Thilo Streck

List of Publications by Year
in descending order

121 papers	7,210 citations	134610 34 h-index	68831 81 g-index
155 all docs	155 docs citations	155 times ranked	8913 citing authors

#	Article	IF	Citations
1	Climate change impact on wheat and maize growth in Ethiopia: A multi-model uncertainty analysis. PLoS ONE, 2022, 17, e0262951.	1.1	18
2	Optimal design of experiments to improve the characterisation of atrazine degradation pathways in soil. European Journal of Soil Science, 2022, 73, .	1.8	1
3	Combining Crop Modeling with Remote Sensing Data Using a Particle Filtering Technique to Produce Real-Time Forecasts of Winter Wheat Yields under Uncertain Boundary Conditions. Remote Sensing, 2022, 14, 1360.	1.8	7
4	Multi-site, multi-crop measurements in the soilâ€“vegetationâ€“atmosphere continuum: a comprehensive dataset from two climatically contrasting regions in southwestern Germany for the period 2009â€“2018. Earth System Science Data, 2022, 14, 1153-1181.	3.7	8
5	Integrated assessment of regional approaches for biodiversity offsetting in urban-rural areas â€“ A future based case study from Germany using arable land as an example. Land Use Policy, 2022, 117, 106085.	2.5	6
6	A Bayesian sequential updating approach to predict phenology of silage maize. Biogeosciences, 2022, 19, 2187-2209.	1.3	4
7	Comparison of simple models for total nitrogen removal from agricultural runoff in FWS wetlands. Water Science and Technology, 2022, 85, 3301-3314.	1.2	4
8	Noahâ€MP With the Generic Crop Growth Model Gecros in the WRF Model: Effects of Dynamic Crop Growth on Landâ€Atmosphere Interaction. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	1.2	10
9	Multi-model evaluation of phenology prediction for wheat in Australia. Agricultural and Forest Meteorology, 2021, 298-299, 108289.	1.9	17
10	How well do crop modeling groups predict wheat phenology, given calibration data from the target population?. European Journal of Agronomy, 2021, 124, 126195.	1.9	27
11	Mineral-Ecological Cropping Systemsâ€”A New Approach to Improve Ecosystem Services by Farming without Chemical Synthetic Plant Protection. Agronomy, 2021, 11, 1710.	1.3	25
12	Modeling Bioavailability Limitations of Atrazine Degradation in Soils. Frontiers in Environmental Science, 2021, 9, .	1.5	2
13	The chaos in calibrating crop models: Lessons learned from a multi-model calibration exercise. Environmental Modelling and Software, 2021, 145, 105206.	1.9	31
14	Gene-Centric Model Approaches for Accurate Prediction of Pesticide Biodegradation in Soils. Environmental Science & Technology, 2020, 54, 13638-13650.	4.6	11
15	Contribution of plant-induced pressurized flow to CH4 emission from a Phragmites fen. Scientific Reports, 2020, 10, 12304.	1.6	16
16	Distinguishing between early- and late-covering crops in the land surface model Noah-MP: impact on simulated surface energy fluxes and temperature. Biogeosciences, 2020, 17, 2791-2805.	1.3	7
17	Analytical expressions for noncapillary soil water retention based on popular capillary retention models. Vadose Zone Journal, 2020, 19, e20042.	1.3	9
18	Plant litter enhances degradation of the herbicide MCPA and increases formation of biogenic non-extractable residues in soil. Environment International, 2020, 142, 105867.	4.8	10

