Thilo Streck

List of Publications by Citations

121 papers	5,230 citations	31 h-index	70 g-index
155 ext. papers	6,249 ext. citations	5 avg, IF	5.01 L-index

#	Paper	IF	Citations
121	Rising temperatures reduce global wheat production. *Nature Climate Change*, **2015**, 5, 143-147	21.4	1048
120	Uncertainty in simulating wheat yields under climate change. *Nature Climate Change*, **2013**, 3, 827-832	21.4	827
119	Multimodel ensembles of wheat growth: many models are better than one. *Global Change Biology*, **2015**, 21, 911-25	11.4	292
118	Similar estimates of temperature impacts on global wheat yield by three independent methods. *Nature Climate Change*, **2016**, 6, 1130-1136	21.4	233
117	Climate change impact and adaptation for wheat protein. *Global Change Biology*, **2019**, 25, 155-173	11.4	177
116	Pesticide Pollution in Surface- and Groundwater by Paddy Rice Cultivation: A Case Study from Northern Vietnam. *Clean - Soil, Air, Water*, **2011**, 39, 356-361	1.6	107
115	The uncertainty of crop yield projections is reduced by improved temperature response functions. *Nature Plants*, **2017**, 3, 17102	11.5	95
114	Comparison of Noah simulations with eddy covariance and soil water measurements at a winter wheat stand. *Agricultural and Forest Meteorology*, **2011**, 151, 345-355	5.8	86
113	Gross Nitrogen Transformations and Related Nitrous Oxide Emissions in an Intensively Used Calcareous Soil. *Soil Science Society of America Journal*, **2009**, 73, 102-112	2.5	86
112	Cadmium Sorption and Desorption in Limed Topsoils as Influenced by pH: Isotherms and Simulated Leaching. *Journal of Environmental Quality*, **1998**, 27, 12-18	3.4	82
111	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	6.5	81
110	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	3.4	73
109	Crop model improvement reduces the uncertainty of the response to temperature of multi-model ensembles. *Field Crops Research*, **2017**, 202, 5-20	5.5	70
108	Global wheat production with 1.5 and 2.0°C above pre-industrial warming. *Global Change Biology*, **2018**, 25, 1428	11.4	69
107	Multimodel ensembles improve predictions of crop-environment-management interactions. *Global Change Biology*, **2018**, 24, 5072-5083	11.4	68
106	Phytolith transport in soil: A field study using fluorescent labelling. *Geoderma*, **2010**, 157, 27-36	6.7	68
105	Description of Simazine Transport with Rate-Limited, Two-Stage, Linear and Nonlinear Sorption. *Water Resources Research*, **1995**, 31, 811-822	5.4	63

104	Nonsingular Sorption of Organic Compounds in Soil: The Role of Slow Kinetics. *Journal of Environmental Quality*, **2000**, 29, 917-925	3.4	61
103	Catchments as reactors: a comprehensive approach for water fluxes and solute turnover. *Environmental Earth Sciences*, **2013**, 69, 317-333	2.9	59
102	Micro-scale modelling of carbon turnover driven by microbial succession at a biogeochemical interface. *Soil Biology and Biochemistry*, **2008**, 40, 864-878	7.5	54
101	A regional-scale study on the crop uptake of cadmium from sandy soils: measurement and modeling. *Journal of Environmental Quality*, **2005**, 34, 1026-35	3.4	54
100	Nonequilibrium Sorption of Dimethylphthalate Compatibility of Batch and Column Techniques. *Soil Science Society of America Journal*, **2001**, 65, 102-111	2.5	54
99	Estimation of heavy metal sorption in German soils using artificial neural networks. *Geoderma*, **2009**, 152, 104-112	6.7	51
98	Phytolith transport in sandy sediment: Experiments and modeling. *Geoderma*, **2009**, 151, 168-178	6.7	42
97	Monitoring and risk assessment of pesticides in a tropical river of an agricultural watershed in northern Thailand. *Environmental Monitoring and Assessment*, **2014**, 186, 1083-99	3.1	38
96	Multi-wheat-model ensemble responses to interannual climate variability. *Environmental Modelling and Software*, **2016**, 81, 86-101	5.2	38
95	Uncertainty of wheat water use: Simulated patterns and sensitivity to temperature and CO2. *Field Crops Research*, **2016**, 198, 80-92	5.5	36
94	Regulation of bacterial and fungal MCPA degradation at the soil Litter interface. *Soil Biology and Biochemistry*, **2010**, 42, 1879-1887	7.5	36
93	Incorporating dynamic root growth enhances the performance of Noah-MP at two contrasting winter wheat field sites. *Water Resources Research*, **2014**, 50, 1337-1356	5.4	35
92	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	5.4	35
91	Effect of Air-Drying on Sorption Kinetics of the Herbicide Chlortoluron in Soil. *Journal of Environmental Quality*, **1999**, 28, 1154-1161	3.4	35
90	Fate of pesticides in combined paddy rice-fish pond farming systems in northern Vietnam. *Journal of Environmental Quality*, **2012**, 41, 515-25	3.4	30
89	Heavy Metal Displacement in a Sandy Soil at the Field Scale: II. Modeling. *Journal of Environmental Quality*, **1997**, 26, 56-62	3.4	30
88	Rate-limited sorption of simazine in saturated soil columns. *Journal of Contaminant Hydrology*, **1997**, 25, 219-234	3.9	30
87	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	5.7	28

