Publications 2016

Updated April 27, 2017

Forest, Global Change and Bioeconomy Research Area

Peer-reviewed scientific articles (refereed, original research) published (or in print) in international journals

Abbott, B. W., Jones, J. B., Schuur, E. A. G., ..., Kouki, J., et al. 2016. Biomass offsets little or none of permafrost carbon release from soils, streams, and wildfire: an expert assessment. Environmental Research Letters 11: 034014.

Ahmadi Sani, N., Babaie Kafaky, S., Pukkala, T., Mataji, A. 2016. Integrated use of GIS, remote sensing and multi-criteria decision analysis to assess ecological land suitability in multi-functional forestry. Journal of Forestry Research 27 5: 1127-1135.

de Almeida, D.R.A., Nelson, B.W., Schietti, J., Gorgens, E.B., Resende, A.F., Stark, S.C., Valbuena, R. 2016. Contrasting fire damage and fire susceptibility between seasonally flooded forest and upland forest in the Central Amazon using portable profiling LiDAR. Remote Sensing of Environment 184:153-160.

Arimura, G., Matsui, K. Koeduka, T., Holopainen, J.K. 2016.Biosynthesis and regulation of plant volatiles, and their functional roles in ecosystem interactions and global environmental changes. pp. 185–237. in: Arimura, G & Maffei, M. (Eds.) Plant Specialized Metabolism: Genomics, Biochemistry, and Biological Functions, 376 p. CRC Press.

Bandau, F., Albrectsen, B.R., Julkunen-Tiitto, R. et al. 2016. Genotypic variability in Populus tremula L. affects how anthropogenic nitrogen enrichment influences litter decomposition. Plant and Soil. doi:10.1007/s11104-016-3033-8.

Barbour, M.A., Fortuna, M.A., Bascompte, J., Nicholson, J.R., Julkunen-Tiitto, R., Jules, E.S., Crutsinger, G.M. 2016. Genetic specificity of a plant-insect food web: Implications for linking genetic variation to network complexity. PNAS 113(8): 2128-2133.

Blande, J.D., Glinwood, R. 2016. Deciphering chemical language of plant communication: Synthesis and future research directions. pp. 319-326. In Blande, J.D. & Glinwood, R. (Eds.) Deciphering Chemical Language of Plant Communication. Springer International Publisher.

Bosela, M., Lier, M., Larocque, G.R., Valbuena, R., Baycheva, T. 2016. Criteria and Indicators of Sustainable Forest Management. In: Larocque G.R (Ed.) Ecological Forest Management Handbook. Applied Ecology and Environmental Management Series. Taylor & Francis, CRC Press. pp. 377-409.

Eales, J., Haddaway, N.R., Bernes, C., Cooke, S.J., Jonsson, B.G., Kouki, J., Petrokofsky, G. 2016. What is the effect of prescribed burning in temperate and boreal forest on biodiversity, beyond tree regeneration, pyrophilous and saproxylic species? A systematic review protocol. Environmental Evidence 5(24).

Farré-Armengol, G., Peñuelas, J., Li, T., Yli-Pirilä, P., Filella, I., Llusia, J., Blande, J.D. 2016. Ozone degrades floral scent and reduces pollinator attraction to flowers. New Phytologist 209: 152-160.

Fedorik, F., Haapala, A. 2016 Numerical Model-Based Estimation of Mould Growth on Single-Family House Building Envelopes Across Finland. European Journal of Environmental and Civil Engineering.

Ge, Z-M., Guo, H-Q., Zhao, B., Zhang, C., Peltola, H., Zhang, L-Q. 2016. Spatiotemporal patterns of the gross primary production in the salt marshes with rapid community change: A coupled modeling approach. Ecological Modelling 321(10): 110-120.

Ge, Z.-M., Wang, H., Cao, H.-B., Zhao, B., Zhou, X., Peltola, H., Cui, L.-F., Li, X.-Z., Zhang, L.-Q. 2016. Responses of eastern Chinese coastal salt marshes to sea-level rise combined with vegetative and sedimentary processes. Scientific Reports 6, Article no. 28466.

