

Curriculum Vitae

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David L.R. Affleck

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Citizenship

Canada; United States of America.

Education

YALE UNIVERSITY, New Haven, Connecticut
Ph.D. Biometrics, 2006
M.Phil. Biometrics, 2005

UNIVERSITY OF BRITISH COLUMBIA, Vancouver, British Columbia
M.Sc. Forest Biometrics, 2001
B.Sc. Forest Science, concentration in Forest Soils, 1998

Professional Experience

Professor of Biometrics, University of Montana, 2017–present
Director, Inland Northwest Growth & Yield Cooperative, 2011–present
Station Statistician, Montana Forest & Conservation Experiment Station, 2007–present

Chair, Department of Forest Management, University of Montana, 2016–2022
Program Director, Forestry, University of Montana, 2017–2022
Visiting Scholar, Universidade de Santiago de Compostela, Jan.–Apr. 2015
Associate Professor of Biometrics, University of Montana, 2012–2017
Assistant Professor of Biometrics, University of Montana, 2006–2012
Graduate Research Assistant, Yale University, 2002–2006
Forest Biometrician, J.S. Thrower & Associates Ltd., Vancouver, British Columbia, 2000–2002
Forest Soils Research Assistant, British Columbia Ministry of Forests, 1997
Research Assistant, Department of Forest Ecology, University of Helsinki, 1996

Teaching Experience

UNIVERSITY OF MONTANA, College of Forestry and Conservation

As Instructor:

Forest Biometrics (undergraduate; 2007 – 2024)
Forest Growth Modeling Seminar (graduate; 2016)
Forest Mensuration (undergraduate; 2007)
Geographic Information Systems (undergraduate; 2009 – 2011; 2023)
Sampling Methods (graduate; 2008 – 2021)
Statistical Models for Ecological Data Analysis (graduate; 2009 – 2017)
Seminar on Communication & Presentation Skills (graduate; 2007 – 2014)
Seminar on Laser Scanning & Forest Vegetation Analysis (graduate; 2015)

YALE UNIVERSITY, School of Forestry & Environmental Studies

As Lecturer:

Sampling Methodology and Practice (graduate; 2005)
Forest Inventory Workshop (graduate; 2005)

Professional Activities

Administrative and Advisory Positions

Director, Inland Northwest Growth & Yield Cooperative, 2011–present
Technical Advisory Committee, Inland Northwest Growth & Yield Cooperative, 2007–present
Science Advisory Panel, USDA Forest Service Partnership for Small Area Estimation, 2022–present
Sustainable Harvest Technical Advisory Committee, Washington State Department of Natural Resources, 2022–present
Vice-Chair, State of Montana Advisory Committee on Forest Lands Productivity & Assessment, 2012–2015
Advisory Panel, National Down Woody Materials Inventory Summit, 2006

External Promotion & Tenure Review

School of Forestry, Northern Arizona University, 2022
Rocky Mountain Research Station, US Department of Agriculture Forest Service, 2022
Warnell School of Forestry & Natural Resources, University of Georgia, 2020
Northern Research Station, US Department of Agriculture Forest Service, 2019

Conference Organization

Abstract Reviewer, Society of American Foresters 2023 National Convention
Conference Chair, 2018 Inland Northwest Growth & Yield Cooperative Technical Meeting
Conference Chair, 2017 Inland Northwest Growth & Yield Cooperative Technical Meeting
Session Chair for “Environmental Research” at the 28th International Biometric Conference, Victoria, BC, 10-15 July 2016
Conference Chair, 2016 Inland Northwest Growth & Yield Cooperative Technical Meeting
Conference Chair, 2014 Inland Northwest Growth & Yield Cooperative Technical Meeting

Conference co-Chair, 2013 Joint Technical Meeting of the Inland Northwest Growth & Yield Cooperative and the Intermountain Forest Tree Nutrition Cooperative

Session Organizer “Challenges and Opportunities for Improved Biomass and Carbon Monitoring of US Tree Species” for the 2012 Forest Inventory and Analysis Science Symposium, Baltimore, MD, 4–6 December 2012

Conference Chair, 2012 Inland Northwest Growth & Yield Cooperative Technical Meeting

