

## Complete Publication List of Dr. Lianjun Zhang (September, 2010)

### PEER-REVIEWED PUBLICATIONS:

1. Zhang, L., J.A. Moore and J.D. Newberry. 1993. Disaggregating stand volume growth to individual trees. *Forest Science* 39(2):295-308.
2. Zhang, L., J.A. Moore and J.D. Newberry. 1993. Estimating asymptotic attributes of forest stands based on bio-mathematical rationales. *Ecological Application* 3(4):743-748.
3. Zhang, L., J.A. Moore and J.D. Newberry. 1993. A whole-stand growth and yield model for interior Douglas-fir. *Western Journal of Applied Forestry* 8(4):120-125.
4. Force, J.E., G.E. Machlis, L. Zhang, and A. Kearney. 1993. The relationship between timber production, historical events and community social change: a quantitative case study. *Forest Science* 39(4):722-742.
5. Newberry, J.D., J.A. Moore and L. Zhang. 1993. Evaluation of simple quantile estimation functions for modeling forest diameter distribution. *Canadian Journal of Forest Research* 23(11):2376-2382.
6. Moore, J.A., L. Zhang and J.D. Newberry. 1994. Effects of intermediate silvicultural treatments on the distribution of within-stand growth. *Canadian Journal of Forest Research* 24(2):398-404.
7. Beyl, C.A., G. Ghale and L. Zhang. 1995. Characteristics of hardwood cuttings influence rooting of *Actinidia Arguta*. *HortiScience* 30(5):973-976.
8. Oswald, B.P., L. Zhang, T.H. Green, and K.E. Ward. 1996. Differences in species composition and stand characteristics in the hardwood forests of north Alabama as reflected by the presence of eastern redcedar. *Journal of Sustainable Forestry* 3(4):75-100.
9. Moore, J.A., L. Zhang and D. Stuck. 1996. Height-diameter equations for ten tree species in the inland Northwest. *Western Journal of Applied Forestry* 11(4):132-137.
10. Zhang, L. 1997. Cross-validation of nonlinear growth functions for modeling tree height-diameter distributions. *Annals of Botany* 79:251-257.
11. Tang, S., Y. Wang, L. Zhang, and C.H. Meng. 1997. A distribution-free method to predict stand diameter distribution. *Forest Science* 43(4):491-500.
12. LaLonde, R.T., L. Bu, A. Henwood, J. Fiumano, and L. Zhang. 1997. Bromine-, chlorine, and mixed halogen-substituted 4-methyl-2(5-H)-furanones: synthesis and mutagenic effects of halogen and hydroxyl group replacement. *Chemical Research in Toxicology* 10:1427-1436.

13. Zhang, L., B.P. Oswald, and .H., Green. 1999. Relationships between overstory species and communities of the Sipsey Wildness, Alabama. *Forest Ecology and Management* 114(2-3):377-383.
14. Nyland, R.D., D.G. Ray, R.D. Yanai, R.D. Briggs, L. Zhang, R. Cymbala, and M.J. Twery. 2000. Early cohort development following even-aged reproduction method cutting in New York northern hardwoods. *Canadian Journal of Forest Research* 30(1):67-75.
15. Force, J.E., G.E. Machlis, and L. Zhang. 2000. The engines of change in resource-dependent communities. *Forest Science* 46(3):410-422.
16. Donoso, P.J., R.D. Nyland, and L. Zhang. 2000. Growth of saplings after selection cutting in northern hardwoods. *Northern Journal of Applied Forestry* 17(4):149-152.
17. Goerlich, D.L., R.D. Nyland, L. Zhang, and R.W. Sage. 2001. Reserve strip method as an alternative for regenerating eastern hemlock. *Northern Journal of Applied Forestry* 18(3):69-73.
18. Peng, C., L. Zhang, and J. Liu. 2001. Developing and validating nonlinear height-diameter models for major tree species of Ontario's boreal forests. *Northern Journal of Applied Forestry* 18(3):87-94.
19. Zhang, L., J.H. Gove, C. Liu, and W.B. Leak. 2001. A finite mixture distribution for modeling the diameter distribution of rotated-sigmoid, uneven-aged stands. *Canadian Journal of Forest Research* 31(9):1654-1659.
20. Solomon, D.S. and L. Zhang. 2002. Maximum size-density relationships for mixed softwood in the Northeast, USA. *Forest Ecology and Management* 155(1-3):163-170.
21. Li, F., L. Zhang, and C. Davis. 2002. Modeling the joint distribution of tree diameters and heights by bivariate generalized beta distribution. *Forest Science* 48(1):47-58.
22. Zhang, L., C. Peng, S. Huang, and X. Zhou. 2002. Development and evaluation of ecoregion-based tree height-diameter models for jack pine in Ontario. *Forestry Chronicle* 78(4):530-538.
23. Liu, C., L. Zhang, C.J. Davis, D.S. Solomon, and J.H. Gove. 2002. A finite mixture model for characterizing the diameter distribution of mixed-species forest stands. *Forest Science* 48(4):653-661.
24. Harris, S., R.H. Germain, and L. Zhang. 2003. Assessing wood procurement management systems in the forest products industry. *Forest Products Journal* 53(2):1-10.
25. Zhang, L., K. Packard and C. Liu. 2003. A comparison of estimation methods for fitting