Ghimire, R.P., Kivimäenpää, M., Blomqvist, M., Holopainen, T., Lyytikäinen-Saarenmaa, P., Holopainen, J.K. 2016. Effect of Bark beetle (Ips typographus) infestation on bark VOC emissions of Norway spruce (Picea abies) trees. Atmospheric Environment 126: 145-152.

Giron-Calva, P.S., Li, T., Blande, J.D. 2016. Plant-plant interactions affect the susceptibility of plants to oviposition by pests but are disrupted by ozone pollution. Agriculture, Ecosystems and Environment. 233: 352-360.

Gong, J., Jia, X., Zha, T., Wang, B., Kellomäki, S., Peltola, H. 2016. Modeling the effects of plant-interspace heterogeneity on water-energy balances in a semiarid ecosystem. Agricultural and Forest Meteorology 221: 189–206.

Guo, X., Zha, T., Jia, X., Wu, B., Feng, W., Xie, J., Gong, J., Zhang, Y., Peltola, H. 2016. Dynamics of Dew in a Cold Desert-Shrub Ecosystem and Its Abiotic Controls. Atmosphere 7(3), Article no. 32.

Hadi, Korhonen, L., Hovi, A., Rönnholm, P., Rautiainen, M. 2016. The accuracy of large-area forest canopy cover estimation using Landsat in boreal region. International Journal of Applied Earth Observation and Geoinformation 53:118-127.

Heikkala, O., Martikainen, P., Kouki, J. 2016. Decadal effects of emulating natural disturbances in forest management on saproxylic beetle assemblages. Biological Conservation 194: 39-47.

Heikkala, O., Martikainen, P., Kouki, J. 2016: Prescribed burning is an effective and quick method to conserve rare pyrophilous forest-dwelling flat bugs. - Insect Conservation and Diversity. doi: 10.1111/icad.12195.

Heikkala, O., Seibold, S., Koivula, M., Martikainen, P., Müller, J., Thorn, S., Kouki, J. 2016. Retention forestry and prescribed burning result in functionally different saproxylic beetle assemblages than clear-cutting. Forest Ecology and Management 359: 51-58.

Heimonen, K., Valtonen, A., Kontunen-Soppela, S., Keski-Saari, S., Rousi, M., Oksanen, E., Roininen, H. 2016. Susceptibility of silver birch (Betula pendula) to herbivorous insects is associated with size and phenology of birch– implications for climate warming. Scandinavian Journal of Forest Research. doi: 10.1080/02827581.2016.1195867.

Hernández-Clemente, R., Kolari, P., Porcar-Castell, A., Korhonen, L., Mõttus, M. 2016. Tracking the seasonal dynamics of boreal forest photosynthesis using EO-1 Hyperion reflectance: sensitivity to structural and illumination effects. IEEE Transactions on Geoscience and Remote Sensing 54(9):5105-5116.

Hou, Z., Xu, Q., Vauhkonen, J., Maltamo, M., Tokola, T. 2016. Species-specific combination and calibration between area-based and tree-based diameter distributions using airborne laser scanning. Canadian Journal of Forest Research 46(6): 753-765.

Hou, Z., Xu, Q., Zhang, C., Maltamo, M., Tokola, T. 2016. Simple approach to improving the extraction of canopy metrics from airborne laser scanning data for tropical forests. Journal of Applied Remote Sensing 10(1).

Hovi, A., Korhonen, L., Vauhkonen, J., Korpela, I. 2016. LiDAR waveform features for tree species classification and their sensitivity to tree- and acquisition related parameters. Remote sensing of Environment 173: 224-237.

Hovi, A., Liang, J., Korhonen, L., Kobayashi, H., Rautiainen, M. 2016. Quantifying the missing link between forest albedo and productivity in the boreal zone. Biogeosciences 13(21):6015-6030.