Conference Chair, 2010 Western Mensurationists’ Meeting

Editorial & Review Service

Associate Editor, *Environmental & Ecological Statistics* (Springer International), 2013–2016

Associate Editor, *Forest Science* (Society of American Foresters), 2011–2016

Manuscript reviewer for

Bosque, 2024

Canadian Journal of Forest Research, 2007–2010, 2015, 2018, 2021–2024

Current Forestry Reports, 2020

Environmental and Ecological Statistics, 2005, 2008–2016, 2020

European Journal of Forest Research, 2005, 2010, 2017

Forest Ecology and Management, 2008

Forest Ecosystems, 2015, 2021, 2022

Forest Science, 2005–2016

Forestry, 2007, 2010–2012, 2019–2021, 2023

International Journal of Wildland Fire, 2007, 2010

Journal of Sustainable Forestry, 2002–2005, 2015

Journal of Forestry, 2012–2013

Scientific Reports, 2017

Silva Fennica, 2009

Southern Journal of Applied Forestry, 2007

Western Journal of Applied Forestry, 2009–2010

Austrian Science Fund, 2016

National Ecological Observatory Network, 2023

State of California Climate Action Reserve, White Paper Series, 2010

USDA Forest Service, General Technical Report Series, 2010, 2020

Washington State, Cooperative Monitoring, Evaluation and Research Committee, 2017

Funding proposal reviewer for

USDA Forest Service, Partnership for Small Area Estimation, 2023

Austrian Science Fund, 2016

Professional Affiliations

American Statistical Association
Section on Statistics and the Environment
Inland Northwest Growth & Yield Cooperative
International Biometric Society
Western North American Region
Society of American Foresters
Western Mensurationists

Awards & Fellowships

USDA Forest Service Director's Award for Forest Inventory and Analysis Excellence, 2024
University of Montana Faculty Merit Award, 2013, 2018, 2021
Faculty Exchange Award, University of Montana International Programs, 2014
National Science Foundation "Statistical Climatology" Conference Travel Award, 2012
Best Speaker Award, Western Mensurationists' Meeting, 2007
Yale University Graduate Fellowship, 2002–2006
Sopron Alumni Memorial Fellowship, U.B.C., 2000–2001
Li Tze Fong Memorial Fellowship, U.B.C., 1999–2000
University of British Columbia Graduate Fellowship, 1998–2001
H.R. MacMillan Prize in Forestry, U.B.C., 1998
H.R. MacMillan Scholarship in Forestry, U.B.C., 1995–1997
Association of B.C. Professional Foresters Scholarship, 1995–1996

Research Grants & Contracts

Robust small-area estimation strategies for developing accurate stand-level diameter distributions (2024–2026). National Council for Air & Stream Improvement, \$150,000. *Co-principal investigator*.

Alternative Approaches to Reserved Lands Forest Inventory in the Western Conterminous United States (2023–2025). US Department of Agriculture Forest Service, Rocky Mountain Research Station \$154,000. *Principal investigator*.

Integrating remotely sensed data for model-assisted small area estimation of forest carbon stocks and stock change (2022–2025). US Department of Agriculture Forest Service, Rocky Mountain Research Station \$176,500. *Principal investigator*.

Addressing the Impacts of Mill Survey Non-response on Roundwood Volume Estimates in the western USA (2022–2025). US Department of Agriculture Forest Service, Rocky Mountain Research Station \$71,000. *Principal investigator*.

Innovations in Forest Inventory and Remote Sensing (2020–2022). US Department of Agriculture Forest Service, Rocky Mountain Research Station \$16,000. *Principal investigator*.

Projecting the impacts of early stand density control on tree and stand attributes (2020). US Department of Agriculture Cooperative State Research, Education, and Extension Service, McIntire-Stennis Cooperative Forest Research Program, \$22,000. *Principal investigator*.