- Weibull and Johnson's  $S_B$  distributions to mixed spruce-fir stands in northeastern North America. *Canadian Journal of Forest Research* 33(6):1340-1347.
26. Liu, C., L. Zhang, C.J. Davis, D.S. Solomon, T.B. Brann, and T. Caldwell. 2003. Comparison of neural networks and statistical methods in classification of ecological habitats using FIA data. *Forest Science* 49(4):619-631.
  27. Shi, H. and L. Zhang. 2003. Local analysis of tree competition and growth. *Forest Science* 49(6):938-955.
  28. Solomon, D.S., L. Zhang, T.B. Brann, and D.S. Larrick. 2003. Mortality patterns following spruce budworm infestation in unprotected spruce-fir forests in Maine. *Northern Journal of Applied Forestry* 20(4):148-153.
  29. Zhang, L., H. Bi, P. Cheng, and C.J. Davis. 2004. Modeling spatial variations in tree diameter-height relationships. *Forest Ecology and Management* 189:317-329.
  30. Zhang, L., C. Liu, C.J. Davis, D.S. Solomon, T.B. Brann, and T. Caldwell. 2004. Fuzzy classification of ecological habitats from FIA data. *Forest Science* 50(1):117-127.
  31. Zhang, L. and H. Shi. 2004. Local modeling of tree growth by geographically weighted regression. *Forest Science* 50(2):225-244.
  32. Zhang, L., C. Liu, and C.J. Davis. 2004. A mixture model-based approach to the classification of ecological habitats using FIA data. *Canadian Journal of Forest Research* 34(5):1150-1156.
  33. Peng, C., L. Zhang, X. Zhou, Q. Dang, and S. Huang. 2004. Developing and evaluating tree height-diameter models at three geographic scales for black spruce in Ontario. *Northern Journal of Applied Forestry* 21(2):83-92.
  34. Zhang, L., C. Peng, and Q. Dang. 2004. Individual-tree basal area growth models for jack pine and black spruce in northern Ontario. *Forestry Chronicle* 80(3):366-374.
  35. Liu, C., S.Y. Zhang, Y. Lei, P.F. Newton, and L. Zhang. 2004. Evaluation of three methods for predicting diameter distributions of black spruce plantations in eastern Canada. *Canadian Journal of Forest Research* 34(12):2424-2432.
  36. Zhao, G., G. Shao, K. Reynolds, M. Wimberly, T. Warner, J. Moser, K. Rennolls, S. Magnussen, M. Koehl, H.-E. Anderson, G. Mendoza, L. Dai, A. Huth, L. Zhang, J. Brey, Y. Sun, R. Ye, B. Martin, F. Li. 2005. Digital forestry: A white paper. *Journal of Forestry* 103(1):47-50.
  37. Zhang, L., J.H. Gove, and L. Heath. 2005. Spatial residual analysis of six modeling

- techniques. *Ecological Modeling* 186:154-177.
38. Zhang, L. and J.H. Gove. 2005. Spatial assessment of model errors from four regression techniques. *Forest Science* 51(4):334-346.
  39. Zhang, L., H. Bi, J.H. Gove, and L. Heath. 2005. A comparison of alternative methods for estimating the self-thinning boundary line. *Canadian Journal of Forest Research* 35(7):1507-1514.
  40. Wu, W., C.S.H. Hall, and L. Zhang. 2006. Predicting the temporal and spatial probability of orographic cloud cover in the Luquillo Experimental Forest in Puerto Rico using generalized linear (mixed) models. *Ecological Modeling* 192:473-498.
  41. Shi, H., L. Zhang, and J. Liu. 2006. A new spatial-attribute function for Geographically Weighted Regression. *Canadian Journal of Forest Research* 36(4):996-1005.
  42. Zhang, L. and C. Liu. 2006. Fitting irregular diameter distributions of forest stands by Weibull, modified Weibull, and mixture Weibull models. *Journal of Forest Research* 11:369-372.
  43. Catranis, C.M., S.E. Anagnost, L. Zhang, S. Zhou, A. Fernando, S. Morey, and C.J.K Wang. 2006. A new sub-sampling method for analysis of air samples collected with the Andersen single-stage sampler. *Aerobiologia* 22(3):177-184.
  44. Li, F. and L. Zhang. 2007. Comparison of point pattern analysis methods for classifying spatial distributions of spruce-fir stands in the Northeast, USA. *Forestry* 80(3):337-349.
  45. Ni, C. and L. Zhang. 2007. An analysis and comparison of estimation methods for self-referencing equations. *Canadian Journal of Forest Research* 37(9):1472-1484.
  46. Gove, J.H., M.J. Ducey, W.B. Leak, and L. Zhang. 2008. Rotated sigmoid structures in managed uneven-aged northern hardwoods: A look at the Burr type III distribution. *Forestry* 81(2):161-176.
  47. Zhang, L., Z. Ma and L. Guo. 2008. Spatially assessing model errors of four regression techniques for three types of forest stands. *Forestry* 81(2):209-225.
  48. Sali, M.J., D.M. Kuehn, and L. Zhang. 2008. Motivations for male and female birdwatchers in New York State. *Human Dimensions of Wildlife* 13(3):187-200.
  49. Guo, L., Z. Ma, and L. Zhang. 2008. Comparison of bandwidth selection in application of geographically weighted regression: a case study. *Canadian Journal of Forest Research* 38(9):2526-2534.