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19	Spatial Control of Carbon Dynamics in Soil by Microbial Decomposer Communities. Frontiers in Environmental Science, 2020, 8, .	1.5	15
20	Equifinality, sloppiness, and emergent structures of mechanistic soil biogeochemical models. Environmental Modelling and Software, 2019, 122, 104518.	1.9	27
21	Carbon fluxes and budgets of intensive crop rotations in two regional climates of southwest Germany. Agriculture, Ecosystems and Environment, 2019, 276, 31-46.	2.5	23
22	Evaluating multi-year, multi-site data on the energy balance closure of eddy-covariance flux measurements at cropland sites in southwestern Germany. Biogeosciences, 2019, 16, 521-540.	1.3	25
23	A Modular Framework for Modeling Unsaturated Soil Hydraulic Properties Over the Full Moisture Range. Water Resources Research, 2019, 55, 4994-5011.	1.7	32
24	Improving the energy balance closure over a winter wheat field by accounting for minor storage terms. Agricultural and Forest Meteorology, 2019, 264, 283-296.	1.9	23
25	Global wheat production with 1.5 and 2.0Â°C above preâ€industrial warming. Global Change Biology, 2019, 25, 1428-1444.	4.2	107
26	Climate change impact and adaptation for wheat protein. Global Change Biology, 2019, 25, 155-173.	4.2	312
27	How Well Does Noah-MP Simulate the Regional Mean and Spatial Variability of Topsoil Water Content in Two Agricultural Landscapes in Southwest Germany?. Journal of Hydrometeorology, 2018, 19, 555-573.	0.7	7
28	Direct Measurement of CO2 Retention in Arable Soils with pH Above 6.5 During Barometric Process Separation Incubation. Pedosphere, 2018, 28, 726-738.	2.1	5
29	Water flow drives small scale biogeography of pesticides and bacterial pesticide degraders - A microcosm study using 2,4-D as a model compound. Soil Biology and Biochemistry, 2018, 127, 137-147.	4.2	10
30	Multimodel ensembles improve predictions of cropâ€“environmentâ€“management interactions. Global Change Biology, 2018, 24, 5072-5083.	4.2	111
31	Coupling the land surface model Noah-MP with the generic crop growth model Gecros: Model description, calibration and validation. Agricultural and Forest Meteorology, 2018, 262, 322-339.	1.9	17
32	Crop model improvement reduces the uncertainty of the response to temperature of multi-model ensembles. Field Crops Research, 2017, 202, 5-20.	2.3	109
33	The uncertainty of crop yield projections is reduced by improved temperature response functions. Nature Plants, 2017, 3, 17102.	4.7	170
34	Energy balance closure on a winter wheat stand: comparing the eddy covariance technique with the soil water balance method. Biogeosciences, 2016, 13, 63-75.	1.3	30
35	The role of <i>Phragmites</i> in the CH₄ and CO₂ fluxes in a minerotrophic peatland in southwest Germany. Biogeosciences, 2016, 13, 6107-6119.	1.3	29
36	The impact of chemical pollution on the resilience of soils under multiple stresses: A conceptual framework for future research. Science of the Total Environment, 2016, 568, 1076-1085.	3.9	37

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37	Multi-wheat-model ensemble responses to interannual climate variability. Environmental Modelling and Software, 2016, 81, 86-101.	1.9	50
38	Partitioning of ecosystem respiration in winter wheat and silage maizeâ€"modeling seasonal temperature effects. Agriculture, Ecosystems and Environment, 2016, 224, 131-144.	2.5	18
39	Modeling coupled pesticide degradation and organic matter turnover: From gene abundance to process rates. Soil Biology and Biochemistry, 2016, 103, 349-364.	4.2	22
40	Uncertainty of wheat water use: Simulated patterns and sensitivity to temperature and CO2. Field Crops Research, 2016, 198, 80-92.	2.3	47
41	Similar estimates of temperature impacts on global wheat yield by three independent methods. Nature Climate Change, 2016, 6, 1130-1136.	8.1	352
42	Spatial and Temporal Variability of Soil Water Content in Two Regions of Southwest Germany during a Threeâ€Year Observation Period. Vadose Zone Journal, 2016, 15, 1-14.	1.3	15
43	Persistence and Leaching of Two Pesticides in a Paddy Soil in Northern Vietnam. Clean - Soil, Air, Water, 2016, 44, 858-866.	0.7	9
44	N2O and CO2 emissions from South German arable soil after amendment of manures and composts. Environmental Earth Sciences, 2016, 75, 1.	1.3	15
45	Evidence for the importance of litter as a co-substrate for MCPA dissipation in an agricultural soil. Environmental Science and Pollution Research, 2016, 23, 4164-4175.	2.7	9
46	Three year observations of water vapor and energy fluxes over agricultural crops in two regional climates of Southwest Germany. Meteorologische Zeitschrift, 2015, 24, 39-59.	0.5	35
47	Nitrate Transformation and N2O Emission in a Typical Intensively Managed Calcareous Fluvaquent Soil: A 15-Nitrogen Tracer Incubation Study. Communications in Soil Science and Plant Analysis, 2015, 46, 1763-1777.	0.6	5
48	Determining the spatial and temporal dynamics of the green vegetation fraction of croplands using high-resolution RapidEye satellite images. Agricultural and Forest Meteorology, 2015, 206, 113-123.	1.9	31
49	Calibration and Application of Aquaflex TDT Soil Water Probes to Measure the Soil Water Dynamics of Agricultural Topsoil in Southwest Germany. Journal of Irrigation and Drainage Engineering - ASCE, 2015, 141, .	0.6	8
50	Rising temperatures reduce global wheatÂproduction. Nature Climate Change, 2015, 5, 143-147.	8.1	1,544
51	Multimodel ensembles of wheat growth: many models are better than one. Global Change Biology, 2015, 21, 911-925.	4.2	387
52	Simulation of stream flow components in a mountainous catchment in northern Thailand with SWAT, using the ANSELM calibration approach. Hydrological Processes, 2015, 29, 1340-1352.	1.1	19
53	Imidacloprid concentrations in paddy rice fields in northern Vietnam: measurement and probabilistic modeling. Paddy and Water Environment, 2015, 13, 191-203.	1.0	16
54	On the use of the post-closure methods uncertainty band to evaluate the performance of land surface models against eddy covariance flux data. Biogeosciences, 2015, 12, 2311-2326.	1.3	25

