# Xiaofeng Xu

List of Publications by Year
in descending order

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|---|---|---|---|
| 114 papers | 7,617 citations | 71004 43 h-index | 64407 83 g-index |
| 143 all docs | 143 docs citations | 143 times ranked | 9984 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Spatial and temporal patterns of CO<sub>2</sub> and CH<sub>4</sub> fluxes in Chinaâ€™s croplands in response to multifactor environmental changes. Tellus, Series B: Chemical and Physical Meteorology, 2022, 63, 222. | 0.8 | 65 |
| 2 | Improved global-scale predictions of soil carbon stocks with Millennial Version 2. Soil Biology and Biochemistry, 2022, 164, 108466. | 4.2 | 36 |
| 3 | Microbial functional genes driving the positive priming effect in forest soils along an elevation gradient. Soil Biology and Biochemistry, 2022, 165, 108498. | 4.2 | 27 |
| 4 | Global divergent trends of algal blooms detected by satellite during 1982â€“2018. Global Change Biology, 2022, 28, 2327-2340. | 4.2 | 51 |
| 5 | A Landsat-derived annual inland water clarity dataset of China between 1984 and 2018. Earth System Science Data, 2022, 14, 79-94. | 3.7 | 11 |
| 6 | Earlier snowmelt may lead to late season declines in plant productivity and carbon sequestration in Arctic tundra ecosystems. Scientific Reports, 2022, 12, 3986. | 1.6 | 16 |
| 7 | Wetland conversion to cropland alters the microbes along soil profiles and over seasons. Catena, 2022, 214, 106282. | 2.2 | 8 |
| 8 | Evaluating alternative ebullition models for predicting peatland methane emission and its pathways via dataâ€“model fusion. Biogeosciences, 2022, 19, 2245-2262. | 1.3 | 5 |
| 9 | Forest biomass turnover time estimation in China based on spatially explicit rootÂ:Âshoot ratios. Global Ecology and Biogeography, 2022, 31, 1332-1344. | 2.7 | 1 |
| 10 | Modeling methane dynamics in three wetlands in Northeastern China by using the CLM-Microbe model. Ecosystem Health and Sustainability, 2022, 8, . | 1.5 | 1 |
| 11 | Spatial evolution of cultivated land in the Heilongjiang Province in China from 1980 to 2015. Environmental Monitoring and Assessment, 2022, 194, . | 1.3 | 8 |
| 12 | Linkage between microbial functional genes and net N mineralisation in forest soils along an elevational gradient. European Journal of Soil Science, 2022, 73, . | 1.8 | 7 |
| 13 | Dynamics of Fungal and Bacterial Biomass Carbon in Natural Ecosystems: Siteâ€Level Applications of the CLMâ€Microbe Model. Journal of Advances in Modeling Earth Systems, 2021, 13, e2020MS002283. | 1.3 | 11 |
| 14 | Extending a land-surface model with <i>Sphagnum</i> moss to simulate responses of a northern temperate bog to whole ecosystem warming and elevated CO<sub>2</sub>. Biogeosciences, 2021, 18, 467-486. | 1.3 | 17 |
| 15 | Climatic versus Anthropogenic Controls of Decadal Trends (1983â€“2017) in Algal Blooms in Lakes and Reservoirs across China. Environmental Science & Technology, 2021, 55, 2929-2938. | 4.6 | 65 |
| 16 | Seasonality of gross ammonification and nitrification altered by precipitation in a semi-arid grassland of Northern China. Soil Biology and Biochemistry, 2021, 154, 108146. | 4.2 | 17 |
| 17 | Representing methane emissions from wet tropical forest soils using microbial functional groups constrained by soil diffusivity. Biogeosciences, 2021, 18, 1769-1786. | 1.3 | 3 |
| 18 | Increasing environmental filtering of diazotrophic communities with a decade of latitudinal soil transplantation. Soil Biology and Biochemistry, 2021, 154, 108119. | 4.2 | 27 |

