# Timothy Griffis

List of Publications by Year
in descending order



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|---|---|---|---|
| 100 papers | 6,659 citations | 76326 40 h-index | 64796 79 g-index |
| 106 all docs | 106 docs citations | 106 times ranked | 7879 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Tillage and soil carbon sequestrationâ€"What do we really know?. Agriculture, Ecosystems and Environment, 2007, 118, 1-5. | 5.3 | 971 |
| 2 | Global and time-resolved monitoring of crop photosynthesis with chlorophyll fluorescence. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E1327-33. | 7.1 | 741 |
| 3 | OCO-2 advances photosynthesis observation from space via solar-induced chlorophyll fluorescence. Science, 2017, 358, . | 12.6 | 438 |
| 4 | Sensitivity and uncertainty of the carbon balance of a Pacific Northwest Douglas-fir forest during an El NiÃ±o/La NiÃ±a cycle. Agricultural and Forest Meteorology, 2004, 123, 201-219. | 4.8 | 254 |
| 5 | Climatic controls on the carbon and water balances of a boreal aspen forest, 1994?2003. Global Change Biology, 2007, 13, 561-576. | 9.5 | 238 |
| 6 | ECOSTRESS: NASA's Next Generation Mission to Measure Evapotranspiration From the International Space Station. Water Resources Research, 2020, 56, e2019WR026058. | 4.2 | 220 |
| 7 | Seasonal variation and partitioning of ecosystem respiration in a southern boreal aspen forest. Agricultural and Forest Meteorology, 2004, 125, 207-223. | 4.8 | 158 |
| 8 | Nitrous oxide emissions are enhanced in a warmer and wetter world. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 12081-12085. | 7.1 | 155 |
| 9 | Comparing the carbon budgets of boreal and temperate deciduous forest stands. Canadian Journal of Forest Research, 2002, 32, 813-822. | 1.7 | 136 |
| 10 | Î´<sup>18</sup>O of water vapour, evapotranspiration and the sites of leaf water evaporation in a soybean canopy. Plant, Cell and Environment, 2008, 31, 1214-1228. | 5.7 | 136 |
| 11 | Identification and correction of spectral contamination in <sup>2</sup>H/<sup>1</sup>H and <sup>18</sup>O/<sup>16</sup>O measured in leaf, stem, and soil water. Rapid Communications in Mass Spectrometry, 2011, 25, 3360-3368. | 1.5 | 132 |
| 12 | Indirect nitrous oxide emissions from streams within the US Corn Belt scale with stream order. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 9839-9843. | 7.1 | 131 |
| 13 | Response of Net Ecosystem Productivity of Three Boreal Forest Stands to Drought. Ecosystems, 2006, 9, 1128-1144. | 3.4 | 129 |
| 14 | Representativeness of Eddy-Covariance flux footprints for areas surrounding AmeriFlux sites. Agricultural and Forest Meteorology, 2021, 301-302, 108350. | 4.8 | 125 |
| 15 | Measuring field-scale isotopic CO2 fluxes with tunable diode laser absorption spectroscopy and micrometeorological techniques. Agricultural and Forest Meteorology, 2004, 124, 15-29. | 4.8 | 115 |
| 16 | Interannual variability of net ecosystem CO2exchange at a subarctic fen. Global Biogeochemical Cycles, 2000, 14, 1109-1121. | 4.9 | 112 |
| 17 | Multiscale analyses of solarâ€induced florescence and gross primary production. Geophysical Research Letters, 2017, 44, 533-541. | 4.0 | 98 |
| 18 | Tracing the flow of carbon dioxide and water vapor between the biosphere and atmosphere: A review of optical isotope techniques and their application. Agricultural and Forest Meteorology, 2013, 174-175, 85-109. | 4.8 | 97 |

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|---|---|---|---|
| 19 | Redefining droughts for the U.S. Corn Belt: The dominant role of atmospheric vapor pressure deficit over soil moisture in regulating stomatal behavior of Maize and Soybean. Agricultural and Forest Meteorology, 2020, 287, 107930. | 4.8 | 90 |
