

## CURRICULUM VITAE

John P. Caspersen  
Faculty of Forestry  
University of Toronto

### DEGREES

Ph.D., Ecology, University of Connecticut, 1998  
B.A., Biology, Oberlin College, 1991

### EMPLOYMENT HISTORY

2015-16     Research fellow, Swiss Institute for Forest, Snow, and Landscape Research  
2007-       Associate professor, Faculty of Forestry, University of Toronto  
2002-07     Assistant professor, Faculty of Forestry, University of Toronto  
1998-2002   Research associate, Princeton University  
1997-98     NSF Biodiversity Fellow, University of Connecticut  
1994-96     NASA Global Change Fellow, University of Connecticut

### AWARDS

Sabbatical Fellowship, Swiss Institute for Forest, Snow, and Landscape Research

### PUBLICATIONS (names in **bold** are supervised students and post-docs)

- Caspersen, J., Thuerig, E., Rigling, A., & Zimmermann N. (2017). Complementarity of gymnosperms and angiosperms: disentangling the effects of phenology, leaf morphology, and temperature. Submitted to: *Journal of Ecology*.
- Yang, J.**, He, Y., Caspersen, J., and Jones, T. (2017). Individual tree-based species classification for a deciduous-dominated forest using multi-seasonal WorldView-3 images. Submitted to: *Remote Sensing of Environment*.
- Li, L. Schneider, R., Achim, A., Caspersen, J., Paradis, N., Power, H. (2017). Scaling wood moduli of elasticity and rupture from mini-clear samples to full-size lumber using tree-level variables. Submitted to: *Annals of Forest Science*.
- Shabaga, J. A., Basiliko, N., Caspersen, J., & Jones, T. A. (2017). Skid trail use influences soil carbon flux and nutrient pools in a temperate hardwood forest. *Forest Ecology and Management*, 402, 51-62.

- Spriggs, R.A., Coomes, D.A., Jones, T.A., Caspersen, J.P. and Vanderwel, M.C. (2017). An alternative approach to using LIDAR remote sensing data to predict stem diameter distributions across a temperate forest landscape. *Remote Sensing*, 9, 944.
- Roussel, J.R.**, Caspersen, J., Beland, M., and Achim, A. (2017). Removing bias from LiDAR-based estimates of canopy height: accounting for the effects of pulse density and footprint size. *Remote Sensing of Environment*, 198, 1-16
- Smenderovac, E.E.**, Webster, K., Caspersen, J., Morris, D., Hazlett, P., Basiliko, N. (2017). Does intensified boreal forest harvesting impact soil microbial community structure and function? *Canadian Journal of Forest Research*, 47, 916-925
- Yang, J.**, He, Y., Caspersen, J., and Jones, T. (2017). Delineating individual tree crowns using multi-spectral watershed segmentation and multi-scale fitting. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 10, 1390-1401. DOI: 10.1109/JSTARS.2016.2638822
- Yang, J.**, He, Y., and Caspersen, J. (2017). Region merging using local spectral angle thresholds: a more accurate method for hybrid segmentation of remote sensing images. *Remote Sensing of Environment*, 190, 137-148.
- Shang, C., Treitz, P., Caspersen, J., and Jones, T. (2017). Estimating stem diameter distributions in a management context for a tolerant hardwood forest using ALS height and intensity data. *Canadian Journal of Remote Sensing*, 43, 1-16.
- Hossain, S.**, Caspersen, J.P., and Thomas, S.C. (2017). Reproductive costs in *Acer saccharum*: exploring size-dependent relations between seed production and branch extension. *Trees*, 31, 1179. DOI:10.1007/s00468-017-1536-4.
- Jucker, T., Caspersen J., Antin C., Barbier, N., Bongers, F., Chave, J., Dalponte, M., van Ewijk, k., Forrester, D., Heani, M., Higgins, S., Holdaway, R., Iida, Y., Keller M., Lorimer, C., Marshall, P., Momo, S., Moncrieff, G., Ploton, P., Poorter, L., Abd Rahman, K., Schlund, M., Sonké, B., Sterck, F., Trugman, A., Usoltsev, V., Vanderwel, M., Waldner, P., Wedeux, B., Wirth, C., Woods, M., Xiang, W., Zimmermann, N., and Coomes, D. (2017). Allometric equations for integrating remote sensing imagery into forest monitoring programs. *Global Change Biology*, 23, 177-190.
- Kunstler, G., Falster, D., Coomes, D. A., Hui, F., Kooyman, R. M., Laughlin, D. C., Poorter, L., Vanderwel M., Vieilledent, S., Wright J., Aiba, M., Baraloto, C., Caspersen, J., Cornelissen H., Gourlet-Fleury, S., Hanewinkel, M., Herault, B., Katge, J., Kurokawa, H., Onoda, Y., Penuelas, J., Poorter, H., Uriarte, M., Richardson, S., Ruiz-Benito, P., Sun, I., Stahl, G., Swenson, N., Thompson J., Westerlund, B., Wirth C., Zavala, M., **Zeng, H.**, Zimmerman, J., Zimmermann,