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|---|---|---|---|
| 19 | Microbial seasonality promotes soil respiratory carbon emission in natural ecosystems: A modeling study. Global Change Biology, 2021, 27, 3035-3051. | 4.2 | 16 |
| 20 | Effect of water-level fluctuations on methane and carbon dioxide dynamics in a shallow lake of Northern China: Implications for wetland restoration. Journal of Hydrology, 2021, 597, 126169. | 2.3 | 11 |
| 21 | Comparative Analysis of Two Machine Learning Algorithms in Predicting Site-Level Net Ecosystem Exchange in Major Biomes. Remote Sensing, 2021, 13, 2242. | 1.8 | 13 |
| 22 | Stoichiometric models of microbial metabolic limitation in soil systems. Global Ecology and Biogeography, 2021, 30, 2297-2311. | 2.7 | 64 |
| 23 | Strong nonâ€growing season N uptake by deciduous trees in a temperate forest: A <sup>15</sup>N isotopic experiment. Journal of Ecology, 2021, 109, 3752-3766. | 1.9 | 11 |
| 24 | Wetland reclamation homogenizes microbial properties along soil profiles. Geoderma, 2021, 395, 115075. | 2.3 | 18 |
| 25 | An Integrative Model for Soil Biogeochemistry and Methane Processes: I. Model Structure and Sensitivity Analysis. Journal of Geophysical Research G: Biogeosciences, 2021, 126, e2019JG005468. | 1.3 | 11 |
| 26 | An Integrative Model for Soil Biogeochemistry and Methane Processes. II: Warming and Elevated CO<sub>2</sub> Effects on Peatland CH<sub>4</sub> Emissions. Journal of Geophysical Research G: Biogeosciences, 2021, 126, e2020JG005963. | 1.3 | 16 |
| 27 | Mapping soil microbial residence time at the global scale. Global Change Biology, 2021, 27, 6484-6497. | 4.2 | 18 |
| 28 | Divergent impacts of atmospheric water demand on gross primary productivity in three typical ecosystems in China. Agricultural and Forest Meteorology, 2021, 307, 108527. | 1.9 | 37 |
| 29 | Hydrological feedbacks on peatland CH4 emission under warming and elevated CO2: A modeling study. Journal of Hydrology, 2021, 603, 127137. | 2.3 | 4 |
| 30 | A semiempirical model for horizontal distribution of surface wind speed leeward windbreaks. Agroforestry Systems, 2020, 94, 499-516. | 0.9 | 5 |
| 31 | Contrasting drought impacts on the start of phenological growing season in Northern China during 1982â€“2015. International Journal of Climatology, 2020, 40, 3330-3347. | 1.5 | 13 |
| 32 | Eutrophic Lake Taihu as a significant CO2 source during 2000â€“2015. Water Research, 2020, 170, 115331. | 5.3 | 85 |
| 33 | Soil dissolved organic carbon in terrestrial ecosystems: Global budget, spatial distribution and controls. Global Ecology and Biogeography, 2020, 29, 2159-2175. | 2.7 | 47 |
| 34 | Microbial macroecology: In search of mechanisms governing microbial biogeographic patterns. Global Ecology and Biogeography, 2020, 29, 1870-1886. | 2.7 | 55 |
| 35 | Population turnover promotes fungal stability in a semi-arid grassland under precipitation shifts. Journal of Plant Ecology, 2020, 13, 499-509. | 1.2 | 8 |
| 36 | Retention of early-spring nitrogen in temperate grasslands: The dynamics of ammonium and nitrate nitrogen differ. Global Ecology and Conservation, 2020, 24, e01335. | 1.0 | 1 |

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|---|---|---|---|
| 37 | The retention dynamics of N input within the soilâ€“microbeâ€“plant system in a temperate grassland. Geoderma, 2020, 368, 114290. | 2.3 | 14 |
| 38 | Phosphorus alleviation of nitrogenâ€suppressed methane sink in global grasslands. Ecology Letters, 2020, 23, 821-830. | 3.0 | 18 |