- National Forest Inventory & Analysis Biomass Project (2019–2021). US Department of Agriculture Forest Service, Northern Research Station & University of Maine \$45,000. *Principal investigator*.
- An Undergraduate Research Experience to Develop Improved Forest Carbon and Biomass Models for the Salish-Kootenai & Nez Perce Inventory Programs (2016–2019). US Department of Agriculture Forest Service - National Institute of Food and Agriculture \$220,000. *Co-principal Investigator*.
- Tree Volume, Biomass and Carbon Allometries for the Interior West (2016–2018). US Department of Agriculture Forest Service, Rocky Mountain Research Station \$75,000. *Principal investigator*.
- Using FIA Plot and Remotely Sensed Data to Map Longleaf Extent and Condition: Emphasizing High Resolution Outputs for Cross-ownership Planning, Monitoring, and Restoration (2015–2018). US Department of Agriculture Forest Service, Rocky Mountain Research Station \$258,500. *Co-principal investigator*.
- Timber Resource Assessment Strategies: A Comparison of Different Cruising Intensities, Sampling Devices, and Measurement Protocols (2015). Plum Creek Timber Company \$3,800. *Principal investigator*.
- Landscape-scale, High Resolution Spatial Modeling of Forest Site Productivity from Biophysical Water Balance Metrics (2013–2016). Washington State Department of Natural Resources \$66,000. *Principal investigator*.
- Tree and Stand Simulator III Growth and Yield Development (2011–2012). British Columbia Ministry of Forests, Lands, and Natural Resource Operations \$173,000. *Co-principal investigator*.
- Effects of variable-retention cuttings on mountain pine beetle activity in lodgepole pine stands (2011–2012). US Department of Agriculture Forest Service - Forest Health Protection \$107,500. *Co-investigator*.
- An improved biomass and carbon database for US tree species (2011–2016). US Department of Agriculture Forest Service, Northern Research Station \$362,000. *Principal investigator*.
- Characterizing Crown Biomass and Crown Density Profiles in Conifer Forests of the Interior Northwest (2010–2013). Joint Fire Science Program \$537,400. *Principal investigator*.
- Ecological and Social Dynamics of Mountain Pine Beetle Outbreaks in western Montana (2010–2011). US Department of Agriculture Cooperative State Research, Education, and Extension Service, McIntire-Stennis Cooperative Forest Research Program, \$167,000. *Co-principal investigator*.
- Evaluation of Bias Correction Methods for Logistic Models of Tree Mortality (2010–2011). University of Montana Research and Creativity Committee, \$2,500. *Principal investigator*.
- Development of a Tree Mortality Model for the Tree and Stand Simulator (2010–2011). Azura Formetrics & British Columbia Ministry of Forests, \$19,000. *Co-principal investigator*.
- Conifer Biomass Model Validation and Development (2010). Inland Northwest Growth & Yield Cooperative, \$16,500. *Principal investigator*.

- Conifer Crown Measurement and Modeling Strategies Invited Conference Session (2010). Joint Fire Science Program, \$3,700. *Principal investigator.*
- Western Mensurationists' Crown Measurement and Modeling Conference Support (2010). Society of American Foresters A1 Inventory & Biometrics Working Group \$1,000. *Principal investigator.*
- Evaluation of Alternative Mortality Models for the Tree and Stand Simulator (2009–2010). British Columbia Ministry of Forests and Azura Formetrics, \$15,500. *Co-principal investigator.*
- Validation of Biomass Equations for Conifer Forests in Region 1 (2009–2010). US Department of Agriculture Forest Service, Northern Region, Renewable Resources Management, \$4,000. *Principal investigator.*
- The Pines Recreation Area Stand Analysis, Inventory, and Reports (2009). US Army Corps of Engineers, Omaha District, \$13,800. *Co-principal investigator.*
- Conifer Biomass Model Validation and Development (2009). Inland Northwest Growth & Yield Cooperative, \$8,500. *Principal investigator.*
- Development of Improved Forest Biomass Equations (2009). Spokane Tribe of Indians, \$38,300. *Principal investigator.*
- Development of Multi-Phase and Multi-Stage Line Intersect Sampling Strategies for Coarse Woody Debris Inventory in the Inland Northwest (2007–2009). US Department of Agriculture Cooperative State Research, Education, and Extension Service, McIntire-Stennis Cooperative Forestry Research Program, \$58,000. *Principal investigator.*
- Statistical Foundations of Segmented and Multiphase Line Intersect Sampling (2002–2006). US Department of Agriculture Forest Service, Northeastern Research Station, RWU-4104, \$50,000. *Co-investigator.*
- Site Productivity Models for High Elevation Second Growth Stands in Southern British Columbia (2003). J.S. Thrower & Associates Ltd., \$5,000. *Principal investigator.*

Research Publications

Submitted & Under Review

- Affleck, D.L.R. (2023; *under review*). “Impacts of early stand density treatments on observed vs projected diameter and height increments in mixed conifer stands of the Inland Northwest”. *Proceedings of the Sixth Forest Vegetation Simulator (FVS) Conference; 7-9 March 2023; Fort Collins, CO*. U.S. Department of Agriculture, Rocky Mountain Research Station.