86	Long-term sorption and desorption of sulfadiazine in soil: experiments and modeling. *Journal of Environmental Quality*, **2010**, 39, 654-66	3.4	28
85	Loss of pesticides from a litchi orchard to an adjacent stream in northern Thailand. *European Journal of Soil Science*, **2007**, 59, 71-81	3.4	28
84	Modeling the environmental fate of cadmium in a large wastewater irrigation area. *Journal of Environmental Quality*, **2006**, 35, 1702-14	3.4	28
83	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	3	27
82	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	10.2	26
81	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	3.1	25
80	Transport and biodegradation of toluene in unsaturated soil. *Journal of Contaminant Hydrology*, **1994**, 17, 111-127	3.9	25
79	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	5.8	24
78	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	2.9	24
77	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	5.5	24
76	Phytolith transport in soil: a laboratory study on intact soil cores. *European Journal of Soil Science*, **2010**, 61, 445-455	3.4	24
75	Capability and limitations of first-order and diffusion approaches to describe long-term sorption of chlortoluron in soil. *Journal of Contaminant Hydrology*, **2006**, 86, 279-98	3.9	24
74	The role of <i>Phragmites</i> in the CH₄ and CO₂ fluxes in a minerotrophic peatland in southwest Germany. *Biogeosciences*, **2016**, 13, 6107-6119	4.6	24
73	Improved Nitrogen Management for an Intensive Winter Wheat/Summer Maize Double-cropping System. *Soil Science Society of America Journal*, **2012**, 76, 286-297	2.5	23
72	Energy balance closure on a winter wheat stand: comparing the eddy covariance technique with the soil water balance method. *Biogeosciences*, **2016**, 13, 63-75	4.6	23
71	Nitrous oxide emissions from mineral and organic soils of a Norway spruce stand in SouthWest Germany. *Atmospheric Environment*, **2007**, 41, 1681-1688	5.3	20
70	Role of Carbon Substrates Added in the Transformation of Surplus Nitrate to Organic Nitrogen in a Calcareous Soil. *Pedosphere*, **2013**, 23, 205-212	5	19
69	Micro-trench experiments on interflow and lateral pesticide transport in a sloped soil in northern Thailand. *Journal of Environmental Quality*, **2007**, 36, 1205-16	3.4	19