| 39 | Spatiotemporal pattern of gypsum blooms in the Salton Sea, California, during 2000-2018. International Journal of Applied Earth Observation and Geoinformation, 2020, 89, 102090. | 1.4 | 7 |
| 40 | A Microbial Functional Groupâ€Based CH<sub>4</sub> Model Integrated Into a Terrestrial Ecosystem Model: Model Structure, Siteâ€Level Evaluation, and Sensitivity Analysis. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001867. | 1.3 | 7 |
| 41 | Rising vegetation activity dominates growing water use efficiency in the Asian permafrost region from 1900 to 2100. Science of the Total Environment, 2020, 736, 139587. | 3.9 | 28 |
| 42 | Global biogeography of fungal and bacterial biomass carbon in topsoil. Soil Biology and Biochemistry, 2020, 151, 108024. | 4.2 | 70 |
| 43 | Climate Change Made Major Contributions to Soil Water Storage Decline in the Southwestern US during 2003â€“2014. Water (Switzerland), 2019, 11, 1947. | 1.2 | 1 |
| 44 | Saturated N2O emission rates occur above the nitrogen deposition level predicted for the semi-arid grasslands of Inner Mongolia, China. Geoderma, 2019, 341, 18-25. | 2.3 | 24 |
| 45 | A Global Data Set for Economic Losses of Extreme Hydrological Events During 1960â€2014. Water Resources Research, 2019, 55, 5165-5175. | 1.7 | 21 |
| 46 | Integrating Soil Microbiology into Ecosystem Science. Advances in Environmental Microbiology, 2019, , 65-102. | 0.1 | 1 |
| 47 | Mechanistic Modeling of Microtopographic Impacts on CO<sub>2</sub> and CH<sub>4</sub> Fluxes in an Alaskan Tundra Ecosystem Using the CLMâ€Microbe Model. Journal of Advances in Modeling Earth Systems, 2019, 11, 4288-4304. | 1.3 | 22 |
| 48 | Large loss of CO2 in winter observed across the northern permafrost region. Nature Climate Change, 2019, 9, 852-857. | 8.1 | 225 |
| 49 | Microbes drive global soil nitrogen mineralization and availability. Global Change Biology, 2019, 25, 1078-1088. | 4.2 | 248 |
| 50 | Coregulation of nitrous oxide emissions by nitrogen and temperature in China's third largest freshwater lake (Lake Taihu). Limnology and Oceanography, 2019, 64, 1070-1086. | 1.6 | 54 |
| 51 | Microbes drive global soil nitrogen mineralization and availability. , 2019, 25, 1078. | | 1 |
| 52 | Foliar nutrient resorption differs between arbuscular mycorrhizal and ectomycorrhizal trees at local and global scales. Global Ecology and Biogeography, 2018, 27, 875-885. | 2.7 | 55 |
| 53 | The Millennial model: in search of measurable pools and transformations for modeling soil carbon in the new century. Biogeochemistry, 2018, 137, 51-71. | 1.7 | 139 |
| 54 | Soil gross N ammonification and nitrification from tropical to temperate forests in eastern China. Functional Ecology, 2018, 32, 83-94. | 1.7 | 38 |

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|---|---|---|---|
| 55 | Biogeographical patterns of soil microbial community as influenced by soil characteristics and climate across Chinese forest biomes. Applied Soil Ecology, 2018, 124, 298-305. | 2.1 | 26 |
| 56 | Nitrogen acquisition strategies during the winter-spring transitional period are divergent at the species level yet convergent at the ecosystem level in temperate grasslands. Soil Biology and Biochemistry, 2018, 122, 150-159. | 4.2 | 17 |
| 57 | Divergence of dominant factors in soil microbial communities and functions in forest ecosystems along a climatic gradient. Biogeosciences, 2018, 15, 1217-1228. | 1.3 | 9 |