| 20 | Interannual, seasonal, and retrospective analysis of the methane and carbon dioxide budgets of a temperate peatland. Journal of Geophysical Research G: Biogeosciences, 2013, 118, 226-238. | 3.0 | 82 |
| 21 | A metaâ€analysis of water vapor deuteriumâ€excess in the midlatitude atmospheric surface layer. Global Biogeochemical Cycles, 2012, 26, . | 4.9 | 78 |
| 22 | Year-round observations of the energy and water vapour fluxes above a boreal black spruce forest. Hydrological Processes, 2003, 17, 3581-3600. | 2.6 | 77 |
| 23 | Response of Net Ecosystem Productivity of Three Boreal Forest Stands to Drought. Ecosystems, 2007, 10, 1039-1055. | 3.4 | 74 |
| 24 | Reconciling the differences between topâ€down and bottomâ€up estimates of nitrous oxide emissions for the U.S. Corn Belt. Global Biogeochemical Cycles, 2013, 27, 746-754. | 4.9 | 71 |
| 25 | Direct measurement of biosphereâ€atmosphere isotopic CO<sub>2</sub> exchange using the eddy covariance technique. Journal of Geophysical Research, 2008, 113, . | 3.3 | 67 |
| 26 | Determining the Oxygen Isotope Composition of Evapotranspiration Using Eddy Covariance. Boundary-Layer Meteorology, 2010, 137, 307-326. | 2.3 | 57 |
| 27 | Sources and seasonality of atmospheric methanol based on tall tower measurements in the US Upper Midwest. Atmospheric Chemistry and Physics, 2011, 11, 11145-11156. | 4.9 | 56 |
| 28 | Feasibility of quantifying ecosystemâ€“atmosphere C18O16O exchange using laser spectroscopy and the flux-gradient method. Agricultural and Forest Meteorology, 2005, 135, 44-60. | 4.8 | 55 |
| 29 | Regionalâ€scale controls on dissolved nitrous oxide in the Upper Mississippi River. Geophysical Research Letters, 2016, 43, 4400-4407. | 4.0 | 54 |
| 30 | Using continuous stable isotope measurements to partition net ecosystem CO2 exchange. Plant, Cell and Environment, 2006, 29, 483-496. | 5.7 | 51 |
| 31 | Determining carbon isotope signatures from micrometeorological measurements: Implications for studying biosphereâ€“atmosphere exchange processes. Boundary-Layer Meteorology, 2007, 123, 295-316. | 2.3 | 50 |
| 32 | Coupling landscape water storage and supplemental irrigation to increase productivity and improve environmental stewardship in the U.S. Midwest. Water Resources Research, 2012, 48, . | 4.2 | 50 |
| 33 | Evaporation from a temperate closed-basin lake and its impact on present, past, and future water level. Journal of Hydrology, 2018, 561, 59-75. | 5.4 | 50 |
| 34 | Carbon dioxide fluxes in a northern fen during a hot, dry summer. Global Biogeochemical Cycles, 1998, 12, 729-740. | 4.9 | 49 |
| 35 | Isoprene emissions and impacts over an ecological transition region in the U.S. Upper Midwest inferred from tall tower measurements. Journal of Geophysical Research D: Atmospheres, 2015, 120, 3553-3571. | 3.3 | 48 |
| 36 | Scaling net ecosystem CO2 exchange from the community to landscape-level at a subarctic fen. Global Change Biology, 2000, 6, 459-473. | 9.5 | 47 |

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|---|---|---|---|
| 37 | The potential of carbonyl sulfide as a proxy for gross primary production at flux tower sites. Journal of Geophysical Research, 2011, 116, . | 3.3 | 46 |
| 38 | Seasonal dynamics and partitioning of isotopic CO2 exchange in a C3/C4 managed ecosystem. Agricultural and Forest Meteorology, 2005, 132, 1-19. | 4.8 | 45 |
| 39 | Evaluating the potential use of winter cover crops in cornâ€“soybean systems for sustainable co-production of food and fuel. Agricultural and Forest Meteorology, 2009, 149, 2120-2132. | 4.8 | 45 |