- N., and Westoby, M. (2016). Plant functional traits have globally consistent effects on competition. *Nature*, 529 (7585), 204-207.
- Yang, J.**, He, Y., and Caspersen, J. (2016). A self-adapted threshold-based region merging method for remote sensing image segmentation. *Geoscience and Remote Sensing Symposium (IGARSS), 2016 IEEE International*.  
DOI: 10.1109/IGARSS.2016.7730652
- Vanderwel M.C., **Zeng H.**, Caspersen J.P., Kunstler G., and Lichstein, J.W. (2016). Demographic controls of aboveground forest carbon across North America. *Ecology Letters*. DOI: 10.1111/ele.12574
- Gorgolewski, A. S.**, Caspersen, J. P., Hazlett, P., Jones, T. A., Tran, H., and Basiliko, N. (2015). Responses of red-backed salamander (*Plethodon cinereus*) abundance in a northern hardwood forest. *Canadian Journal of Forest Research*, 46, 402-409.
- Yang, J.**, Jones, T., Caspersen, J., & He, Y. (2015). Object-based canopy gap segmentation and classification: quantifying the pros and cons of integrating optical and LiDAR data. *Remote Sensing*, 7, 15917-15932.
- Cleary, J.** and Caspersen, J. P. (2015). Comparing the life cycle impacts of using harvest residue as feedstock for small- and large-scale bioenergy systems. *Energy*, 88, 917-926.
- Shabaga JA, Basiliko N, Caspersen JP, Jones TA. (2015). Seasonal controls on patterns of soil respiration and temperature sensitivity in a northern mixed deciduous forest following partial harvesting. *Forest Ecology and Management*, 348, 208-219.
- Yang, J.**, He, Y., and Caspersen, J. (2015). Fully constrained linear spectral unmixing based global shadow compensation for high resolution satellite imagery of urban areas. *International Journal of Applied Earth Observation and Geoinformation*, 38, 88-98.
- Cleary, J., Wolf, D. P.**, and Caspersen, J. P. (2015). Comparing the life cycle costs of using harvest residue as feedstock for small- and large-scale bioenergy systems. *Energy*, 86, 539-547.
- Spriggs, R. A., Vanderwel, M. C., Jones, T. A., Caspersen, J. P., and Coomes, D. A. (2015). A simple area-based model for predicting airborne LiDAR first returns from stem diameter distributions: an example study in an uneven-aged, mixed temperate forest. *Canadian Journal of Forest Research*, 45, 1338-1350.
- Yang, J.**, He, Y., Caspersen, J., and Jones, T. (2015). A discrepancy measure for segmentation evaluation from the perspective of object recognition. *ISPRS Journal of Photogrammetry and Remote Sensing*, 101, 186-192.