| 58 | Plant, microbial and ecosystem carbon use efficiencies interact to stabilize microbial growth as a fraction of gross primary production. New Phytologist, 2017, 214, 1518-1526. | 3.5 | 62 |
| 59 | Global pattern and controls of soil microbial metabolic quotient. Ecological Monographs, 2017, 87, 429-441. | 2.4 | 106 |
| 60 | Multiscale evaluation of NCEP and CRUNCEP data sets at 90 large U.S. cities. Journal of Geophysical Research D: Atmospheres, 2017, 122, 7433-7444. | 1.2 | 7 |
| 61 | Significant inconsistency of vegetation carbon density in CMIP5 Earth system models against observational data. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 2282-2297. | 1.3 | 17 |
| 62 | Interactive impacts of nitrogen input and water amendment on growing season fluxes of CO2, CH4, and N2O in a semiarid grassland, Northern China. Science of the Total Environment, 2017, 578, 523-534. | 3.9 | 34 |
| 63 | Biogeochemical modeling of CO<sub>2</sub> and CH<sub>4</sub> production in anoxic Arctic soil microcosms. Biogeosciences, 2016, 13, 5021-5041. | 1.3 | 27 |
| 64 | Addressing numerical challenges in introducing a reactive transport code into a land surface model: a biogeochemical modeling proof-of-concept with CLMâ€“PFLOTRAN 1.0. Geoscientific Model Development, 2016, 9, 927-946. | 1.3 | 14 |
| 65 | Reviews and syntheses: Four decades of modeling methane cycling in terrestrial ecosystems. Biogeosciences, 2016, 13, 3735-3755. | 1.3 | 102 |
| 66 | Intermediate-scale community-level flux of CO2 and CH4 in a Minnesota peatland: putting the SPRUCE project in a global context. Biogeochemistry, 2016, 129, 255-272. | 1.7 | 35 |
| 67 | Toward more realistic projections of soil carbon dynamics by Earth system models. Global Biogeochemical Cycles, 2016, 30, 40-56. | 1.9 | 343 |
| 68 | Interdisciplinary research in climate and energy sciences. Wiley Interdisciplinary Reviews: Energy and Environment, 2016, 5, 49-56. | 1.9 | 18 |
| 69 | Cover Image, Volume 5, Issue 1. Wiley Interdisciplinary Reviews: Energy and Environment, 2016, 5, i. | 1.9 | 0 |
| 70 | Convergence of microbial assimilations of soil carbon, nitrogen, phosphorus and sulfur in terrestrial ecosystems. Scientific Reports, 2015, 5, 17445. | 1.6 | 35 |
| 71 | A microbial functional groupâ€based module for simulating methane production and consumption: Application to an incubated permafrost soil. Journal of Geophysical Research G: Biogeosciences, 2015, 120, 1315-1333. | 1.3 | 56 |
| 72 | Explicitly representing soil microbial processes in Earth system models. Global Biogeochemical Cycles, 2015, 29, 1782-1800. | 1.9 | 286 |

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|---|---|---|---|
| 73 | Contrasting effects of ammonium and nitrate inputs on soil CO2 emission in a subtropical coniferous plantation of southern China. Biology and Fertility of Soils, 2015, 51, 815-825. | 2.3 | 41 |
| 74 | Global methane and nitrous oxide emissions from terrestrial ecosystems due to multiple environmental changes. Ecosystem Health and Sustainability, 2015, 1, 1-20. | 1.5 | 180 |
| 75 | North American terrestrial CO2 uptake largely offset by CH4 and N2O emissions: toward a full accounting of the greenhouse gas budget. Climatic Change, 2015, 129, 413-426. | 1.7 | 112 |
| 76 | Substrate and environmental controls on microbial assimilation of soil organic carbon: a framework for Earth system models. Ecology Letters, 2014, 17, 547-555. | 3.0 | 148 |
| 77 | Plant functional types in Earth system models: past experiences and future directions for application of dynamic vegetation models in high-latitude ecosystems. Annals of Botany, 2014, 114, 1-16. | 1.4 | 240 |
