerial attributes for timber supply analysis in British Columbia. Presented at the "Second Forest Vegetation Simulator Conference". Feb. 12-14. Fort Collins, CO.
8. LeMay, V.M, Temesgen H., and P.L. Marshall. 2002. Using Aerial Data as a Proxy to Populate the Forested Landscape. Presented at "Reality, Models and Parameter Estimation – the Forestry Scenario" June 2-5, Sesimbra, Portugal.
7. Badre,H., A. Zumrawi, P.L. Marshall, H. Temesgen, and V. M. LeMay. 2001. Comparing regeneration imputation approaches for mixed-species, partially cut stands. Poster presentation at the "Forest modeling for ecosystem management, forest certification, and sustainable management" conference. Aug. 12–17, 2001, Vancouver, BC, Canada.
6. Temesgen, H., V.M. LeMay, and P.L. Marshall. 2001. Adapting a mortality model for Southeast British Columbia. Presented at the 2001 Western Forest Mensurationists' Conference. June 24 - 26, Klamath Falls, Oregon, USA.
5. Temesgen, H. and V.M. LeMay. 2000. Bivariate distribution functions in assessing leaf area distribution in hybrid spruce crowns. Poster presentation at the XXI IUFRO World Congress 2000, Aug. 7-12, Kuala Lumpur, Malaysia.
4. Temesgen, H. and V.M. LeMay. 1999. Linking growth and yield models to aerial information. Presented at the Measurements and Quantitative Methods and Management Conference & The 1999 Southern Mensurationists Meeting. Nov. 17-18, Jekyll Island, Georgia, USA.
3. Temesgen, H. and V.M. LeMay. 1999. Evaluation of the small tree mortality model of Prognosis<sup>BC</sup>. Presented at the interior growth and yield modelling meeting, Jan. 21, Victoria, BC.
2. Temesgen, H. 1997. Examination and modelling of leaf area distributions in tree crowns. Presented at the Western Forest Mensurationists Meeting, June 23-24, Lake Tahoe, CA.
1. Temesgen, H. and V.M. LeMay. 1997. Evaluation of sampling alternatives to quantify tree leaf area. Presented at the BC Ministry of Forests, Research Branch, Nov. 12, Victoria, BC.

### **3. Research Grants**

#### **Current Projects**

Current Projects:

Since 2003, I have secured 16 grants totaling \$1,253,136 Million. I am the Principal Investigator on 11 of these grants.

## **SERVICE**

### **1. University Service**

#### **University committees**

- Since 2009 Chair, Faculty Senate Graduate Admissions Committee.
- Since 2009 ex-officio Member, Faculty Graduate Council.
- 2008 Member, Faculty Senate Graduate Admissions Committee.
- Since 2005 Member, Fellowships and Awards Committee for the OSU Chapter of the Honor Society of Phi Kappa Phi, where we select an OSU candidate among students who have more than 3.89 GPA, to compete for the title of National Champion.

#### **College of Forestry committees**

- 2008-Present Member, Search Committee for the Forest Engineering, Resources and Management Department Head position.
- 2009- Present College of Forestry Scholarship Committee.
- 2007 Member, College of Forestry Reorganization Advisory Committee (RAC). The RAC was chartered to identify strength and weaknesses of alternative approaches to reorganizing the College of Forestry into three academic units.
- 2007 Member, College of Forestry Budget Reallocation Task Group.
- 2003-Present Co-Adviser, Forestry Club, Forestry Undergraduate Student Club at OSU.
- 2003-Present Member, Selection Committee for the Dilworth Memorial Fellowship at OSU.

#### **Department of Forest Engineering, Resources and Management committees**

- 2010 Member, Graduate Committee
- 2007- 2008 Chair, Graduate Affairs and Harris Lab committee
- 2003- 2006 Member, Graduate Affairs and Harris Lab committee
- 2005 Faculty Review Committee
- 2004-2005 Forest Management Curriculum Review Committee
- 2004 Quantitative Skills Subcommittee
- 2004 Search Committee for Silviculture position that hired Dr. John Bailey.
- 2003 College Forests Inventory System Review Committee

#### **At University of British Columbia**

- Member, Graduate Committee, Department of Forest Resources (2000-2003).
- Member, Graduate Student Poster Competition Reviewer (2001).