Published & In-Press

- Affleck, D.L.R. & G.C. Gaines III (2024). Mill and Landbase Attributes Condition Response Rates to Timber Product Output Surveys in the Western United States. *Forest Science* **70**: 14–22.
- Affleck, D.L.R. & G.C. Gaines III (2024; *in press*). Recognizing van Deusen’s mixed estimator for annual forest inventory as a linear mixed model. *Canadian Journal of Forest Research*.

- Affleck, D.L.R. & G.C. Gaines III (2023). Model-assisted domain estimation of postfire tree regeneration in the western US using nearest neighbor techniques. *Canadian Journal of Forest Research* **53**: 981–995.
- Jaffe, M.R., M.R. Kreider, D.L.R. Affleck, P.E. Higuera, C.A. Seielstad, S.A. Parks, & A.J. Larson (2023). Mesic mixed-conifer forests are resilient to both historical high-severity fire and contemporary reburns in the US Northern Rocky Mountains. *Forest Ecology and Management* **545**: 121283.
- Westfall, J.A., J.W. Coulston, A.N. Gray, J.D. Shaw, P.J. Radtke, D.M. Walker, A.R. Weiskittel, D.W. MacFarlane, D.L.R. Affleck, D. Zhao, H. Temesgen, K.P. Poudel, J.M. Frank, S.P. Prisley, Y. Wang, A.J. Sánchez Meador, D. Auty, & G.M. Domke (2023). *A national-scale tree volume, biomass, and carbon modeling system for the United States*. General Technical Report WO-104, U.S. Department of Agriculture, Forest Service. Washington, DC.
- Dettmann, G., D. MacFarlane, P. Radtke, A. Weiskittel, D.L.R. Affleck, K. Poudel, & J. Westfall (2022). Testing a generalized leaf mass estimation method for diverse tree species and climates of the continental United States. *Ecological Applications* **32**(7): e2646.
- Gaines III, G.C. & D.L.R. Affleck (2021). Small area estimation of postfire tree density using continuous forest inventory data. *Frontiers in Forests and Global Change* **4**: 761509.
- Hogland, J. & D.L.R. Affleck (2021). Improving estimates of natural resources using model-based estimators: impacts of sample design, estimation technique, and strengths of association. *Remote Sensing* **13**: 3893.
- Maher, C., C. Millar, D.L.R. Affleck, R. Keane, A. Sala, C. Tobalske, A. Larson, & C. Nelson (2021). Alpine treeline ecotones are potential refugia for a montane pine species threatened by bark beetle outbreaks. *Ecological Applications* **31**: e02274.
- Gaines III, G.C. & D.L.R. Affleck (2020). “Small area estimation of post-fire tree regeneration using the Forest Inventory & Analysis plot network”. *Celebrating progress, possibilities, and partnerships: Proceedings of the 2019 Forest Inventory and Analysis (FIA) Science Stakeholder Meeting; 2019 November 19-21; Knoxville, TN*. Brandeis, T.J. (comp). e-GTR-SRS-256. Asheville, NC: U.S. Department of Agriculture, Forest Service Southern Research Station, pp. 83–85.
- Hogland, J., D.L.R. Affleck, N. Anderson, C. Seielstad, S. Dobrowski, J. Graham, & R. Smith (2020). Estimating forest characteristics for longleaf pine restoration using normalized remotely sensed imagery in Florida USA. *Forests* **11**: 426.
- Affleck, D.L.R. (2019). Aboveground biomass equations for the predominant conifer species of the Inland Northwest USA. *Forest Ecology and Management* **432**: 179–188.
- Frank, J., A. Weiskittel, D. Walker, J. Westfall, P. Radtke, D.L.R. Affleck, J. Coulston, & D.W. MacFarlane (2019). *Gaps in available data for modeling tree biomass in the United States*. NRS-184. General Technical Report of the U.S. Department of Agriculture, Forest Service, Northern Research Station.
- Hogland, J. & D.L.R. Affleck (2019). Mitigating the impact of field and image registration errors through spatial aggregation. *Remote Sensing* **11**: 222.