Hämäläinen, A., Hujo, M., Heikkala, O., Junninen, K., Kouki, J. 2016. Retention tree characteristics have major influence on the post-harvest tree mortality and availability of coarse woody debris in clear-cut areas. Forest Ecology and Management 369: 66-73.

Jia, X., Zha, T., Gong, J., Wang, B., Zhang, Y., Wu, B., Qin, S., Peltola, H. 2016. Carbon and water exchange over a temperate semi-arid shrubland during three years of contrasting precipitation and soil moisture patterns. Agricultural and Forest Meteorology 228: 120-129.

Jia, X., Zha, T.S., Gong, J.N., Wu, B., Zhang, Y.Q., Qin, S.G., Chen, G.P., Feng, W., Kellomäki, S., Peltola, H. 2016. Energy partitioning over a semi-arid shrubland in northern China. Hydrological Processes 30(6): 972–985.

Jin, X., Pukkala, T., Li, F. 2016. A management planning system for even-aged and uneven-aged forests in northeast China. Journal of Forestry Research 27(4): 837-852.

Jin, X., Pukkala, T., Li, F. 2016. Fine-tuning heuristic methods for combinatorial optimization in forest planning. European Journal of Forest Research 135(4): 765-779.

Jing Xie, J., Zha, T., Zhou, C., Jia, X., Yu, H., Yang, B., Chen, J., Zhang, F., Wang, B., Bourque, C. P.-A., Sun, G., Ma, H., Liu, H., Peltola, H. 2016. Seasonal variation in ecosystem water use efficiency in an urban-forest reserve affected by periodic drought. Agricultural and Forest Meteorology 221: 142–151.

Juutinen, S. Moore, T.R., Laine, A. M., Bubier, J.L., Tuittila, E-S., De Young, A., Chong, M. 2016. Responses of mosses Sphagnum capillifolium and Polytrichum strictum to nitrogen deposition in a bog: height growth, ground cover, and CO_2 exchange. Botany 94(2): 127-138.

Kangas, J., Kajanus, M., Leskinen, P., Kurttila, M. 2016. Incorporating MCDS and voting into SWOT – basic idea and experiences. Serbian Journal of Management 11(1): 1-13.

Kansanen, K., Vauhkonen, J., Lähivaara, T., Mehtätalo, L. 2016. Stand density estimators based on individual tree detection and stochastic geometry. Canadian Journal of Forest Research 46(11): 1359-1366.

Karban, R. Grof-Tisza, P. Blande, J.D. 2016. Chemotypic variation in volatiles and herbivory for sagebrush. Journal of Chemical Ecology 42: 829-840.

Karban, R., Wetzel, W.C., Shiojiri, K.,Pezzola, E., Blande, J.D. 2016. Geographic dialects in volatile communication between sagebrush individuals. Ecology 97: 2917-2924.

Kasurinen, A., Koikkalainen, K., Possen, B., Anttonen, M.J., Oksanen, E., Rousi, M., Vapaavuori, E., Holopainen, T. 2016. Root morphology, mycorrhizal roots and extramatrical mycelium growth in silver birch (Betula pendula Roth) genotypes exposed to experimental warming and soil moisture manipulations. Plant and Soil 407(1): 341–353.

Kasurinen, A., Silfver, T., Rousi, M., Mikola, J. 2016. Warming and ozone exposure effects on silver birch (Betula pendula Roth) leaf litter quality, microbial growth and decomposition. Plant and soil. doi: 10.1007/s11104-016-3122-8.

Kataja-aho, S., Hannonen, P., Liukkonen, T., Rosten, H., Koivula, M., Koponen, S., Haimi, J. 2016. The arthropod community of boreal Norway spruce forests responds variably to stump harvesting. Forest Ecology and Management 371: 75-83.

Keränen, J., Maltamo, M., Packalen, P. 2016. Effect of flying altitude, scanning angle and scanning mode on the accuracy of ALS based forest inventory. International Journal of Applied Earth Observation and Geoinformation 52: 349-360.