| 78 | Terrestrial carbon balance in tropical Asia: Contribution from cropland expansion and land management. Global and Planetary Change, 2013, 100, 85-98. | 1.6 | 44 |
| 79 | A global analysis of soil microbial biomass carbon, nitrogen and phosphorus in terrestrial ecosystems. Global Ecology and Biogeography, 2013, 22, 737-749. | 2.7 | 762 |
| 80 | Projecting terrestrial carbon sequestration of the southeastern United States in the 21st century. Ecosphere, 2013, 4, 1-18. | 1.0 | 13 |
| 81 | Effect of continued nitrogen enrichment on greenhouse gas emissions from a wetland ecosystem in the Sanjiang Plain, Northeast China: A 5â€‰year nitrogen addition experiment. Journal of Geophysical Research G: Biogeosciences, 2013, 118, 741-751. | 1.3 | 29 |
| 82 | Reviewing Global Change Research and Recommending Future Priorities. Eos, 2013, 94, 426-426. | 0.1 | 2 |
| 83 | Large methane emission upon spring thaw from natural wetlands in the northern permafrost region. Environmental Research Letters, 2012, 7, 034009. | 2.2 | 61 |
| 84 | Contemporary and projected biogenic fluxes of methane and nitrous oxide in North American terrestrial ecosystems. Frontiers in Ecology and the Environment, 2012, 10, 528-536. | 1.9 | 41 |
| 85 | Effect of nitrogen deposition on China's terrestrial carbon uptake in the context of multifactor environmental changes. Ecological Applications, 2012, 22, 53-75. | 1.8 | 93 |
| 86 | Food benefit and climate warming potential of nitrogen fertilizer uses in China. Environmental Research Letters, 2012, 7, 044020. | 2.2 | 95 |
| 87 | Net exchanges of CO2, CH4 and N2O between marshland and the atmosphere in Northeast China as influenced by multiple global environmental changes. Atmospheric Environment, 2012, 63, 77-85. | 1.9 | 12 |
| 88 | Methane exchange between marshland and the atmosphere over China during 1949â€“2008. Global Biogeochemical Cycles, 2012, 26, . | 1.9 | 51 |
| 89 | Regional sources of nitrous oxide over the United States: Seasonal variation and spatial distribution. Journal of Geophysical Research, 2012, 117, . | 3.3 | 52 |
| 90 | Multifactor controls on terrestrial N<sub>2</sub>O flux over North America from 1979 through 2010. Biogeosciences, 2012, 9, 1351-1366. | 1.3 | 34 |

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|---|---|---|---|
| 91 | Century-Scale Responses of Ecosystem Carbon Storage and Flux to Multiple Environmental Changes in the Southern United States. Ecosystems, 2012, 15, 674-694. | 1.6 | 130 |
| 92 | Extension of the growing season due to delayed autumn over mid and high latitudes in North America during 1982â€“2006. Global Ecology and Biogeography, 2012, 21, 260-271. | 2.7 | 189 |
| 93 | Impacts of urbanization on carbon balance in terrestrial ecosystems of the Southern United States. Environmental Pollution, 2012, 164, 89-101. | 3.7 | 137 |
| 94 | Effects of multiple environment stresses on evapotranspiration and runoff over eastern China. Journal of Hydrology, 2012, 426-427, 39-54. | 2.3 | 48 |
| 95 | China's terrestrial carbon balance: Contributions from multiple global change factors. Global Biogeochemical Cycles, 2011, 25, n/a-n/a. | 1.9 | 231 |
| 96 | Net exchanges of CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O between China's terrestrial ecosystems and the atmosphere and their contributions to global climate warming. Journal of Geophysical Research, 2011, 116, . | 3.3 | 139 |