- Hogland, J., N. Anderson, D.L.R. Affleck, & J. St. Peter (2019). Using forest inventory data with Landsat 8 imagery to map longleaf pine forest characteristics in Georgia, USA. *Remote Sensing* **11**: 1803.
- Hoylman, Z., K. Jencso, J. Hu, Z. Holden, B. Allred, S. Dobrowski, N. Robinson, J. Martin, D.L.R. Affleck, & C. Seielstad (2019). The Topographic Signature of Ecosystem Climate Sensitivity in the Western United States. *Geophysical Research Letters* **46**: 14508–14520.
- Schneider, E., D.L.R. Affleck, & A. Larson (2019). Tree spatial patterns modulate peak snow accumulation and snow disappearance. *Forest Ecology and Management* **441**: 9–19.
- Behling, A., S. Péllico Netto, C. Sanquetta, A. Dalla Corte, D.L.R. Affleck, A. Rodrigues, & M. Behling (2018). Critical analyses when modeling tree biomass to ensure additivity of its components. *Anais da Academia Brasileira de Ciências* **92**: 1759–1774.
- Crotteau, J.S., C.R. Keyes, S.M. Hood, D.L.R. Affleck, & A. Sala (2018). Fuel dynamics after a bark beetle outbreak impacts experimental fuel treatments. *Fire Ecology* **14**: 13.
- Gregoire, T.G. & D.L.R. Affleck (2018). Estimating desired sample size for simple random sampling of a skewed population. *The American Statistician* **72**: 184–190.
- Holden, Z.A., A. Swanson, W.M. Jolly, C.H. Luce, M. Maneta, J.W. Oyler, D.A. Warren, R. Parsons, & D.L.R. Affleck (2018). Decreasing fire season precipitation increased recent western U.S. forest wildfire activity. *Proceedings of the National Academy of Sciences* **115**: E8349–E8357.
- Lei, Y., L. Fu, D.L.R. Affleck, A.S. Nelson, C. Shen, M. Wang, J. Zheng, Q. Ye, & G. Yang (2018). Additivity of nonlinear tree Crown width models: aggregated and disaggregated model structures using Nonlinear simultaneous equations. *Forest Ecology and Management* **427**: 372–382.
- Madani, N., J.S. Kimball, A.P. Ballantyne, D.L.R. Affleck, P.M. van Bodegom, P.B. Reich, J. Kattge, A. Sala, M. Nazeri, M. Jones, M. Zhao, & S.W. Running (2018). Future global productivity will be affected by plant trait response to climate. *Scientific Reports* **8**: 2870.
- Retzlaff, M.L., R.E. Keane, D.L.R. Affleck, & S.M. Hood (2018). Growth response of whitebark pine (*Pinus albicaulis* Engelm) regeneration to thinning and prescribed burn treatments. *Forests* **9**(6): 311.
- Williams, G.M., A.S. Nelson, & D.L.R. Affleck (2018). Vertical distribution of foliar biomass in western larch (*Larix occidentalis*). *Canadian Journal of Forest Research* **48**: 42–57.
- Frank, J., A. Weiskittel, D. Walker, P. Radtke, J. Westfall, D.W. MacFarlane, D.L.R. Affleck, & H. Temesgen (2017). “Development and evaluation of multi-species, cross-regional stem taper and bark thickness models for predicting merchantable volume across the United States”. *Doing More With the Core: Proceedings of the 2017 Forest Inventory and Analysis (FIA) Science Stakeholder Meeting; 2017 October 24-26; Park City, Utah*. Healey, S.P. and V.M. Berrett (comps). Proc. RMRS-P-75. Fort Collins, CO: U.S. Department of Agriculture, Forest Service Rocky Mountain Research Station, pp. 10–15.
- Schaedel, M., A. Larson, D.L.R. Affleck, R. Belote, J. Goodburn, & D. Page-Dumroese (2017). Early forest thinning changes aboveground carbon distribution among pools, but not total amount. *Forest Ecology and Management* **389**: 187–198.