68	Modelling nitrous oxide emission from water-logged soils of a spruce forest ecosystem using the biogeochemical model Wetland-DNDC. *Biogeochemistry*, **2007**, 86, 287-299	3.8	18
67	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	4.6	18
66	A Modular Framework for Modeling Unsaturated Soil Hydraulic Properties Over the Full Moisture Range. *Water Resources Research*, **2019**, 55, 4994	5.4	17
65	Succession of bacterial and fungal 4-chloro-2-methylphenoxyacetic acid degraders at the soil-litter interface. *FEMS Microbiology Ecology*, **2013**, 86, 85-100	4.3	17
64	Equifinality, sloppiness, and emergent structures of mechanistic soil biogeochemical models. *Environmental Modelling and Software*, **2019**, 122, 104518	5.2	15
63	Micro-scale modeling of pesticide degradation coupled to carbon turnover in the detritusphere: model description and sensitivity analysis. *Biogeochemistry*, **2014**, 117, 185-204	3.8	15
62	Cadmium leaching from micro-lysimeters planted with the hyperaccumulator Thlaspi caerulescens: experimental findings and modeling. *Journal of Environmental Quality*, **2006**, 35, 2055-65	3.4	15
61	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	4.6	14
60	Imidacloprid concentrations in paddy rice fields in northern Vietnam: measurement and probabilistic modeling. *Paddy and Water Environment*, **2015**, 13, 191-203	1.6	14
59	Spatial and Temporal Variability of Soil Water Content in Two Regions of Southwest Germany during a Three-Year Observation Period. *Vadose Zone Journal*, **2016**, 15, vzj2015.11.0143	2.7	14
58	Pesticide-contaminated feeds in integrated grass carp aquaculture: toxicology and bioaccumulation. *Diseases of Aquatic Organisms*, **2014**, 108, 137-47	1.7	14
57	Partitioning of ecosystem respiration in winter wheat and silage maize□modeling seasonal temperature effects. *Agriculture, Ecosystems and Environment*, **2016**, 224, 131-144	5.7	14
56	Modeling coupled pesticide degradation and organic matter turnover: From gene abundance to process rates. *Soil Biology and Biochemistry*, **2016**, 103, 349-364	7.5	14
55	Carbon fluxes and budgets of intensive crop rotations in two regional climates of southwest Germany. *Agriculture, Ecosystems and Environment*, **2019**, 276, 31-46	5.7	13
54	Pesticide transport pathways from a sloped Litchi orchard to an adjacent tropical stream as identified by hydrograph separation. *Journal of Environmental Quality*, **2012**, 41, 1315-23	3.4	13
53	Immobilization of heavy metals in soils amended by nanoparticulate zeolitic tuff: Sorption-desorption of cadmium. *Journal of Plant Nutrition and Soil Science*, **2010**, 173, 852-860	2.3	13
52	Shortcomings in the Commercialized Barometric Process Separation Measuring System. *Soil Science Society of America Journal*, **2008**, 72, 135-142	2.5	13
51	Improving the energy balance closure over a winter wheat field by accounting for minor storage terms. *Agricultural and Forest Meteorology*, **2019**, 264, 283-296	5.8	13

50	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	3.3	12
49	Modelling the fate of pesticides in paddy rice-fish pond farming systems in northern Vietnam. *Pest Management Science*, **2014**, 70, 70-9	4.6	12
48	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	5.8	11
47	Modelling spatial variability and uncertainty of cadmium leaching to groundwater in an urban region. *Journal of Hydrology*, **2009**, 369, 274-283	6	11
46	Field-Scale Study of Chlortoluron Movement in a Sandy Soil over Winter: II. Modeling. *Journal of Environmental Quality*, **1999**, 28, 1824-1831	3.4	11
45	How well do crop modeling groups predict wheat phenology, given calibration data from the target population?. *European Journal of Agronomy*, **2021**, 124, 126195	5	11
44	Field-Scale Study of Chlortoluron Movement in a Sandy Soil over Winter: I. Experiments. *Journal of Environmental Quality*, **1999**, 28, 1817-1823	3.4	10
43	Evidence for the importance of litter as a co-substrate for MCPA dissipation in an agricultural soil. *Environmental Science and Pollution Research*, **2016**, 23, 4164-75	5.1	9
42	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	2.3	9
41	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	2.3	9
40	N2O and CO2 emissions from South German arable soil after amendment of manures and composts. *Environmental Earth Sciences*, **2016**, 75, 1	2.9	8
39	Nanoparticulate Zeolitic Tuff for Immobilizing Heavy Metals in Soil: Preparation and Characterization. *Water, Air, and Soil Pollution*, **2009**, 203, 155-168	2.6	8
38	On field-scale dispersion of strongly sorbing solutes in soils. *Water Resources Research*, **1998**, 34, 2769-2778	3.4	8
37	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, 04014072	1.1	7
36	Spatial Control of Carbon Dynamics in Soil by Microbial Decomposer Communities. *Frontiers in Environmental Science*, **2020**, 8,	4.8	7
35	Persistence and Leaching of Two Pesticides in a Paddy Soil in Northern Vietnam. *Clean - Soil, Air, Water*, **2016**, 44, 858-866	1.6	7
34	Simulating pesticide transport from a sloped tropical soil to an adjacent stream. *Journal of Environmental Quality*, **2010**, 39, 353-64	3.4	7
33	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	7