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55	A three-component hydrograph separation based on geochemical tracers in a tropical mountainous headwater catchment in northern Thailand. Hydrology and Earth System Sciences, 2014, 18, 525-537.	1.9	27
56	Modelling the fate of pesticides in paddy rice-fish pond farming systems in northern Vietnam. Pest Management Science, 2014, 70, 70-79.	1.7	16
57	Monitoring and risk assessment of pesticides in a tropical river of an agricultural watershed in northern Thailand. Environmental Monitoring and Assessment, 2014, 186, 1083-1099.	1.3	55
58	Micro-scale modeling of pesticide degradation coupled to carbon turnover in the detritusphere: model description and sensitivity analysis. Biogeochemistry, 2014, 117, 185-204.	1.7	20
59	Pesticide-contaminated feeds in integrated grass carp aquaculture: toxicology and bioaccumulation. Diseases of Aquatic Organisms, 2014, 108, 137-147.	0.5	19
60	Incorporating dynamic root growth enhances the performance of Noah-MP at two contrasting winter wheat field sites. Water Resources Research, 2014, 50, 1337-1356.	1.7	47
61	WESS: an interdisciplinary approach to catchment research. Environmental Earth Sciences, 2013, 69, 313-315.	1.3	1
62	Catchments as reactors: a comprehensive approach for water fluxes and solute turnover. Environmental Earth Sciences, 2013, 69, 317-333.	1.3	71
63	Assessing the relevance of subsurface processes for the simulation of evapotranspiration and soil moisture dynamics with CLM3.5: comparison with field data and crop model simulations. Environmental Earth Sciences, 2013, 69, 415-427.	1.3	36
64	Uncertainty in simulating wheat yields under climate change. Nature Climate Change, 2013, 3, 827-832.	8.1	1,021
65	Role of Carbon Substrates Added in the Transformation of Surplus Nitrate to Organic Nitrogen in a Calcareous Soil. Pedosphere, 2013, 23, 205-212.	2.1	25
66	Succession of bacterial and fungal 4-chloro-2-methylphenoxyacetic acid degraders at the soil-litter interface. FEMS Microbiology Ecology, 2013, 86, 85-100.	1.3	20
67	Multiresponse, multiobjective calibration as a diagnostic tool to compare accuracy and structural limitations of five coupled soil-plant models and CLM3.5. Water Resources Research, 2013, 49, 8200-8221.	1.7	40
68	Improved Nitrogen Management for an Intensive Winter Wheat/Summer Maize Doubleâ€cropping System. Soil Science Society of America Journal, 2012, 76, 286-297.	1.2	35
69	Analysis of pesticides in surface water in remote areas in Vietnam: Coping with matrix effects and test of long-term storage stability. International Journal of Environmental Analytical Chemistry, 2012, 92, 797-809.	1.8	9
70	Estimating Freundlich isotherm parameters of heavy metals from multiple batch extraction tests using a Bayesian approach. Geoderma, 2012, 173-174, 42-49.	2.3	3
71	The influence of the herbicide 2-methyl-4-chlorophenoxyacetic acid (MCPA) on the mineralization of litter-derived alkanes and the abundance of the alkane monooxygenase gene (alkB) in the detritusphere of Pisum sativum (L.). Biology and Fertility of Soils, 2012, 48, 933-940.	2.3	2
72	Fate of Pesticides in Combined Paddy Rice-Fish Pond Farming Systems in Northern Vietnam. Journal of Environmental Quality, 2012, 41, 515-525.	1.0	32