| 40 | Emissions of C<sub>6</sub>â€“C<sub>8</sub> aromatic compounds in the United States: Constraints from tall tower and aircraft measurements. Journal of Geophysical Research D: Atmospheres, 2015, 120, 826-842. | 3.3 | 44 |
| 41 | Oxygen isotope composition of evapotranspiration and its relation to C<sub>4</sub>photosynthetic discrimination. Journal of Geophysical Research, 2011, 116, . | 3.3 | 41 |
| 42 | Productivity and Carbon Dioxide Exchange of Leguminous Crops: Estimates from Flux Tower Measurements. Agronomy Journal, 2014, 106, 545-559. | 1.8 | 40 |
| 43 | Bidirectional Ecosystemâ€“Atmosphere Fluxes of Volatile Organic Compounds Across the Mass Spectrum: How Many Matter?. ACS Earth and Space Chemistry, 2018, 2, 764-777. | 2.7 | 39 |
| 44 | Modelling the interannual variability of net ecosystem CO2 exchange at a subarctic sedge fen. Global Change Biology, 2001, 7, 511-530. | 9.5 | 33 |
| 45 | Influence of C<sub>4</sub> vegetation on <sup>13</sup>CO<sub>2</sub> discrimination and isoforcing in the upper Midwest, United States. Global Biogeochemical Cycles, 2010, 24, . | 4.9 | 32 |
| 46 | Partitioning N<sub>2</sub>O emissions within the U.S. Corn Belt using an inverse modeling approach. Global Biogeochemical Cycles, 2016, 30, 1192-1205. | 4.9 | 32 |
| 47 | Temporal Dynamics of Aerodynamic Canopy Height Derived From Eddy Covariance Momentum Flux Data Across North American Flux Networks. Geophysical Research Letters, 2018, 45, 9275-9287. | 4.0 | 31 |
| 48 | A global database of water vapor isotopes measured with high temporal resolution infrared laser spectroscopy. Scientific Data, 2019, 6, 180302. | 5.3 | 31 |
| 49 | A Modeling Study of Direct and Indirect N<sub>2</sub>O Emissions From a Representative Catchment in the U.S. Corn Belt. Water Resources Research, 2018, 54, 3632-3653. | 4.2 | 30 |
| 50 | A modeling investigation of canopyâ€air oxygen isotopic exchange of water vapor and carbon dioxide in a soybean field. Journal of Geophysical Research, 2010, 115, . | 3.3 | 29 |
| 51 | North American acetone sources determined from tall tower measurements and inverse modeling. Atmospheric Chemistry and Physics, 2013, 13, 3379-3392. | 4.9 | 29 |
| 52 | Effects of in-situ and reanalysis climate data on estimation of cropland gross primary production using the Vegetation Photosynthesis Model. Agricultural and Forest Meteorology, 2015, 213, 240-250. | 4.8 | 29 |
| 53 | Investigating the source, transport, and isotope composition of water vapor in the planetary boundary layer. Atmospheric Chemistry and Physics, 2016, 16, 5139-5157. | 4.9 | 29 |
| 54 | Automated, Lowâ€Power Chamber System for Measuring Nitrous Oxide Emissions. Journal of Environmental Quality, 2013, 42, 606-614. | 2.0 | 28 |

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|---|---|---|---|
| 55 | Hydrometeorological sensitivities of net ecosystem carbon dioxide and methane exchange of an Amazonian palm swamp peatland. Agricultural and Forest Meteorology, 2020, 295, 108167. | 4.8 | 25 |
| 56 | Interannual Variability in Net Ecosystem CO 2 Exchange at the Arctic Treeline. Arctic, Antarctic, and Alpine Research, 2001, 33, 149. | 1.1 | 24 |
| 57 | Performance of Linear and Nonlinear Two-Leaf Light Use Efficiency Models at Different Temporal Scales. Remote Sensing, 2015, 7, 2238-2278. | 4.0 | 23 |
| 58 | Top-down constraints on global N<sub>2</sub>O emissions at optimal resolution: application of aÂnew dimension reduction technique. Atmospheric Chemistry and Physics, 2018, 18, 735-756. | 4.9 | 22 |
| 59 | Climate Sensitivity of Peatland Methane Emissions Mediated by Seasonal Hydrologic Dynamics. Geophysical Research Letters, 2020, 47, e2020GL088875. | 4.0 | 21 |