- Cecil-Cockwell, M., Caspersen J.P.** (2015). A simple system for classifying hardwood vigour and quality. *Canadian Journal of Forest Research*, 45, 900-909.
- Cecil-Cockwell, M. and J.P. Caspersen** (2014). Sources of variation in the net value of sugar maple trees: implications for tree selection and operations management. *Forest Products Journal*, 64(7), 250-258.
- Thiel, M.C., Basiliko, N., Caspersen, J.P., Fera, J., and Jones, T.A.,** (2015). Operational biomass recovery of small trees: equations for six central Ontario tree species. *Canadian Journal of Forest Research*, 45, 370–375.
- Wolf, D.P., Meek P., Cormier, D., Jones, T.A., and J.P. Caspersen** (2014). Harvest residue recovery in semi-mechanized single-tree selection operations. *International Journal of Forest Engineering*, 25(3), 229-237.
- Yang, J., Y. He, and J. Caspersen.** (2014). A multi-band watershed segmentation method for individual tree crown delineation from high resolution multispectral aerial image. In: *Proceedings of the International Geoscience and Remote Sensing Symposium (IGARSS)*, Quebec City, QC, Canada, pp. 1588-1591.
- Martin A.R., Caspersen J.P., Fuller M.M., Jones T.A., and S.C. Thomas** (2014). Temporal dynamics and causes of postharvest mortality in a selection-managed tolerant hardwood forest. *Forest Ecology and Management*, 314, 183-192.
- Kuprevicius, A., Auty, D., Alexis, A., and J.P. Caspersen** (2013). Quantifying the influence of live crown ratio on the mechanical properties of clear wood. *Forestry*: doi: 10.1093/forestry/cpt006
- Hurt, G.C., S.W. Pacala, P.R. Moorcroft, J. Caspersen, E. Shevliakova, R.A. Houghton, B. Moore III, and J. Fisk.** (2013). Ecosystem Demography Model: U.S. Ecosystem Carbon Stocks and Fluxes, 1700-1990. Model product. Available online <http://daac.ornl.gov> from Oak Ridge National Laboratory Distributed Active Archive Center, Oak Ridge, Tennessee, U.S.A. <http://dx.doi.org/10.3334/ORNLDAAC/1160>
- Vanderwel, M.C., Malcolm, J.R., and J.P. Caspersen** (2012). Using a data-constrained model of home range establishment to predict abundance in spatially heterogeneous habitats. *PLoS ONE* 7(7): e40599. doi:10.1371/journal.pone.0040599
- Hossain, S.M.Y, and J.P. Caspersen** (2012). In-situ measurement of twig dieback and regrowth in mature *Acer saccharum* trees. *Forest Ecology and Management*, 270, 183-188.
- Caspersen, J.P., Vanderwel, M. C., Cole W.G., and D.W. Purves** (2011) How stand productivity results from size- and competition-dependent growth and mortality. *PLoS ONE* 6(12): e28660. doi:10.1371/journal.pone.0028660

- Zavala, M.A., Espelta, J.M., Caspersen, J.P., and J. Retana (2011) Interspecific differences in sapling performance with respect to light and aridity gradients in Mediterranean pin-oak forests: implications for species coexistence. *Canadian Journal of Forest Research*, 2011: 1432-1444.
- Vanderwel, M.C.**, Caspersen, J.P., Malcolm J.R., Papaik, M.J., and C. Messier (2011) Structural changes and potential vertebrate responses following simulated partial harvesting of boreal mixedwood stands. *Forest Ecology and Management*, 26: 1362-1371.
- Vanderwel, M.C.**, J.R. Malcolm, J.P. Caspersen, and M.A. Newman (2010). Fine-scale habitat associations of red-backed voles in boreal mixedwood stands. *Journal of Wildlife Management*, 74: 1492-1501.
- Vanderwel M.C., Thorpe H.C.**, Caspersen J.P. (2010) Contributions of harvest slash to maintaining downed woody debris in selection-managed forests. *Canadian Journal of Forest Research* 40, 1680-1685.
- Lichstein, J.W., J. Dushoff, K. Ogle, A. Chen, D.W. Purves, and S.W. Pacala (2010) Unlocking the forest inventory data: relating individual-tree performance to unmeasured environmental factors. *Ecological Applications* 20, 684-699.
- Thorpe, H.C., M.C. Vanderwel**, M.M. Fuller, S.C. Thomas, and J.P. Caspersen. (2009) Modelling stand development after partial harvests: An empirically based, spatially explicit analysis for lowland black spruce. *Ecological Modelling*: doi: 10.1016/j.ecolmodel.2009.10.005.
- Shevliakova, E., S.W. Pacala, S. Malyshev, G.C. Hurtt, P. Milly, J.P. Caspersen, L. Thompson, C. Wirth and K. Dunne (2009). Carbon cycling under 300 years of land-use change: the importance of the secondary vegetation sink. *Global Biogeochemical Cycles* doi:10.1029/2007GB003176
- Vanderwel, M.C., H.C. Thorpe**, J.L. Shuter, J.C. Caspersen, and S.C. Thomas (2008). Contrasting downed woody debris dynamics in managed and unmanaged northern hardwood stands. *Canadian Journal of Forest Research*: 38, 2850-2861.
- Thorpe, H.C.**, S.C. Thomas and J.P. Caspersen (2008) Tree mortality following partial harvests is determined by skidding proximity. *Ecological Applications* 18, 1652-1663.
- Arii, K.**, J.P. Caspersen, **T. Jones** and S.C. Thomas (2007). Development of a spatially-aggregated harvesting algorithm for use in an individual-based forest simulation model. *Ecological Modelling* 211, 251-266.