Khaling, E., Holopainen, J.K., Blande, J.D. 2016. Elevated ozone modulates herbivore-induced volatile emissions of Brassica nigra and alters a tritrophic interaction. Journal of Chemical Ecology 42: 368-381.

Kilpeläinen, A., Alam, A., Torssonen, P., Ruusuvuori, H., Kellomäki, S., Peltola, H. 2016. Effects of intensive forest management on net climate impact of energy biomass utilisation from final felling of Norway spruce. Biomass and Bioenergy 87:1-8.

Kilpeläinen, A., Torssonen, P., Strandman, H., Kellomäki, S., Asikainen, A., Peltola, H. 2016. Net climate impacts of forest biomass production and utilization in managed boreal forests. Global Change Biology Bioenergy 8(2): 307-316.

Kiss, K., Malinen, J., Tokola, T. 2016. Comparison of high and low density airborne lidar data for forest road quality assessment. ISPRS Annals of the Photogrammetry, Remote Sensing and Spatial Information Sciences 3(8): 167-172.

Kivimäenpää, M., Ghimire, R.P., Sutinen, S., Häikiö, E., Kasurinen, E., Holopainen, T., Holopainen, J.K. 2016. Increases of volatile organic compound emissions of Scots pine in response to elevated ozone and warming are modified by herbivory and soil nitrogen availability. European Journal of Forest Research 135: 343-360.

Korhonen, L., Rautiainen, M., Arumäe, T., Lang, M., Flewelling, T., Tokola, T., Stenberg, P. 2016. Relationships between MODIS black-sky shortwave albedo and airborne lidar based forest canopy structure. Teoksessa: EGU General Assembly 2016 (toim.), Geophysical Research Abstracts.

Korhonen, L., Salas, C., Østgård, T., Lien, V., Gobakken, T., and Næsset, E. 2016. Predicting the occurrence of large-diameter trees using airborne laser scanning. Canadian Journal of Forest Research 46(4): 461-469. doi:10.1139/cjfr-2015-0384.

Korrensalo, A., Hájek, T., Alekseychik, P., Rinne, J., Vesala, T., Mehtätalo, L., Mammarella, I., Tuittila, E.-S. 2016. Species-specific temporal variation in photosynthesis as a moderator of peatland carbon sequestration. Biogeosciences Discuss. doi: 10.5194/bg-2016-265.

Korrensalo, A., Hájek, T., Vesala, T., Mehtätalo, L., Tuittila, E.-S. 2016. Variation in photosynthetic properties among bog plants. Botany 94: 1127–1139.

Koskinen, M., Maanavilja, L., Nieminen, M., Minkkinen, K., Tuittila, E-S. 2016. High methane emissions from restored Norway spruce swamps in southern Finland over one growing season. Mires and Peat 17(2): 1–13.

Kotivuori E, Korhonen L, Packalen P. 2016. Nationwide airborne laser scanning based models for volume, biomass and dominant height in Finland. Silva Fennica 50 4: 1567.

Kunttu P., Kotiranta H., Kulju M., Pasanen H., Kouki J. 2016: Occurrence patterns, diversity and ecology of aphyllophoroid fungi on the black alder (Alnus glutinosa) in an archipelago in the Baltic Sea. Annales Botanici Fennici 53: 173–189.

Kuusinen, N., Stenberg, P., Korhonen, L., Rautiainen, M., and Tomppo, E. 2016. Structural factors driving boreal forest albedo in Finland. Remote Sensing of Environment 175: 43-51.

Kuzmin, A., Korhonen, L., Manninen, T., Maltamo, M. 2016. Automatic Segment-Level Tree Species Recognition Using High Resolution Aerial Winter Imagery. European Journal of Remote Sensing 49: 239-259.

Laine, A.M., Tolvanen, A., Mehtätalo, L., Tuittila, E.-S. 2016. Vegetation structure and photosynthesis respond rapidly to restoration in young coastal fens. Ecology and Evolution 6(19): 6880-6891.

Laine, A.M., Wilson, D., Alm, J., Schneider, J., Tuittila, E-S. 2016. Spatial variation in potential photosynthesis in Northern European bogs. Journal of Vegetation Science 27(2): 365-376.