| 60 | A geostatistical approach to identify and mitigate agricultural nitrous oxide emission hotspots. Science of the Total Environment, 2016, 572, 442-449. | 8.0 | 20 |
| 61 | Estimating regional greenhouse gas fluxes: an uncertainty analysis of planetary boundary layer techniques and bottom-up inventories. Atmospheric Chemistry and Physics, 2014, 14, 10705-10719. | 4.9 | 18 |
| 62 | Source Partitioning of Methane Emissions and its Seasonality in the U.S. Midwest. Journal of Geophysical Research G: Biogeosciences, 2018, 123, 646-659. | 3.0 | 18 |
| 63 | Topâ€Down Constraints on Anthropogenic CO‹sub›2‹/sub› Emissions Within an Agriculturalâ€Urban Landscape. Journal of Geophysical Research D: Atmospheres, 2018, 123, 4674-4694. | 3.3 | 18 |
| 64 | Interannual, seasonal, and diel variability in the carbon isotope composition of respiration in a C3/C4 agricultural ecosystem. Agricultural and Forest Meteorology, 2012, 153, 144-153. | 4.8 | 17 |
| 65 | Evaluation of carbon isotope flux partitioning theory under simplified and controlled environmental conditions. Agricultural and Forest Meteorology, 2012, 153, 154-164. | 4.8 | 17 |
| 66 | The Annual Carbon Budget for Fen and Forest in a Wetland at Arctic Treeline. Arctic, 2002, 55, . | 0.4 | 17 |
| 67 | Error characterization of methane fluxes and budgets derived from a long-term comparison of open- and closed-path eddy covariance systems. Agricultural and Forest Meteorology, 2019, 278, 107638. | 4.8 | 16 |
| 68 | Simulation of atmospheric N<sub>2</sub>O with GEOS-Chem and its adjoint: evaluation of observational constraints. Geoscientific Model Development, 2015, 8, 3179-3198. | 3.6 | 15 |
| 69 | Anthropogenic Methane Emission and Its Partitioning for the Yangtze River Delta Region of China. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 1148-1170. | 3.0 | 14 |
| 70 | Aircraft-based inversions quantify the importance of wetlands and livestock for Upper Midwest methane emissions. Atmospheric Chemistry and Physics, 2021, 21, 951-971. | 4.9 | 14 |
| 71 | Seasonality in aerodynamic resistance across a range of North American ecosystems. Agricultural and Forest Meteorology, 2021, 310, 108613. | 4.8 | 14 |
| 72 | Investigation of the N2O emission strength in the U. S. Corn Belt. Atmospheric Research, 2017, 194, 66-77. | 4.1 | 13 |

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|---|---|---|---|
| 73 | Comparing crop growth and carbon budgets simulated across AmeriFlux agricultural sites using the Community Land Model (CLM). Agricultural and Forest Meteorology, 2018, 256-257, 315-333. | 4.8 | 13 |
| 74 | KGML-ag: a modeling framework of knowledge-guided machine learning to simulate agroecosystems: a case study of estimating N<sub>2</sub>O emission using data from mesocosm experiments. Geoscientific Model Development, 2022, 15, 2839-2858. | 3.6 | 13 |
| 75 | Impact of Kura Clover Living Mulch on Nitrous Oxide Emissions in a Cornâ€“Soybean System. Journal of Environmental Quality, 2016, 45, 1782-1787. | 2.0 | 12 |
| 76 | Influences of Root Hydraulic Redistribution on N<sub>2</sub>O Emissions at AmeriFlux Sites. Geophysical Research Letters, 2018, 45, 5135-5143. | 4.0 | 12 |
| 77 | CONTROLS ON ENERGY AND CARBON FLUXES FROM SELECT HIGH-LATITUDE TERRESTRIAL SURFACES. Physical Geography, 2000, 21, 345-367. | 1.4 | 11 |
| 78 | Reply to Magnani et al.: Linking large-scale chlorophyll fluorescence observations with cropland gross primary production. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E2511. | 7.1 | 11 |