50. Ni, C. and L. Zhang. 2008. An estimator of prediction error variance for projection equations. *Forest Science* 54(6):569-578.
51. Keele, D.M., R.W. Malmshiemer, D.W. Floyd, and L. Zhang. 2009. An Analysis of Ideological Effects in Published Versus Unpublished Judicial Opinions. *Journal of Empirical Legal Studies* 6(1):213-239.
52. Kiernan, D.H., E. Bevilacqua, R.D. Nyland, and L. Zhang. 2009. Modeling tree mortality in low- to medium-density uneven-aged hardwood stands under a selection system using Generalized Estimating Equations. *Forest Science* 55(4):343-351.
53. Zhang, L., Z. Ma, and L. Guo. 2009. Spatial autocorrelation and heterogeneity in the relationships between tree variables. *Forest Science* 55(6):533-548.
54. Zhang, W., Y. Ke, L. Quackenbush, and L. Zhang. 2010. Using error-in-variable regression to predict tree diameter and crown width from remotely sensed imagery. *Canadian Journal of Forest Research* 40(6):1095-1108.
55. Wang, M., A. Upadhyay, and L. Zhang. 2010. Trivariate distribution modeling of tree diameter, height, and volume. *Forest Science* 56(3):290-300.
56. Lu, J. and L. Zhang. 2010. Evaluation of parameter estimation methods for fitting spatial regression models. *Forest Science* (in press).

**PAPERS ACCEPTED WITH REVISION:**

- Ma, Z., L. Zhang, E. Bevilacqua, L. Shen, J.H. Gove, and L.S. Heath. Multi-scale analysis and modeling of tree-ring and climate data using wavelets. Revised for *Forest Science*.
- Lu, J. and L. Zhang. Geographically local linear mixed models for tree height-diameter relationship. Revised for *Forest Science*.
- Lu, J. and L. Zhang. Modeling and prediction of tree height-diameter relationships using spatial autoregressive models. Revised for *Forest Science*.
- Li, F., Z. Ma, L. Guo, and L. Zhang. Modeling and predicting bivariate distributions of tree diameter and height for spruce-fir stands in the Northeast, USA. Revised for *Journal of Forest Research*.
- Guo, L., S. Du, R. Haining, and L. Zhang. Global and local indicators of spatial association between points and polygons: a study of land use change. Revised for *Landscape Ecology*.