- Nock, C.A.,** J.P. Caspersen and S.C. Thomas (2008) Large ontogenetic declines in intra-crown leaf area index in canopy trees of two temperate deciduous tree species. *Ecology*, 89, 744-753.
- Thorpe, H.C.,** S.C. Thomas and J.P. Caspersen (2007). Residual-tree growth responses of residual *Picea mariana* trees following partial stand harvest. *Canadian Journal of Forest Research*, 37, 1563-1571.
- Stehlik, I., J.P. Caspersen, L. Wirth, and R. Holderegger (2007). Floral free fall in the Swiss lowlands: environmental determinants of local plant population extinction in a peri-urban landscape. *Journal of Ecology* 95, 734-744.
- Domke, G.M.,** J.P. Caspersen and **T. Jones** (2007) Light attenuation following selection harvesting in northern hardwood forests. *Forest Ecology and Management* 239, 182-190.
- Holloway, G.L., J.P. Caspersen, **M.C. Vanderwel** and B. J. Naylor (2007) Cavity tree occurrence in hardwood forests of Central Ontario. *Forest Ecology and Management* 239, 191-199.
- Pacala, S.W., R.A. Birdsey, S. Bridgham, R.T. Conant, K. Davis, B. Hales, R.A. Houghton, J.C. Jenkins, M. Johnston, G. Marland, K. Paustian, S. Wofsy, J.P. Caspersen, R. Socolow and R.S.J. Tol (2007). The North American Carbon Budget Past and Present. In the *First State of the Carbon Cycle Report*, U.S. Climate Change Science Program.
- Vanderwel, M.C.** and J.P. Caspersen (2006) Snag dynamics in partially-harvested northern hardwood forests. *Canadian Journal of Forest Research*, 36, 2769-2779.
- Caspersen, J.P. (2006) Elevated mortality of residual trees following single-tree felling in northern hardwood forests. *Canadian Journal of Forest Research* 36, 1225-1265.
- Stehlik, I., J.P. Caspersen and S.C.H. Barrett (2006) Spatial ecology of mating success in a sexually polymorphic plant. *Proceedings of the Royal Society of London, Series B* 273, 387-394.
- Caspersen, J.P. and **M. Saprunoff** (2005) Seedling recruitment in a northern temperate forest: the relative importance of supply and establishment limitation. *Canadian Journal of Forest Research* 35, 978-989.
- Caspersen, J.P. (2004) Variation in stand mortality related to successional composition. *Forest Ecology and Management* 200, 149-160.
- Purves, D., J.P. Caspersen, P.R. Moorcroft, G.C. Hurtt and S.W. Pacala (2004) Human-induced changes in U.S. biogenic VOC emissions: evidence from long-term forest inventories. *Global Change Biology* 10, 1737-1755.

- Chave, J., R. Condit, T. Guynup, S. Lao, J.P. Caspersen, J.P. Mezonigal, R.B. Foster and S.P. Hubbell (2003) Spatial and temporal variation of biomass in a tropical forest: results from a large census plot in Panama. *Journal of Ecology* 91, 240-252.
- Hurt, G.C., S.W. Pacala, P.R. Moorcroft, J. P. Caspersen, E. Shevliakova, R.A. Houghton and B. Moore (2002) Projecting the future of the U.S. carbon sink. *Proceedings of the National Academy of Sciences* 99, 1389-1394.
- Caspersen, J.P. and S.W. Pacala (2001) Successional diversity and forest ecosystem function. *Ecological Research* 16, 895-903.
- Pacala, S.W., G.C. Hurtt, D. Baker, P. Peylin, R.A. Houghton, R.A. Birdsey, L. Heath, E. T. Sundquist, R.F. Stallard, P. Ciais, P.R. Moorcroft, J.P. Caspersen, E. Shevliakova, B. Moore, G. Kohlmaier, E. Holland, M. Gloor, M.E. Harmon, S.-M. Fan, J.L. Sarmiento, C. Goodale, D. Schimel and C.B. Field (2001) Consistent land- and atmosphere-based U.S. carbon sink estimates. *Science* 292, 2316-2320.
- Pacala, S.W., J.P. Caspersen, P.R. Moorcroft and G.C. Hurtt (2001) Carbon storage in the US caused by land use change. In T. Matsuno and H. Kida (eds.) *The Present and Future of Modeling Global Environmental Change*. Terra Scientific Publishing Company.
- Caspersen, J.P. and R.K. Kobe (2001) Interspecific variation in sapling mortality in relation to soil moisture and growth. *Oikos* 92, 160-168
- Armesto, J.J., R. Rozzi, and J.P. Caspersen (2000) Temperate forests: contrasts between North and South America. In F.S. Chapin III and E.O. Sala (Eds.) *Future Scenarios for Biological Diversity*. Springer-Verlag.
- Caspersen, J.P., S.W. Pacala, J. Jenkins, G.C. Hurtt, P.R. Moorcroft and R.A. Birdsey (2000) Contributions of land-use history to carbon accumulation in U.S. forests. *Science* 290, 1148-1151.
- Caspersen, J.P., J.A. Silander, C.D. Canham and S.W. Pacala (1999) Modeling the competitive dynamics and distribution of tree species along soil moisture gradients. In D. Mladenoff and W. Baker (eds.) *Spatial Modeling of Forest Landscape Change*. Cambridge University Press. This chapter was reviewed by external peer reviewers.