| 79 | Long-term ecosystem carbon losses from silage maize-based forage cropping systems. Agricultural and Forest Meteorology, 2021, 306, 108438. | 4.8 | 11 |
| 80 | Quantifying nitrous oxide fluxes on multiple spatial scales in the Upper Midwest, USA. International Journal of Biometeorology, 2015, 59, 299-310. | 3.0 | 10 |
| 81 | Tall Tower Ammonia Observations and Emission Estimates in the U.S. Midwest. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 3432-3447. | 3.0 | 10 |
| 82 | The influence of plants on atmospheric methane in an agriculture-dominated landscape. International Journal of Biometeorology, 2014, 58, 819-833. | 3.0 | 9 |
| 83 | Seasonal Variations of CH4 Emissions in the Yangtze River Delta Region of China Are Driven by Agricultural Activities. Advances in Atmospheric Sciences, 2021, 38, 1537-1551. | 4.3 | 9 |
| 84 | Fossil Versus Nonfossil CO Sources in the US: New Airborne Constraints From ACTâ€America and GEM. Geophysical Research Letters, 2021, 48, e2021GL093361. | 4.0 | 8 |
| 85 | Response of nitrous oxide emissions to individual rain events and future changes in precipitation. Journal of Environmental Quality, 2022, 51, 312-324. | 2.0 | 8 |
| 86 | Modeling the Sources and Transport Processes During Extreme Ammonia Episodes in the U.S. Corn Belt. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD031207. | 3.3 | 7 |
| 87 | Topâ€Down Constraints on Methane Point Source Emissions From Animal Agriculture and Waste Based on New Airborne Measurements in the U.S. Upper Midwest. Journal of Geophysical Research G: Biogeosciences, 2020, 125, e2019JG005429. | 3.0 | 7 |
| 88 | Warming temperatures lead to reduced summer carbon sequestration in the U.S. Corn Belt. Communications Earth & Environment, 2021, 2, . | 6.8 | 7 |
| 89 | A simple, accurate, field-portable mixing ratio generator and Rayleigh distillation device. Agricultural and Forest Meteorology, 2010, 150, 1607-1611. | 4.8 | 6 |
| 90 | Evaluation of a CONUS-Wide ECOSTRESS DisALEXI Evapotranspiration Product. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2021, 14, 10117-10133. | 4.9 | 6 |

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|---|---|---|---|
| 91 | Anthropogenic and natural controls on atmospheric <i>Î´</i><sup>13</sup>C-CO<sub>2</sub> variations in the Yangtze River delta: insights from a carbon isotope modeling framework. Atmospheric Chemistry and Physics, 2021, 21, 10015-10037. | 4.9 | 6 |
| 92 | SYNOPTIC AND SURFACE CLIMATOLOGY INTERACTIONS IN THE CENTRAL CANADIAN SUBARCTIC: NORMAL AND EL NIÃ‘O SEASONS. Physical Geography, 2000, 21, 368-383. | 1.4 | 5 |
| 93 | Seasonality in the Surface Energy Balance of Tundra in the Lower Mackenzie River Basin. Journal of Hydrometeorology, 2003, 4, 673-679. | 1.9 | 5 |
| 94 | Feasibility of Recycling Excess Agricultural Nitrate with Electrodialysis. Journal of Environmental Quality, 2017, 46, 1528-1534. | 2.0 | 5 |
| 95 | Nitrogen management and air quality in China. Nature Food, 2020, 1, 597-598. | 14.0 | 4 |
| 96 | A Multiyear Constraint on Ammonia Emissions and Deposition Within the US Corn Belt. Geophysical Research Letters, 2021, 48, e2020GL090865. | 4.0 | 4 |
| 97 | Biases in open-path carbon dioxide flux measurements: Roles of instrument surface heat exchange and analyzer temperature sensitivity. Agricultural and Forest Meteorology, 2021, 296, 108216. | 4.8 | 3 |
| 98 | Influence of Phenology and Land Management on Biosphere-Atmosphere Isotopic CO2 Exchange. , 2009, , 143-166. | | 2 |
| 99 | METEOROLOGICAL ANALYSIS OF DAILY MAXIMUM GROUND-LEVEL OZONE FOR THE NIAGARA REGION. Physical Geography, 1996, 17, 371-399. | 1.4 | 1 |
| 100 | Atmospheric Humidity. Agronomy, 2018, , 95-108. | 0.2 | 0 |