- Schaedel, M.S., A.J. Larson, D.L.R. Affleck, R.T. Belote, J.M. Goodburn, D.K. Wright, & E.K. Sutherland (2017). Long-term precommercial thinning Effects on *Larix occidentalis* (western larch) tree and stand characteristics. *Canadian Journal of Forest Research* **47**: 861–874.
- Affleck, D.L.R. & U. Diéguez-Aranda (2016). Additive nonlinear biomass equations: A likelihood-based approach. *Forest Science* **62**(2): 129–140.
- Castle, S., Y. Lekberg, D.L.R. Affleck, & C. Cleveland (2016). Soil abiotic and biotic controls on plant performance during primary succession in a glacial landscape. *Journal of Ecology* **104**: 1555–1565.
- Madani, N., J.S. Kimball, M. Nazeri, L. Kumar, & D.L.R. Affleck (2016). Remote sensing derived fire frequency, soil moisture and ecosystem productivity explain regional movements in emu over Australia. *PLoS ONE* **11**(1): e0147285.
- Tinkham, W., A. Smith, D.L.R. Affleck, J. Saralecos, M. Falkowski, C. Hoffman, A. Hudak, & M. Wulder (2016). Development of height-volume relationships in second growth *Abies grandis* for use with aerial LiDAR. *Canadian Journal of Remote Sensing* **42**: 400–410.
- Affleck, D.L.R. (2015). “Additivity and Maximum Likelihood Estimation of Nonlinear Component Biomass Models”. *New Directions in Inventory Techniques and Applications: Forest Inventory and Analysis (FIA) Symposium 2015*. Ed. by S. Stanton & G. Christensen. Vol. PNW-GTR-931. Portland, OR: US Department of Agriculture Forest Service, Pacific Northwest Research Station, pp. 13–17.
- Affleck, D.L.R. & T.G. Gregoire (2015). Generalized and synthetic regression estimators for randomized branch sampling: Small and combined sample properties. *Forestry* **88**: 599–611.
- Ferrarese, J., D.L.R. Affleck, & C. Seielstad (2015). Conifer crown profile models from terrestrial laser scanning. *Silva Fennica* **49**(1): 1106.
- Maher, C.T., A.L. Barber, & D.L.R. Affleck (2015). Shelter provided by wood, facilitation, and density-dependent herbivory influence Great Basin bristlecone pine seedling survival. *Forest Ecology and Management* **342**: 76–83.
- Temesgen, H., D.L.R. Affleck, K. Poudel, A. Gray, & J. Sessions (2015). A Review of the Challenges and Opportunities in Estimating Above Ground Forest Biomass Using Tree-Level Models. *Scandinavian Journal of Forest Research* **30**: 326–335.
- Weiskittel, A., J. Frank, J. Westfall, D. Walker, P. Radtke, D.L.R. Affleck, & D. Macfarlane (2015). “Gaps in Sampling and Limitations to Tree Biomass Estimation: A Review of Past Sampling Efforts Over the Past 50 Years”. *New Directions in Inventory Techniques and Applications: Forest Inventory and Analysis (FIA) Symposium 2015*. Ed. by S. Stanton & G. Christensen. Vol. PNW-GTR-931. Portland, OR: US Department of Agriculture Forest Service, Pacific Northwest Research Station, pp. 31–35.
- Weiskittel, A.R., D.W. MacFarlane, P.J. Radtke, D.L.R. Affleck, H. Temesgen, J.A. Westfall, C.W. Woodall, & J.W. Coulston (2015). A call to improve methods for estimating tree biomass for regional and national assessments. *Journal of Forestry* **113**: 414–424.
- Madani, N., J.S. Kimball, D.L.R. Affleck, J. Kattge, J. Graham, P.M. van Bodegom, P.B. Reich, & S.W. Running (2014). Improving ecosystem productivity modeling through spatially explicit estimation of optimal light use efficiency. *Journal of Geophysical Research: Biogeosciences* **119**: 1755–1769.