## **RESEARCH FUNDING**

### **Current funding**

- \$130,000 NSERC Discovery Program (evolution and ecology grant selection committee - #18). “Temperature-driven changes in tree species abundance and carbon cycling along latitudinal and altitudinal gradients”. Sole applicant. 2015-2020.
- \$32,000 NSERC Collaborative Research and Development Grant. “Assessment of wood attributes using remote sensing”. Co-applicant. 2014-2018.
- \$16,000 Haliburton Grant-in-Aid program. “Alternative structural targets in selection-managed forest: consequences to forest productivity, net present value, and carbon sequestration”. Co-applicant. 2015-2017.

### **Past funding**

- \$355,000 NRCAN EcoENERGY Program. “Assessing forest biomass as a bioenergy feedstock: the availability and recovery of biomass in uneven-aged forests” Lead applicant 2012-2016.
- \$41,333 MITACS Accelerate Program, FPInnovations, BioFuelNet. “The Petawawa biofibre harvest trial”. Lead applicant. 2013-2015.
- \$50,000 BioFuelNet, a network of centres of excellence grant. “The supply and sustainability of forestry feedstocks”. Co-applicant. 2012-2014.
- \$549,800 NSERC Strategic Grant. “Biochar as a soil amendment in northern forests: ecology, biogeochemistry, and bioenergy tradeoffs”. Co-applicant. 2011-2014.
- \$355,142 NSERC Collaborative Research and Development Grant. “Intensifying forest biomass utilization for energy production”. Lead applicant. 2010-2013.
- \$120,000 NSERC Discovery Program (evolution and ecology grant selection committee - #18). “Crown plasticity and canopy dynamics in northern hardwood forests”. Sole applicant. 2009-2015.
- \$234,000 NSERC Strategic Network Grants Program. “ForValueNet: Integrated Forest Management and Wood Manufacturing Decision-support Systems for a Value-added Forest Industry”. Co-applicant. 2008-2013.



- \$18,000 Assessing the benefits and impacts of utilizing forest biomass for energy production. Haliburton Grant-in-Aid program. Sole applicant. 2011-2012.
- \$40,000 MITACS Elevate Program, Ontario Power Generation. “Remote sensing of the forest biomass available for energy production in central Ontario. Lead applicant. 2010.
- \$213,328 MITACS Accelerate Program, Ontario Power Generation. “Increased utilization of forest biomass for energy production: greenhouse gas benefits and ecosystem impacts.” Lead applicant. 2009-2011.
- \$34,619 NSERC Research Tools and Instruments. Dual-beam laser altimetry system for ground-based remote sensing of tree and forest canopy structure. Co-applicant. 2011.
- \$18,000 Assessing the benefits and impacts of utilizing forest biomass for energy production. Haliburton Grant-in-Aid program
- \$87,500 NSERC Discovery Program (evolution and ecology grant selection committee - #18). “The maintenance of diversity in northern hardwood forests”. Sole applicant. 2004-2009.
- \$305,000 Forestry Futures Trust. “Multi-cohort forest management in northeastern Ontario: cohort classification, associated wildlife communities, and projected stand dynamics.” Co-applicant with J. Malcolm, S. Smith, and P. Drapeau. 2005-2008.
- \$507,000 Sustainable Forest Management Network. “Tree mortality following partial stand harvests: a cross-Canada study”. Co-applicant with S. Thomas, F. Berninger, N. Kenkel, V. Lieffers, and C. Messier. 2005-2008.
- \$33,475 Canada Foundation for Innovation, infrastructure operating fund. “Forest canopy dynamics: infrastructure for experimental studies and computer simulations”. Sole applicant. 2003-2008.
- \$72,086 NSERC equipment grant. Meteorological instrument tower for integrated forest ecosystem measurements. Co-applicant with S. Thomas, J. Malcolm, S. Smith, J. Chen, N. Balsiliko. 2007.
- \$44,000 Alexander von Humboldt Foundation. “Development of management strategies for conversion of exploited mixed forests in the Great Lakes-St. Lawrence region” Co-applicant with H. Spiecker and S. Thomas. 2005-2006.