Lehtonen, I., Kämäräinen, M., Gregow, H., Venäläinen, A., Peltola, H. 2016. Heavy snow loads in Finnish forests respond regionally asymmetrically to projected climate change. Natural Hazards and Earth System Sciences 16: 2259-2271. doi: 10.5194/nhess-16-2259-2016.

Lehtonen, I., Venäläinen, A., Kämäräinen, M., Peltola, H., Gregow, H. 2016. Risk for large-scale fires in boreal forests of Finland under changing climate. Natural Hazards and Earth Systems Sciences 16(1): 239-253.

Li, T. 2016. Neighbour recognition through volatile-mediated interactions. pp. 153-174. In Blande, J.D. & Glinwood, R. (Eds.) Deciphering Chemical Language of Plant Communication. Springer International Publisher.

Li, T., Blande, J.D., Holopainen, J.K. 2016. Atmospheric transformation of plant volatiles disrupts host plant finding. Scientific Reports 6: Article 33851.

Lihavainen, J., Ahonen, V., Keski-Saari, S., Kontunen-Soppela, S., Sober, A., Oksanen, E., Keinänen, M. 2016. Low VPD affects nitrogen nutrition and foliar metabolites of silver birch. Journal of Experimental Botany. doi:10.1093/jxb/erw218.

Lihavainen, J., Keinänen, M., Keski-Saari, S., Kontunen-Soppela, S., Sober, A., Oksanen, E. 2016. Artificially decreased VPD in field conditions modifies foliar metabolite profiles of birch and aspen. Journal of Experimental Botany. doi:10.1093/jxb/erw219.

Liu, P., Zha, T., Jia, X., Wang, B., Guo, X., Zhang, Y., Wu, B., Yang, Q., Peltola, H. 2016. Diurnal Freeze-Thaw Cycles Modify Winter Soil Respiration in a Desert Shrub-Land Ecosystem. Forests 7(8), article no. 161.

Lu J., Venäläinen M., Julkunen-Tiitto R., Harju A.M. 2016. Stilbene impregnation retards brown-rot decay of Scots pine sapwood. Holzforschung 70(3): 261-266.

Maja, M.M., Kasurinen, A., Holopainen, T., Julkunen-Tiitto, R., Holopainen, J.K. 2016. The effect of warming and enhanced ultraviolet radiation on gender-specific emissions of volatile organic compounds from European aspen. Science of The Total Environment 547: 39–47.

Maltamo, M., Bollandsås, O.M., Gobakken, T., Næsset, E. 2016. Large-scale prediction of aboveground biomass in heterogeneous mountain forests by means of airborne laser scanning. Can. J. For. Res. 46(9): 1138–1144.

Manzanera, J.A., García-Abril, A., Pascual, C., Tejera, R., Martín-Fernández, S., Tokola, T., Valbuena, R. 2016. Fusion of airborne LiDAR and multispectral sensors reveals synergic capabilities in forest structure characterization. GIScience & Remote Sensing. 53(6): 723-738.

Mathijssen, P.J.H., Väliranta, M., Korrensalo, A., Alekseychik, P., Vesala, T., Rinne, J., Tuittila, E.-S. 2016. Reconstruction of Holocene carbon dynamics in a large boreal peatland complex, southern Finland. Quaternary Science Reviews 142(15): 1-15.

Mauro, F., Molina, I., García-Abril, A., Valbuena, R. and Ayuga-Téllez, E. 2016. Remote sensing estimates and measures of uncertainty for forest variables at different aggregation levels. Environmetrics 27(4): 225-238. doi:10.1002/env.2387.

Mazziotta, A., Pouzols, F.M., Mönkkönen, M., Kotiaho, J.S., Strandman, H., Moilanen, A. 2016. Optimal conservation resource allocation under variable economic and ecological time discounting rates in boreal forest. Journal of Environmental Management 180: 366–374. doi: 10.1016/j.jenvman.2016.05.057.