- Schlecht, R.M. & D.L.R. Affleck (2014). Branch aggregation and crown allometry condition the precision of randomized branch sampling estimators of conifer crown mass. *Canadian Journal of Forest Research* **44**: 499–508.
- Affleck, D.L.R., J.M. Goodburn, & J.D. Shaw (2012). “Strategies for assessing inter- and intra-specific variation in tree biomass in the Interior West”. *Moving from Status to Trends: Forest Inventory and Analysis (FIA) Symposium 2012*. Ed. by R.S. Morin, G.C. Liknes, & C. Greg. Vol. GTR-NRS-P-105. Newtown Square, PA: US Department of Agriculture Forest Service, Northern Research Station, pp. 361–364.
- Affleck, D.L.R., C.R. Keyes, & J.M. Goodburn (2012). Conifer crown fuel modeling: current limits and potential for improvement. *Western Journal of Applied Forestry* **27**: 165–169.
- Affleck, D.L.R. & B. Turnquist (2012). “Assessing the Accuracy of Crown Biomass Equations in the Inland Northwest”. *Monitoring Across Borders: 2010 Joint Meeting of the Forest Inventory and Analysis (FIA) Symposium and the Southern Mensurationists*. Ed. by McWilliams W.G. & F.A. Roesch. Vol. GTR-SRS-157. Asheville, NC: US Department of Agriculture Forest Service, Southern Research Station, pp. 247–254.
- Finkral, A.J., A.M. Evans, C.D. Sorensen, & D.L.R. Affleck (2012). Estimating consumption and remaining carbon in burned slash piles. *Canadian Journal of Forest Research* **42**: 1744–1749.
- Abrahamson, I.L., C.R. Nelson, & D.L.R. Affleck (2011). Assessing the performance of sampling designs for measuring the abundance of understory plants. *Ecological Applications* **21**: 452–464.
- Contreras, M.A., D.L.R. Affleck, & W. Chung (2011). Evaluating tree competition indices as predictors of basal area increment in western Montana forests. *Forest Ecology and Management* **262**: 1939–1949.
- Affleck, D.L.R. (2010). On the efficiency of line intersect distance sampling. *Canadian Journal of Forest Research* **40**: 1086–1094.
- Affleck, D.L.R. (2010). “Probability Sampling”. *The Encyclopedia of Research Design*. Ed. by N.J. Salkind. Thousand Oaks, CA: SAGE Press.
- Valentine, H.T., D.L.R. Affleck, & T.G. Gregoire (2009). Systematic sampling of discrete and continuous populations: sample selection and the choice of estimator. *Canadian Journal of Forest Research* **39**: 1061–1068.
- Affleck, D.L.R. (2008). A line intersect distance sampling strategy for downed wood inventory. *Canadian Journal of Forest Research* **38**: 2262–2273.
- Affleck, D.L.R. (2008). “Field Results for Line Intersect Distance Sampling of Coarse Woody Debris”. *Proceedings of the 2008 Forest Inventory and Analysis (FIA) Symposium, October 21-23, 2008, Park City, UT*. Ed. by W.G. McWilliams, G. Moisen, & R. Czaplewski. Vol. RMRS-P-56CD. Fort Collins, CO: US Department of Agriculture Forest Service, Rocky Mountain Research Station.
- Affleck, D.L.R. (2006). Poisson mixture models for regression analysis of stand-level mortality. *Canadian Journal of Forest Research* **36**: 2994–3006.
- Valentine, H.T., M. J. Ducey, J. H. Gove, A. Lanz, & D.L.R. Affleck (2006). Corrections for cluster-plot slop. *Forest Science* **52**: 55–66.

- Affleck, D.L.R., T.G. Gregoire, & H.T. Valentine (2005). Design unbiased estimation in line intersect sampling using segmented transects. *Environmental and Ecological Statistics* **12**(2): 139–154.
- Affleck, D.L.R., T.G. Gregoire, & H.T. Valentine (2005). Edge Effects in Line Intersect Sampling With Segmented Transects. *Journal of Agricultural, Biological, and Environmental Statistics* **10**(4): 460–477.
- Gregoire, T.G., D.L.R. Affleck, & H.T. Valentine (2005). “Conditioning Inference on Line Orientation in Line Intersect Sampling”. *Forest Inventory and Planning in Nordic Countries, Proceedings of SamNordisk Skogsforskning Meeting at Sjusjøen, Norway, 6–8 September 2004*. Ed. by K. Hobbelstad. (Norwegian Institute of Land Inventory NIJOS Rapport 9/2005), pp. 121–129.