- \$22,000 Sustainable Forest Management Network. “Old-growth forests in eastern Canada: exploring tradeoffs among timber, biodiversity, carbon, and public preferences”. Subcontract from Dalhousie University. 2004-2006.
- \$56,000 Living Legacy Trust. “Modeling the effects of selection management tree species diversity in Great Lakes-St. Lawrence Forests”. Co-applicant with S. Thomas. 2003.
- \$2,000 TRANSFOR faculty exchange program. Funding to visit Albert Ludwigs University in Freiburg. Sole applicant 2005 - 2006.
- \$12,000 Haliburton Forest Grant-in-Aid program. “Field calibration of a stand projection model”. Sole applicant. 2003-2004.
- \$101,130 Canada Foundation for Innovation. “Forest canopy dynamics: infrastructure for experimental studies and computer simulations”. Sole applicant. 2003.
- \$101,130 Ontario Innovation Trust: matching grant. “Forest canopy dynamics: infrastructure for experimental studies and computer simulations”. Sole applicant. 2003.
- \$40,000 Connaught New Staff Matching Grant. “Human-induced changes in biogenic VOC emissions: past, present and future”. Sole applicant. 2004.

## **TEACHING**

### **Undergraduate courses**

Biology of Trees and Forests (FOR305), 2005-2015, 2016-17.  
 Field Methods in Forest Conservation (FOR301), 2002-2010.  
 Environmental Collapse of Ancient Civilizations (LTE199), 2018-2012.  
 Environmental Impact and Risk Assessment (CIV440), 2014, 2015, 2017.

### **Graduate courses**

Research Paper in Forest Conservation (FOR3008), 2013, 2014, 2016.  
 International Forest Conservation Field Course (FOR3011), 2007, 2010, 2013.  
 GIS module, in Case Study Analysis in Forest Management (FOR3006), 2003-2007, 2012.  
 Forests and Global Change (FOR 1322), 2004.

## **Directed Studies**

2016 1 Student  
2014 1 Student  
2013 2 Students  
2012 2 Students  
2011 1 Student  
2010 2 Students  
2009 1 Student  
2007 2 Students  
2006 3 Students  
2004 3 Students  
2003 6 Students

## **STUDENT SUPERVISION**

Current: 4 Ph.D., 3 M.F.C.

Past: 4 Ph.D., 11 M.Sc.F., 13 M.F.C., 12 undergraduates, 5 post-docs

### **Current students**

Derek Wolf (Ph.D.) Thesis: Assessing the costs and benefits of a bioheat infrastructure initiative based on local forest resource limits. Sole supervisor from Sept. 2012-present.

Jean-Romain Roussel (Ph.D. at Laval) Thesis: Tree crown delineation and species classification  
Co-supervisor from Sept. 2015-present.

Malcolm Cockwell (Ph.D.) Thesis: Joint optimization of forest management and mill operations  
Sole supervisor from Sept. 2011-present.

Adam Gorgolewski (Ph.D.) Thesis: Carbon and methane dynamics of deadwood. Co-supervisor from Sept. 2015-present.

Shree Gautam (MFC). Thesis: The effect of harvest intensity on regeneration following salvage logging of stands infected with beech bark disease. Sole supervisor from April 2017 – present.

Shannon Kainula (MFC). Thesis: The effect of harvesting on the abundance of beech. Sole supervisor from April 2017 – present.

Michael Speelman (MFC). Thesis: Optimizing early successional habitat to support biodiversity in the Acadian forest region. Sole supervisor from August 2017 – present.

## **Past students**

Jian Yang (Ph.D. at UTM) Thesis: Tree crown delineation and species classification  
Co-supervisor from Sept. 2013-2017.

Kate Macklan (MFC). Thesis: A silvicultural approach to beech bark disease  
management. Sole supervisor from July 2016 – January 2017.

Jeremy Calhoun (MFC). Thesis: Predicting product recovery and value using  
harvested basal area. Sole supervisor from July 2016 – January 2017.

Adam Gorgolewski (M.Sc.). Thesis: Wood ash as a forest soil amendment. Sole  
supervisor from May. 2013-2015.

Julian Cleary (post-doc) Project: Life cycle assessment of bioenergy systems. Sole  
supervisor from Sept 2011-2015.