Mazziotta, A., Triviño, M., Tikkanen, O.-P., Kouki, J., Strandman, H., Mönkkönen, M. 2016. Habitat associations drive species vulnerability to climate change in boreal forests. Climatic Change 135(3-4): 585-595. doi: 10.1007/s10584-015-1591-z.

Melin, M., Matala, J., Mehtätalo, L., Pusenius, J., Packalen, P. 2016. Ecological dimensions of airborne laser scanning - Analyzing the role of forest structure in moose habitat use within a year. Remote Sensing of Environment 173: 238-247.

Melin, M., Matala, J., Mehtätalo, L., Suvanto, A., Packalen, P. 2016. Detecting moose (Alces alces L.) browsing damage in young boreal forests from airborne laser scanning data. Canadian Journal of Forest Research 46(1): 10-19.

Melin, M., Mehtätalo, L., Miettinen, J., Tossavainen, S., Packalen, P. 2016. Forest structure as a determinant of grouse brood occurrence – An analysis linking LiDAR data with presence/absence field data. Forest Ecology and Management 380: 202-211.

Mengistu, M.M., Kasurinen, A. Holopainen, T., Julkunen-Tiitto, R. Holopainen, J.K. 2016. The effect of warming and enhanced ultraviolet radiation on gender-specific emissions of volatile organic compounds from European aspen. Science of Total Environment 547: 39-47.

Miina, J., Pukkala, T., Kurttila, M. 2016. Optimal multi-product management of stands producing timber and wild berries. European Journal of Forest Research 135: 781-794.

Niemi, M., Vauhkonen, J. 2016. Extracting canopy surface texture from airborne laser scanning data for the supervised and unsupervised prediction of area-based forest characteristics. Remote Sensing 8(7): 582.

Nissinen, K., Nybakken, L., Virjamo, V., Julkunen-Tiitto, R. 2016. Slow-growing Salix repens (Salicaceae) benefits from changing climate. Environmental and Experimental Botany 128: 59-68.

Papazian, S., Khaling, E., Bonnet, C., Lassueur, S., Reymond, P., Moritz, T., Blande, J.D., Albrectsen, B.R. 2016. Central Metabolic Responses to Ozone and Herbivory Affect Photosynthesis and Stomatal Closure. Plant Physiology 172(3): 2057-2078.

Pasalodos-Tato, M., Pukkala, T., Calama, R., Canellas, I., Sanchez-Gonzalez, M. 2016. Optimal management of Pinus pinea stands when cone and timber. European Journal of Forest Research 135: 607-619.

Pasanen, H., Rouvinen, S., Kouki. J. 2016: Artificial canopy gaps in the restoration of boreal conservation areas: long-term effects on tree seedling establishment in pine-dominated forests. European Journal of Forest Research 135: 697-706.

Pascual, A., Pukkala, T., Rodríguez, F., de-Miguel, S. 2016. Using spatial optimization to create dynamic harvest blocks from LiDAR-based small interpretation units. Forests 7(10): 220.

Peltoniemi, K., Laiho, R., Juottonen, H., Bodrossy, L., Kell, D.K., Minkkinen, K., Mäkiranta, P., Mehtätalo, L., Penttilä, T., Siljanen, H., Tuittila, E-S., Tuomivirta, T., Fritze, H. 2016. Responses of methanogenic and methanotrophic communities to warming in varying moisture regime of two boreal peatlands. Soil Biology and Biochemisty 97: 144-156.

Pippuri, I., Suvanto, A., Maltamo, M., Korhonen, K.T., Pitkänen, J., Packalen, P. 2016. Classification of forest land attributes using multi-source remotely sensed data. International Journal of Applied Earth Observation and Geoinformation 44: 11-22.

Pukkala, T. 2016. Plenterwald, Dauerwald, or clearcut? Forest policy and Economics 62: 125–134.

Pukkala, T. 2016. Which type of forest management provides most ecosystem services? Forest Ecosystems 3(9): 1-16.