32	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	2.3	7
31	How well do crop modeling groups predict wheat phenology, given calibration data from the target population?		7
30	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	3.7	5
29	Quantifying the Influence of Uncertainty and Variability on Groundwater Risk Assessment for Trace Elements. *Vadose Zone Journal*, **2007**, 6, 668-678	2.7	5
28	Multi-model evaluation of phenology prediction for wheat in Australia. *Agricultural and Forest Meteorology*, **2021**, 298-299, 108289	5.8	5
27	Mineral-Ecological Cropping Systems—A New Approach to Improve Ecosystem Services by Farming without Chemical Synthetic Plant Protection. *Agronomy*, **2021**, 11, 1710	3.6	5
26	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	1.5	4
25	Analytical expressions for noncapillary soil water retention based on popular capillary retention models. *Vadose Zone Journal*, **2020**, 19, e20042	2.7	4
24	MODELING CA/K EXCHANGE KINETICS ON MONTMORILLONITE AND VERMICULITE. *Soil Science*, **1998**, 163, 382-393	0.9	4
23	Contribution of plant-induced pressurized flow to CH emission from a Phragmites fen. *Scientific Reports*, **2020**, 10, 12304	4.9	4
22	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	7.5	4
21	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	4.6	3
20	Plant litter enhances degradation of the herbicide MCPA and increases formation of biogenic non-extractable residues in soil. *Environment International*, **2020**, 142, 105867	12.9	3
19	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	2.3	3
18	Gene-Centric Model Approaches for Accurate Prediction of Pesticide Biodegradation in Soils. *Environmental Science & Technology*, **2020**, 54, 13638-13650	10.3	3
17	Direct Measurement of CO2 Retention in Arable Soils with pH Above 6.5 During Barometric Process Separation Incubation. *Pedosphere*, **2018**, 28, 726-738	5	3
16	The chaos in calibrating crop models: Lessons learned from a multi-model calibration exercise. *Environmental Modelling and Software*, **2021**, 145, 105206	5.2	3
15	Estimating Freundlich isotherm parameters of heavy metals from multiple batch extraction tests using a Bayesian approach. *Geoderma*, **2012**, 173-174, 42-49	6.7	2

14	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	6.1	2
13	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	2.3	2
12	Ion transport through unsaturated soils: field experiments and regional simulations. *European Journal of Soil Science*, **2002**, 53, 57-70	3.4	2
11	Modeling concentration-dependent sorption-desorption hysteresis of atrazine in a loam soil. *Journal of Environmental Quality*, **2011**, 40, 538-47	3.4	2
10	RIMAX-Verbundprojekt Entwicklung eines integrativen Bewirtschaftungskonzepts f Trockenbecken und Polder zur Hochwasserr khaltung. *Environmental Sciences Europe*, **2006**, 18, 67		1
9	Energy balance closure on a winter wheat stand: comparing the eddy covariance technique with the soil water balance method		1
8	Multi-model evaluation of phenology prediction for wheat in Australia		1
7	The chaos in calibrating crop models		1
6	Climate change impact on wheat and maize growth in Ethiopia: A multi-model uncertainty analysis.. *PLoS ONE*, **2022**, 17, e0262951	3.7	0
5	Integrated assessment of regional approaches for biodiversity offsetting in urban-rural areas A future based case study from Germany using arable land as an example. *Land Use Policy*, **2022**, 117, 106085	5.6	0
4	A Bayesian sequential updating approach to predict phenology of silage maize. *Biogeosciences*, **2022**, 19, 2187-2209	4.6	0
3	Transportformen **2004**, 1-24		
2	The Environmental Fate of Agro-Chemicals: A Case Study in the Mae Sa Noi Watershed **2007**, 54-67		
1	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	5	