Hongcheng Zeng (post-doc) Project: Impact of bioenergy production on forest carbon  
storage. Sole supervisor from Dec 2011-2015.

Shaik Hossain (Ph.D.) Thesis: The dynamics of tree crowns and the structure of forest canopies  
Sole supervisor from June 2006-2015.

Emily Smenderovac (M.Sc.) Thesis: The response of soil microbial communities to intensified  
biomass harvesting. Co-supervisor from Sept. 2012-2014

Thomas McCay (M.F.C.). Sole supervisor from Jan 2014-2015.

Felix Chan (undergraduate), recipient of a Centre for Global Change Science fellowship.  
Sole supervisor from May-August 2013.

Monika Oviedo (undergraduate), recipient of an NSERC USRA. Sole supervisor from  
May-August 2014.

Michael Marcucci (undergraduate), recipient of an NSERC USRA. Sole supervisor from  
May-August 2013.

Adam Gorgolewski (undergraduate), recipient of a Centre for Global Change Science  
fellowship. Co-supervisor from May-August 2013.

Adam Gorgolewski (undergraduate), recipient of an NSERC USRA. Co-supervisor from  
May-August 2012.

Alecia Korkowski (undergraduate), recipient of a Centre for Global Change Science  
fellowship. Sole supervisor from May-August 2012.

Assunta Saliola (M.Sc. in Geography) Thesis: Remote sensing of stand structure and species composition. Co-supervisor from Sept. 2011-2013.

Phil Rudz (M.Sc.) Thesis: Carbon and nitrogen dynamics of coarse woody debris  
Sole supervisor from June 2010-2013.

Derek Wolf (M.Sc.F) Thesis: Harvest residue recovery in semi-mechanized single-tree selection operations. Sole supervisor from Sept 2009 –2012.

Katelyn Louckes (M.F.C). A comparison between ALS LiDAR and stereo-image derived point clouds in a forested environment. Sole supervisor from Sept 2011 – Dec. 2012.

Adam Kuprevicius (M.Sc.F) Thesis: The influence of crown and stand structure on wood quality. Sole supervisor from Sept 2008 –2010.

Mark Vanderwel (Post-doc). Project: Modeling canopy and stand dynamics. Sole supervisor from Sept. 2009 - 2010. Recipient of an NSERC postdoctoral fellowship.

Malcolm Cecil-Cockwell (undergraduate), recipient of a Centre for Global Change Science fellowship. Sole supervisor from May-August 2010.

Mark Vanderwel (Ph.D.) Thesis: Modeling the effects of multi-cohort forest management on species and their habitat. Co-supervised with J. Malcolm from 2005-2009. Recipient of an NSERC PGS scholarship.

Fraser Smith (M.Sc.F) Thesis: Post-harvest following structural retention harvests in the Yukon. Co-supervised with S. Thomas from Sept 2007 – 2009.

Hilary Thorpe (Ph.D.) Thesis: Stand dynamics following partial harvest in lowland black spruce forests. Co-supervised with S. Thomas from Sept. 2003-present. Recipient of an NSERC PGS scholarship and an NSERC post-doctoral fellowship.

William Martin (M.Sc.F.) Thesis: Soil-landform relationships on the Oak Ridges Moraine. Co-supervised with Vic Timmer from Sept. 2002-July 2004.

Grant Domke (M.Sc.F.) Thesis: Gap closure in northern hardwood forests. Sole supervisor from Sept. 2003-Sept. 2005.

Megan Sapruff (M.Sc.F.) Thesis: Comparative ecology of temperate Asian tree species. Co-supervised with S. Thomas from Sept. 2003-Sept. 2005.

Charles Nock (M.Sc.F.) Thesis: Age-related decline in the leaf area index of two temperate deciduous tree species. Sole supervisor from Sept. 2004-Sept. 2006.