Pukkala, T., Laiho, O., Lähde, E. 2016. Continuous cover management reduces wind damage. Forest Ecology and Management 372(15): 120-127.

Raabe, K., Pisek, J., Lang, M., Korhonen, L. 2016. Estimating the clumping index at two contrasting points in the growing season using a variety of field-based methods. Teoksessa: Ji, Wu; Ya-Qiu, Jin (toim.), IEEE Geoscience and Remote Sensing Symposium (IGARSS). IEEE International.

Rana, P., Gautam, B., Tokola, T. 2016. Optimizing the number of training areas for modeling above-ground biomass with ALS and multispectral remote sensing in subtropical Nepal. International Journal of Applied Earth Observation and Geoinformation 49: 52–62.

Rodríguez, A., Kouki, J. 2016. Disturbance-mediated heterogeneity drives pollinator diversity in boreal managed forest ecosystems. Ecological Applications. doi: 10.1002/eap.1468.

Räty, J., Vauhkonen, J., Maltamo, M., Tokola, T. 2016. On the potential to predetermine dominant tree species based on sparse-density airborne laser scanning data for improving subsequent predictions of species-specific timber volumes. Forest Ecosystems 3(1): 1-17.

Sellin, A., Alber, M., Keinänen, M., Kupper, P., Lihavainen, J., Löhmus, K., Oksanen, E., Söber, A., Söber, J., Tullus, A. 2016. Growth of northern deciduous trees under increasing atmospheric humidity: possible mechanisms behind the growth retardation. Reg Environ Change. doi: 10.1007/s10113-016-1042-z.

Semiz, G., Erbilgin, N., Holopainen, J.K. 2016. Hylobius abietis feeding on the novel host Pinus brutia increases emission of volatile organic compounds. Journal of Applied Entomology DOI: 10.1111/jen.12310.

Šimpraga, M. Takabayashi, J., Holopainen, J.K. 2016. Language of plants – Where is the word? Journal of Integrative Plant Biology 58: 343-349.

Strømme, C.B., Julkunen-Tiitto, R., Olsen. J.E., Nybakken, L. 2016. High daytime temperature delays autumnal bud formation in Populus tremula under field conditions. Tree Physiology 00: 1–11. doi:10.1093/treephys/tpw089.

Taulavuori, K., Hyöky, V., Oksanen, J., Taulavuori, E., Julkunen-Tiitto, R. 2016. Species-specific differences in synthesis of flavonoids and phenolic acids under increasing periods of enhanced blue light. Environmental and Experimental Botany 121: 145-150.

Torssonen, P., Kilpeläinen, A., Strandman, H., Kellomäki, S., Jylhä, K., Asikainen, A., Peltola, H. 2016. Effects of climate change and management on net climate impacts of production and utilization of energy biomass in Norway spruce with stable age-class distribution. Global Change Biology Bioenergy 8(2): 419–427.

Tuovinen, T.S., Kasurinen, A., Häikiö, E., Tervahauta, A., Makkonen, S., Holopainen, T., Juutilainen, J. 2016. Transfer of elements relevant to nuclear fuel cycle from soil to boreal plants and animals in experimental meso- and microcosms. Science of Total Environment 539: 252-261.

Valbuena, R, Maltamo, M. and Packalen, P. 2016. Classification of forest development stages from national low-density lidar datasets: a comparison of machine learning methods. Revista de teledeteccìon 45, Special issue: 15-25. (Spanish Journal of Remote Sensing).

Valbuena, R, Maltamo, M. and Packalen, P. 2016. Classification of multi-layered forest development classes from low-density national airborne lidar datasets. Forestry 89(4): 392-401.

Valbuena, R., Eerikäinen, K., Packalen, P., Maltamo, M. 2016. Gini coefficient predictions from airborne lidar remote sensing display the effect of management intensity on forest structure. Ecological Indicators 60: 574-585.

Valbuena, R., Heiskanen, J., Aynekulu, E., Pitkänen, S., Packalen, P. 2016. Sensitivity of Above-Ground Biomass Estimates to Height-Diameter Modelling in Mixed-Species West African Woodlands. PLOS ONE 11(7): 1-24.