| 97 | Impacts of tropospheric ozone and climate change on net primary productivity and net carbon exchange of China's forest ecosystems. Global Ecology and Biogeography, 2011, 20, 391-406. | 2.7 | 78 |
| 98 | Modeling ecosystem responses to prescribed fires in a phosphorus-enriched Everglades wetland: II. Phosphorus dynamics and community shift in response to hydrological and seasonal scenarios. Ecological Modelling, 2011, 222, 3942-3956. | 1.2 | 9 |
| 99 | Effect of exogenous phosphorus addition on soil respiration in Calamagrostis angustifolia freshwater marshes of Northeast China. Atmospheric Environment, 2011, 45, 1402-1406. | 1.9 | 16 |
| 100 | Climate and land use controls over terrestrial water use efficiency in monsoon Asia. Ecohydrology, 2011, 4, 322-340. | 1.1 | 79 |
| 101 | The Effects of Urbanization on Net Primary Productivity in Southeastern China. Environmental Management, 2010, 46, 404-410. | 1.2 | 60 |
| 102 | Heavy metal contamination of cultivated wetland soils along a typical plateau lake from southwest China. Environmental Earth Sciences, 2010, 59, 1781-1788. | 1.3 | 42 |
| 103 | Modeling ecosystem responses to prescribed fires in a phosphorus-enriched Everglades wetland: I. Phosphorus dynamics and cattail recovery. Ecological Modelling, 2010, 221, 1252-1266. | 1.2 | 14 |
| 104 | Attribution of spatial and temporal variations in terrestrial methane flux over North America. Biogeosciences, 2010, 7, 3637-3655. | 1.3 | 70 |
| 105 | Spatial and temporal patterns of CH<sub>4</sub> and N<sub>2</sub>O fluxes in terrestrial ecosystems of North America during 1979â€“2008: application of a global biogeochemistry model. Biogeosciences, 2010, 7, 2673-2694. | 1.3 | 153 |
| 106 | Model estimates of net primary productivity, evapotranspiration, and water use efficiency in the terrestrial ecosystems of the southern United States during 1895â€“2007. Forest Ecology and Management, 2010, 259, 1311-1327. | 1.4 | 300 |
| 107 | Heavy Metal Contamination in Riverine Soils Upstream and Downstream of a Hydroelectric Dam on the Lancang River, China. Environmental Engineering Science, 2009, 26, 941-946. | 0.8 | 25 |
| 108 | Ecosystemâ€“atmosphere exchange of CH<sub>4</sub> and N<sub>2</sub>O and ecosystem respiration in wetlands in the Sanjiang Plain, Northeastern China. Global Change Biology, 2009, 15, 692-705. | 4.2 | 232 |

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|---|---|---|---|
| 109 | Two-Decade Reconstruction of Algal Blooms in Chinaâ€™s Lake Taihu. Environmental Science & Technology, 2009, 43, 3522-3528. | 4.6 | 473 |
| 110 | Forecasting and Assessing the Large-Scale and Long-Term Impacts of Global Environmental Change on Terrestrial Ecosystems in the United States and China. , 2009, , 235-266. | | 10 |
| 111 | Convergence in the relationship of CO‹sub›2‹/sub› and N‹sub›2‹/sub›O exchanges between soil and atmosphere within terrestrial ecosystems. Global Change Biology, 2008, 14, 1651-1660. | 4.2 | 86 |
| 112 | Effects of tropospheric ozone pollution on net primary productivity and carbon storage in terrestrial ecosystems of China. Journal of Geophysical Research, 2007, 112, . | 3.3 | 81 |
| 113 | The variation of methane emission from freshwater marshes and response to the exogenous N in Sanjiang Plain Northeast China. Atmospheric Environment, 2007, 41, 4063-4072. | 1.9 | 19 |
| 114 | Upscaling Methane Flux From Plot Level to Eddy Covariance Tower Domains in Five Alaskan Tundra Ecosystems. Frontiers in Environmental Science, 0, 10, . | 1.5 | 0 |