### **NON-REFEREED PUBLICATIONS:**

1. Zhang, L. and J.A. Moore. 1993. A simple algorithm for calculating board foot volume to a variable top diameter for interior Douglas-fir. P 105-109. *in* Proceedings of Modern Methods of Estimating Tree and Log Volume and Increment. Conference and Workshop, IUFRO 4.02. June 14-16, 1993. West Virginia University. Morgantown, WV.
2. Zhang, L. and J.A. Moore. 1993. Empirical prediction models for Douglas-fir response to nitrogen fertilization. P 181-190. *in* Proceedings of Modeling Stand Response to Silvicultural Practices. Conference, IUFRO S4.01. September 27-October 1, 1993. Virginia Polytechnic Institute and State University. Blacksburg, Virginia.
3. Moore, J.A. and L. Zhang. 1993. Effects of nitrogen fertilization treatments on within-stand relative size-relative growth relationships. P 77-83. *in* Proceedings of Modeling Stand Response to Silvicultural Practices. Conference, IUFRO S4.01. September 27-October 1, 1993. Virginia Polytechnic Institute and State University. Blacksburg, Virginia.
4. Zhang, L., B.P. Oswald, T.H. Green, and S.L. Stout. 1995. Relative density measurement and species composition in the mixed upland hardwood forests of north Alabama. P 467- 472. *in* Proceedings of 8th Biennial Southern Silviculture Research Conference. November 1-3, 1994. Auburn, Alabama. USDA For. Serv. Gen. Tech. Rep. SRS-1.
5. Oswald, B.P., L. Zhang, T.H. Green, and S.L. Stout. 1995. Height-diameter relationships of dominant trees in the mixed upland hardwood forests of north Alabama. P 596-599. *in* Proceedings of 8th Biennial Southern Silviculture Research Conference. November 1-3, 1994. Auburn, Alabama. (Poster). USDA For. Serv. Gen. Tech. Rep. SRS-1.
6. Oswald, B.P., T.H. Green, G. Brown, and L. Zhang. 1996. Mixed hardwood forests of northern Alabama. P 391-392. *in* Proceedings of 1995 Society of American Foresters Annual Convention. October 28-November 1, 1995. Portland, Maine.
7. Zhang, L., J.A. Moore, and J.D. Newberry. 1996. Evaluation of the prediction performance for eight nonlinear height-diameter equations. P 447-448. *in* Proceedings of 1995 Society of American Foresters Annual Convention. October 28-November 1, 1995. Portland, Maine.
8. Floyd, D.W., J.E. Kaeser, C.J. Davis, V.A. Luzadis, and L. Zhang. 1996. Local Regulation of Forest Practices in New York State: Implications for NIPF Management. P 101-109. *in* Proceedings of the Symposium on Nonindustrial Private Forests: Learning from the Past, Prospects for the Future. February 19, 1996. Washington DC.
9. Solomon, D.S. and L. Zhang. 1998. Maximum size-density relationships for mixed-hardwood forest stands in New England. P 570-579. *in* Proceedings of the International Conference on the Inventory and Monitoring of Forested Ecosystems. August 16-20, 1998. Boise, Idaho. For. Serv. Gen. Tech. Rep. NC-212.

10. Zhang, L., F. Li, R.D. Nyland, and J.P. Halligan. 1999. A stand density management diagram for Norway spruce plantations in central New York. P 271. *in* Proceedings of 12<sup>th</sup> Central Hardwood Forest Conference, February 28-March 3, 1999. Lexington, KY.
11. Zhang, L. and C. Liu. 2001. Use of a finite mixture model in describing irregular diameter distributions of forest stands. P 451-461. *in* Proceedings of IUFRO Conference on Forest Modeling for Ecosystem Management, Forest Certification, and Sustainable Management. August 12-18, 2001. Vancouver, B.C., Canada.
12. Peng, C., L. Zhang, S. Huang, X. Zhou, J. Oarton, and M. Woods. 2001. Developing ecoregion-based tree height-diameter models for jack pine and black spruce in Ontario. Ontario Forest Research Institute Research Report No. 159. 18p.
13. Liu, C., L. Zhang, and C.J. Davis. 2002. Comparison of fuzzy classification, neural network, and linear discriminant analysis for classifying ecological habitats in Northeastern USA. P 158. *in* Proceedings of IUFRO 4.11 Symposium on Statistics and Information Technology in Forestry. September 8-12, 2002. Virginia Tech. Blacksburg, VI.
14. Shi, H., L. Zhang, and C.J. Davis. 2002. Analysis of tree competition using local indicator of spatial association (LISA). P 159. *in* Proceedings of IUFRO 4.11 Symposium on Statistics and Information Technology in Forestry. September 8-12, 2002. Virginia Tech. Blacksburg, VI.
15. Shi, H., L. Zhang, and C.J. Davis. 2002. Geographically weighted regression for modeling individual tree growth. P 160. *in* Proceedings of IUFRO 4.11 Symposium on Statistics and Information Technology in Forestry. September 8-12, 2002. Virginia Tech. Blacksburg, VI.
16. Catranis, C.M., S.E. Anagnost, A. Fernando, S. Morey, C.J.K. Wang, L. Zhang, P. DeStefano, C. Garback, M. LaMoy, G. Hall, D. Naishadham, J. Crawford, A. Hunt, and J.L. Abraham. 2005. Assessment of exposure to indoor environmental factors for an infant cohort at risk for Asthma: Preliminary analysis of bioaerosol data. P. 40-48. *in* Bioaerosols, Fungi, Bacteria, Mycotoxins and Human Health. Editor, E. Johanning. Fungal Research Group Foundation, Inc., Albany, New York.
17. Shi, H., L. Zhang, and J. Liu. 2005. Incorporating both geographical space and attribute space into the kernel weighting function of geographically weighted regression. *in* Proceedings of GeoComputation2005. The 8<sup>th</sup> International Conference on GeoComputation. August 1 – 3, 2005. Ann Arbor, Michigan, USA.