Vauhkonen, J., Holopainen, M., Kankare, V., Vastaranta, M., Viitala, R. 2016. Geometrically explicit description of forest canopy based on 3D triangulations of airborne laser scanning data. Remote Sensing of Environment 173: 248-257.

Vauhkonen, J., Imponen, J. 2016. Unsupervised classification of airborne laser scanning data to locate potential wildlife habitats for forest management planning. Forestry 89(4): 350-363.

Vauhkonen, J., Pukkala, T. 2016. Selecting trees to be harvested based on the relative value growth of the remaining trees. European Journal of Forest Research 135(3): 581-592.

Venugopal, P., Julkunen-Tiitto, R., Junninen, K., Kouki, J. 2016. Phenolic compounds in Scots pine heartwood: are kelo trees a unique woody substrate? Canadian Journal of Forest Research 46(2): 225-233.

Venugopal, P., Junninen, K., Linnakoski, R., Edman, M., Kouki J. 2016. Climate and wood quality have decayer-specific effects on fungal wood decomposition. Forest Ecology and Management 360: 341-351.

Vilen, T., Cienciala, E., Schelhaas, M.J., Verkerk, P.J., Lindner, M., Peltola, H. 2016. Increasing carbon sinks in European forests: effects of afforestation and changes in mean growing stock volume. Forestry 89 (1): 82-90.

Wilson, D., Blain, D., Couwenberg, J., Evans, C.D., Murdiyarso, D., Page, S.E., Renou-Wilson, F., Rieley, J.O., Sirin, A., Strack, M., Tuittila, E.-S. 2016. Greenhouse gas emission factors associated with rewetting of organic soils. Mires and Peat 17: 1- 28.

Virjamo, V., Julkunen-Tiitto, R. 2016. Variation in piperidine alkaloid chemistry of Norway spruce (Picea abies) foliage in diverse geographic origins grown in the same area. Canadian Journal of Forest Research. 46(4): 456-460.

Väisänen, T., Haapala, A., Lappalainen, R., Tomppo, L. 2016 Utilization of organic waste and residues in natural fiber-polymer composites: A Review. Waste Management 54: 62-73.

Xie, J., Zha, T., Zhou, C., Jia, X., Yu, H., Bai, Y., Chen, J., Zhang, F., Wang, B., Bourque, C.P.-A., Sun, G., Ma, H., Liu, H., Peltola, H. 2016. Seasonal variation in ecosystem water use efficiency in an urban-forest reserve affected by periodic drought. Agricultural and Forest Meteorology 221: 142-151.

Yli-Pirilä, P., Copolovicki, L., Kännaste, A., Noe, S., Blande, J.D., Mikkonen, S., Klemola, T., Pulkkinen, J., Virtanen, A., Laaksonen, A., Joutsensaari, J., Niinemets, Ü., Holopainen J.K. 2016. Herbivory by an outbreaking moth increases emissions of biogenic volatiles and leads to enhanced secondary organic aerosol formation capacity. Environmental Science & Technology. 50: 11501–11510.

Ylisirniö, A.-L., Mönkkönen, M., Hallikainen, V., Ranta-Maunus, T., Kouki, J. 2016: Woodland key habitats in preserving polypore diversity in boreal forests: effects of patch size, stand structure and microclimate. Forest Ecology and Management 373: 138-148.

Zubizarreta-Gerendiain, A., Garcia-Gonzalo, J., Strandman, H., Jylhä, K., Peltola, H. 2016. Regional effects of alternative climate change and management scenarios on timber production, economic profitability and carbon stocks in Norway spruce forests in Finland. Canadian Journal of Forest Research 46(2): 274-283.

Zubizarreta-Gerendiain, A., Pukkala, T., Peltola, H. 2016. Effects of wood harvesting and utilisation policies on the carbon balance of forestry under changing climate: a Finnish case study. Forest Policy and Economics 62: 168-176.