- Adam Martin (M.F.C.) Thesis: Elevated tree mortality following selection harvesting in temperate hardwood forests. Co-supervisor from Dec. 2005 – Dec. 2006.
- Stephanie Ulcar (M.F.C.) Thesis: Evaluating the accuracy of the Forest Vegetation Simulator (FVS-Ontario) for southern Ontario. Supervisor from Dec. 2010 – Dec. 2011.
- Matt Meade (M.F.C.) Project: Conifer release in riparian forests on the Haida Gwaii. Supervised from Dec. 2006-Dec. 2007.
- Tyler Peet (M.F.C.) Project: Do trees show their years? Morphological predictors of tree age. Co-supervised from Sept. 2005-Dec. 2006.
- Jeffrey Biggs (M.F.C.) Project: Afforestation-generated Kyoto-compliant carbon offsets: a case study in Northeastern Ontario. Sole supervisor from Sept. 2002-Dec. 2003.
- Jalil Hashemi (M.F.C.) Project: Mitigation of oak decline in the town of Oakville, Ontario. Sole supervisor from Sept. 2002-Dec. 2003.
- Michael Parkes, (M.F.C.) Project: Monumental cedar on British Columbia's Haida Gwaii/Queen Charlotte Islands: abundance, distribution, and implications for land-use planning and forest management. Sole supervisor from Sept. 2003-Dec. 2004.
- Karen Mousseau (M.F.C.) Project: Effects of helicopter logging on the structure and composition of forests of the Queen Charlotte Islands. Sole supervisor from Sept. 2004-Dec. 2005.
- Lisa Leung (M.F.C.) Project: Effects of cormorants on the structure and composition of forests on the Leslie Street spit. Sole supervisor from Sept. 2004-Dec. 2005.
- Lazar Pavlovic (undergraduate) NSERC undergraduate student research award recipient. Sole supervisor from May-Aug. 2008.
- Susan Kidnie (undergraduate) NSERC undergraduate student research award recipient. Sole supervisor from May-Aug. 2006.
- Charles Nock (undergraduate) NSERC undergraduate student research award recipient. Sole supervisor from May-August 2003.
- Alicia Speratti (undergraduate) NSERC undergraduate student research award recipient. Sole supervisor from May-Aug. 2003.

Sheelah Griffith (undergraduate) NSERC undergraduate student research award recipient. Sole supervisor from May-Aug. 2004. Currently a M.Sc. candidate in the Department of Renewable Resources at the University of Alberta.

Rachel Mayberry (undergraduate) Sole supervisor from May-Aug. 2004. Currently a M.Sc. candidate in the Department of Biological Sciences at Simon Fraser University.

Trevor Jones (Post-doc) Project: Modeling post-harvest stand dynamics. Co-supervised with S. Thomas from March 2006-Aug. 2006.

Ken Aarii (Post-doc) Project: Modeling post-harvest stand dynamics. Co-supervised with S. Thomas from July 2005-March 2007.

## **SERVICE TO FACULTY AND UNIVERSITY**

### **Administrative positions**

Undergraduate coordinator, Sept 2009 – 2013.

Graduate coordinator, July 2017 – present.

### **Graduate committees**

<u>Degree</u>	<u>Student</u>	<u>Status</u>
M.Sc.F.	Ben Angel	In progress
Ph.D.	Shivajanani Shivarajah	In progress
Ph.D.	Sossina Gezagegn	In progress
M.Sc.	Li Li (UQ a Rimouski)	Completed
Ph.D.	Jason Shabaga (Geography)	Completed
Ph.D.	John Schurman	Completed
Ph.D.	Genevieve Noyce	Completed
Ph.D.	Peter Ralevic	Completed
Ph.D.	Adam Martin	Completed
Ph.D.	Jon McKechnie (Engineering)	Completed
M.Sc.F	Ben Filewod	Completed
Ph.D.	Liz Nelson	Completed
Ph.D.	Ben Kutner	Completed
Ph.D.	Maria Garza	Completed
Ph.D.	Patrick James	Completed
Ph.D.	Yuenying Peng	Completed
Ph.D.	Ajit Govind (Geography)	Completed
M.Sc.F.	Miriam Guisandez Sanchez	Completed
Ph.D.	Mike Wotton	Completed
Ph.D.	Trevor Jones	Completed
Ph.D.	Thomasz Gradowski	Completed

**Administrative committees**

Council, Faculty of Forestry

Executive committee of the council, Faculty of Forestry

Undergraduate curriculum committee, Faculty of Forestry

Centre for global change science steering committee, Univ. of Toronto

Safety committee, Faculty of Forestry



## **REVIEW ACTIVITIES**

### **Journals**

Canadian Journal of Forest Research  
Climatic Change  
Ecology  
Ecosystems  
Ecological Applications  
Ecological Monographs  
Forest Ecology and Management  
Forestry  
Global Biogeochemical Cycles  
Global Change Biology  
GCB – Bioenergy  
Global Environmental Change  
Journal of Applied Ecology  
PloS ONE  
Proceedings of the National Academy of Sciences  
Science

### **Proposals/Scholarships**

CFI  
MITACS  
NSERC Discovery Grant  
U.S. National Institute for Climatic Change Research  
Ontario Graduate Scholarship adjudication panel