Conference Presentations & Invited Lectures

- Affleck, D. L. R. & G.C. Gaines III (2024). van Deusen’s Mixed Estimator for Annual Inventory Data as a Temporal Fay-Herriot Model for Small Interval Estimation. Presented by invitation at *2024 Forest Inventory & Analysis National User Group Meeting, 2-5 April 2024, Tucson, AZ*.
- Affleck, D.L.R. (2024). Calibrating a regional pre-commercial thinning response function from long-term trials. *Inland Northwest Growth & Yield Cooperative Technical Meeting, Coeur D’Alene, ID, 7 May 2024*.
- Affleck, D.L.R. & G.C. Gaines III (2024). Evaluation of a Constrained Fay-Herriot Model for Annual Estimation Using Panel Survey Data. Presented by invitation at *SAE 2024: Small Area Estimation, Surveys and Data Science, June 3–7, 2024, Lima, Perú*.
- Affleck, D.L.R. (2023). Effects of early stand density treatments on diameter and height increments in mixed conifer stands of the Inland Northwest. *Sixth Forest Vegetation Simulator Conference, Fort Collins, CO, 7-9 March 2023*.
- Gaines III, G.C. & D.L.R. Affleck (2023). Partnership for Small Area Estimation. Presented by invitation at *2023 Biometrics Working Group Meeting, June 2023, Louisville, KY*.
- Gaines III, G.C. & D.L.R. Affleck (2022). Borrowing data to estimate postfire tree density in the West. Presented by invitation at the *2022 Rocky Mountain Research Station FIA User Group Meeting, online, April 27–28, 2022*.
- Gaines III, G.C. & D.L.R. Affleck (2022). Model-assisted domain estimation of postfire tree regeneration in the western US using nearest neighbor techniques. *Forest Inventory & Analysis Science Stakeholder Meeting, online, 15-17 November 2022*.
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Graduate Student Advising

Thesis and Dissertation Supervision

Gianna Santino, M.S. candidate, 2024–present

Christian Mercado, M.S. 2023

George Gaines, Ph.D. 2022

John Hogland, Ph.D. 2020

Molly Retzlaff, M.S. 2018

Colin Kirkmire, M.S. 2017

James Furlaud, M.S. 2014

Matthew Perry, M.S. 2014

James Reilly, M.S. 2014

Ryan Schlecht, M.S. 2012

Brian Turnquist, M.S. 2012

Allissa Corrow, M.S. 2010

Graduate Advising & Review

Hannah Alverson, M.S. candidate, 2023–present

Cici Conroy, M.S. candidate, 2024–present

Enzo Martelli Moya, Ph.D. student, 2023–present

Joshua Beisel, Ph.D. student, 2023–present

Ilana Abrahamson, M.S. 2009

Erik Aschehoug, Ph.D. 2011

Donald Belile, M.S. 2015

Julia Berkey, M.S. 2020

Marco Contreras, Ph.D. 2010

Shawn Crimmins, Ph.D. 2013

Justin Crotteau, Ph.D. 2017

Jena Ferrarese, M.S. 2013

Sarah Flanary, M.S. 2018

Juan Daniel García Villabrille, Ph.D. 2015 (Universidade de Santiago de Compostela, Spain)

Woongsong Jang, Ph.D. 2015

Colin Maher, Ph.D. 2018

Nima Madani, Ph.D. 2017

Ryan McHugh, M.S. 2009

Mariah McIntosh, Ph.D. 2022

Chris Moran, Ph.D. 2019

Jacob Muller, M.S. 2014

Theodore Owen, Ph.D. 2021

Eric Rowell, Ph.D. 2018

Ryan Rock, M.S. 2020

Alan Swanson, M.S. 2012

Agus Suratno, Ph.D. 2009

Sangay Wangchuck, M.S. 2011

Lucas Wells, M.S. 2014