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73	Pesticide Transport Pathways from a Sloped Litchi Orchard to an Adjacent Tropical Stream as Identified by Hydrograph Separation. Journal of Environmental Quality, 2012, 41, 1315-1323.	1.0	14
74	Short-term dynamics of pesticide concentrations and loads in a river of an agricultural watershed in the outer tropics. Agriculture, Ecosystems and Environment, 2012, 158, 1-14.	2.5	31
75	Comparison of Noah simulations with eddy covariance and soil water measurements at a winter wheat stand. Agricultural and Forest Meteorology, 2011, 151, 345-355.	1.9	98
76	Pesticide Pollution in Surface- and Groundwater by Paddy Rice Cultivation: A Case Study from Northern Vietnam. Clean - Soil, Air, Water, 2011, 39, 356-361.	0.7	132
77	Modeling Concentrationâ€Dependent Sorptionâ€“Desorption Hysteresis of Atrazine in a Sandy Loam Soil. Journal of Environmental Quality, 2011, 40, 538-547.	1.0	2
78	Regulation of bacterial and fungal MCPA degradation at the soilâ€“litter interface. Soil Biology and Biochemistry, 2010, 42, 1879-1887.	4.2	42
79	Phytolith transport in soil: a laboratory study on intact soil cores. European Journal of Soil Science, 2010, 61, 445-455.	1.8	30
80	Longâ€Term Sorption and Desorption of Sulfadiazine in Soil: Experiments and Modeling. Journal of Environmental Quality, 2010, 39, 654-666.	1.0	31
81	Simulating Pesticide Transport from a Sloped Tropical Soil to an Adjacent Stream. Journal of Environmental Quality, 2010, 39, 353-364.	1.0	8
82	Immobilization of heavy metals in soils amended by nanoparticulate zeolitic tuff: Sorptionâ€desorption of cadmium. Journal of Plant Nutrition and Soil Science, 2010, 173, 852-860.	1.1	19
83	Phytolith transport in soil: A field study using fluorescent labelling. Geoderma, 2010, 157, 27-36.	2.3	88
84	Modelling spatial variability and uncertainty of cadmium leaching to groundwater in an urban region. Journal of Hydrology, 2009, 369, 274-283.	2.3	11
85	Nanoparticulate Zeolitic Tuff for Immobilizing Heavy Metals in Soil: Preparation and Characterization. Water, Air, and Soil Pollution, 2009, 203, 155-168.	1.1	9
86	Phytolith transport in sandy sediment: Experiments and modeling. Geoderma, 2009, 151, 168-178.	2.3	53
87	Estimation of heavy metal sorption in German soils using artificial neural networks. Geoderma, 2009, 152, 104-112.	2.3	73
88	Gross Nitrogen Transformations and Related Nitrous Oxide Emissions in an Intensively Used Calcareous Soil. Soil Science Society of America Journal, 2009, 73, 102-112.	1.2	99
89	Loss of pesticides from a litchi orchard to an adjacent stream in northern Thailand. European Journal of Soil Science, 2008, 59, 71-81.	1.8	29
90	Micro-scale modelling of carbon turnover driven by microbial succession at a biogeochemical interface. Soil Biology and Biochemistry, 2008, 40, 864-878.	4.2	75