### **2. Service to the Profession**

- Subject matter specialist for USDA FS panel review for:
  - Promotion and Tenure reviewer for a candidate at University of Florida.
  - Dr. Tara Barrett's promotion from GS 13 to GS 14 (2008)
  - Dr. Vicente Monleon's promotion from GS 12 to GS 13 (2009)
  - Dr. Hans-Erick Anderson's promotion from GS 12 to GS 13 (2010)

## **Research review**

Washington Department of Natural Resources

One of four reviewers selected to critically review the “effectiveness of riparian management zones in providing habitat for wildlife: re-sampling at the 10-year post-treatment Interval”.

USDA Forest Inventory and Analysis panel review Portfolio #4.

USDA National Research Initiative Competitive Grants Program (competitive grant proposals)

Oregon Department of Forestry Research Proposals (research proposal)

USDA Forest Service (Conference Proceedings, General and Research Reports).

University of Washington (Pacific Northwest Stand Management Cooperative’s Tree-list Generation Research Program).

## **Review of journal articles**

Forest Science

Canadian Journal of Forest Research

Forest Ecology and Management

Scandinavian Journal of Forest Research

Silva Fennica

Forestry: International Journal of Forestry Research

Western Journal of Applied Forestry

Forestry Chronicle

Journal of Sustainable Forestry

Ethiopian Journal of Science

## **Professional Associations/Societies**

**Coordinator, IUFRO Research Group 4.01** -Forest mensuration and modelling (Since 2010).

**Deputy**, IUFRO Working Group 4.02.03, Inventories on Successive Occasions (2006-2010).

**Registered Professional Forester** with the Association of British Columbia Professional Foresters, BC, Canada (Since 1999).

**Member**, American Statistical Association (Since 2007).

**Member**, The International Biometric Society (Since 2007).

**Member**, Society of American Foresters (Since 2006).

**Member**, Fellowships and Awards Committee for OSU Chapter of the Honor Society of Phi Kappa Phi (Since 2006).

**Member**, International Scientific Committee for “Multipurpose trees in the tropics: Assessment, Growth, and Management” conference, Nov. 22-25, 2004, Johdpur, India.

**Member**, Provincial Prognosis<sup>BC</sup> Steering Committee (1999-2006).

**Member**, Canadian Institute of Forestry (1998-2003).

**Member**, American Society of Photogrammetry and Remote Sensing (1991-1993).

## **2. Service to the Public (professionally related)**

**Session coordinator and Moderator** at the 23<sup>rd</sup> World IUFRO World Congress “Advances in handling missing data in sustainable forest management” (F-05, with Prof. Valerie LeMay & Göran Ståhl), August 23-28, 2010. Soul, Korea.



**Session coordinator and Moderator** at the 23<sup>rd</sup> World IUFRO World Congress “Contemporary frontiers in forest inventory and assessment using successive remotely sensed data” (F-02, with Prof. Cris Brack), August 23-28, 2010. Soul, Korea.

**Invited instructor** for Mixed models/R workshop for Forest Value network researchers, Vancouver, B.C. June 10-12.

**Consultant**, to the BC Ministry of Forests and Quebec Ministry of Natural Resources on methods of linking growth and yield models with inventory data (Since Sept. 2006).

**Member**, Organizing committee for the annual Western Forest Mensurationists meeting (2004).

**Chair** for a growth and yield models sessions at the international conference on “Forest Modelling for Ecosystem Management, Forest Certification, and Sustainable Management”. Vancouver, BC, Canada, August 12-17, 2001.

**Invited Participant** in the Global Vision for Forests 2050 Meeting at the Liu Centre for the Study of Global Issues, UBC, Canada (2000).

**Organizer** for a weekly Forest Biometrics seminar at the Faculty of Forestry, UBC, (1997).

## **AWARDS AND HONORS**

### **1. National and International**

German Academic Exchange Fellowship (2003).

Graduate School Scholarship, Lakehead University (1989-1993).

### **2. State and Regional**

Associate Editor, Western Journal of Applied Forestry Research

Associate Editor, Forestry Ecology and Management

### **3. University and Community**

Phi Kappa Phi OSU Emerging Scholar, 2009.

Selected as a Mentor of OSU, one of the two mentors selected from the College of Forestry for the 2008 mentors of OSU campaign.

Xi Sigma Pi Mentor award, 2008. Oregon State University, College of Forestry.

Runner-up for the 2007 Phi Kappa Phi Emerging Scholar Award at OSU (one of three finalists).

Inducted to the OSU Chapter of the Honor Society of Phi Kappa Phi (2005).

Forest Mensuration Fellowship, University of British Columbia (UBC), Canada (1994-1996).

UBC, Faculty of Forestry Fellowship (1994).

Special University Scholarship (UBC – Faculty of Forestry Fellowship (1993)

Graduate School Fellowship, Lakehead University (1990, 1991)