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91	Impact of the heatwave in 2003 on the summer CH4 budget of a spruce forest with large variation in soil drainage: A four-year comparison (2001-2004). Journal of Plant Nutrition and Soil Science, 2008, 171, 666-671.	1.1	7
92	Shortcomings in the Commercialized Barometric Process Separation Measuring System. Soil Science Society of America Journal, 2008, 72, 135-142.	1.2	16
93	Micro-Trench Experiments on Interflow and Lateral Pesticide Transport in a Sloped Soil in Northern Thailand. Journal of Environmental Quality, 2007, 36, 1205-1216.	1.0	24
94	The effect of mulching and tillage on the water and temperature regimes of a loess soil: Experimental findings and modeling. Soil and Tillage Research, 2007, 96, 52-63.	2.6	117
95	Nitrous oxide emissions from mineral and organic soils of a Norway spruce stand in Southâ€“West Germany. Atmospheric Environment, 2007, 41, 1681-1688.	1.9	22
96	Modelling N2O emission from a forest upland soil: A procedure for an automatic calibration of the biogeochemical model Forest-DNDC. Ecological Modelling, 2007, 205, 52-58.	1.2	29
97	Modelling nitrous oxide emission from water-logged soils of a spruce forest ecosystem using the biogeochemical model Wetland-DNDC. Biogeochemistry, 2007, 86, 287-299.	1.7	19
98	Quantifying the Influence of Uncertainty and Variability on Groundwater Risk Assessment for Trace Elements. Vadose Zone Journal, 2007, 6, 668-678.	1.3	7
99	Modeling the Environmental Fate of Cadmium in a Large Wastewater Irrigation Area. Journal of Environmental Quality, 2006, 35, 1702-1714.	1.0	36
100	Cadmium Leaching from Micro-Lysimeters Planted with the Hyperaccumulator Thlaspi caerulescens. Journal of Environmental Quality, 2006, 35, 2055-2065.	1.0	19
101	Capability and limitations of first-order and diffusion approaches to describe long-term sorption of chlortoluron in soil. Journal of Contaminant Hydrology, 2006, 86, 279-298.	1.6	26
102	A Regional-Scale Study on the Crop Uptake of Cadmium from Sandy Soils. Journal of Environmental Quality, 2005, 34, 1026-1035.	1.0	61
103	Suitability of the ESS laboratory method to determine the equilibrium soil solution composition of agricultural soils, and suggestions for simplification of the experimental procedure. Journal of Plant Nutrition and Soil Science, 2003, 166, 742-749.	1.1	2
104	Distribution of Cd in the vicinity of a metal smelter: Interpolation of soil Cd concentrations with regard to regulative limits. Journal of Plant Nutrition and Soil Science, 2002, 165, 697-705.	1.1	10
105	Ion transport through unsaturated soils: field experiments and regional simulations. European Journal of Soil Science, 2002, 53, 57-70.	1.8	3
106	Nonequilibrium Sorption of Dimethylphthalate-Compatibility of Batch and Column Techniques. Soil Science Society of America Journal, 2001, 65, 102-111.	1.2	58
107	Ground water preservation by soil protection: Determination of tolerable total Cd contents and Cd breakthrough times. Journal of Plant Nutrition and Soil Science, 2000, 163, 31-40.	1.1	11
108	Nonsingular Sorption of Organic Compounds in Soil: The Role of Slow Kinetics. Journal of Environmental Quality, 2000, 29, 917-925.	1.0	65

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109	Field-Scale Study of Chlortoluron Movement in a Sandy Soil over Winter: II. Modeling. Journal of Environmental Quality, 1999, 28, 1824-1831.	1.0	12
110	Effect of Airâ€Drying on Sorption Kinetics of the Herbicide Chlortoluron in Soil. Journal of Environmental Quality, 1999, 28, 1154-1161.	1.0	36
111	Field-Scale Study of Chlortoluron Movement in a Sandy Soil over Winter: I. Experiments. Journal of Environmental Quality, 1999, 28, 1817-1823.	1.0	10
112	Regional pattern of the mobile water fraction in soils as determined by disc infiltrometer experiments. Journal of Plant Nutrition and Soil Science, 1999, 162, 393-400.	1.1	4
113	On field-scale dispersion of strongly sorbing solutes in soils. Water Resources Research, 1998, 34, 2769-2773.	1.7	8
114	Cadmium Sorption and Desorption in Limed Topsoils as Influenced by pH: Isotherms and Simulated Leaching. Journal of Environmental Quality, 1998, 27, 12-18.	1.0	94
115	MODELING CA/K EXCHANGE KINETICS ON MONTMORILLONITE AND VERMICULITE. Soil Science, 1998, 163, 382-393.	0.9	8
116	Heavy Metal Displacement in a Sandy Soil at the Field Scale: II. Modeling. Journal of Environmental Quality, 1997, 26, 56-62.	1.0	34
117	Heavy Metal Displacement in a Sandy Soil at the Field Scale: I. Measurements and Parameterization of Sorption. Journal of Environmental Quality, 1997, 26, 49-56.	1.0	78
118	Rate-limited sorption of simazine in saturated soil columns. Journal of Contaminant Hydrology, 1997, 25, 219-234.	1.6	32
119	Description of Simazine Transport with Rate-Limited, Two-Stage, Linear and Nonlinear Sorption. Water Resources Research, 1995, 31, 811-822.	1.7	66
120	Transport and biodegradation of toluene in unsaturated soil. Journal of Contaminant Hydrology, 1994, 17, 111-127.	1.6	30
121	Diagnosing similarities in probabilistic multi-model ensembles: an application to soilâ€“plant-growth-modeling. Modeling Earth Systems and Environment, 0, , .	1.9	2