Sabine Grunwald

List of Publications by Year
in descending order

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120 papers	6,507 citations	81900 39 h-index	66911 78 g-index
124 all docs	124 docs citations	124 times ranked	6132 citing authors

#	Article	IF	Citations
1	A global sensitivity analysis tool for the parameters of multi-variable catchment models. Journal of Hydrology, 2006, 324, 10-23.	5.4	980
2	A global spectral library to characterize the world's soil. Earth-Science Reviews, 2016, 155, 198-230.	9.1	546
3	Comparison of multivariate methods for inferential modeling of soil carbon using visible/near-infrared spectra. Geoderma, 2008, 146, 14-25.	5.1	316
4	Multi-criteria characterization of recent digital soil mapping and modeling approaches. Geoderma, 2009, 152, 195-207.	5.1	270
5	Digital Soil Mapping and Modeling at Continental Scales: Finding Solutions for Global Issues. Soil Science Society of America Journal, 2011, 75, 1201-1213.	2.2	233
6	Soil Security: Solving the Global Soil Crisis. Global Policy, 2013, 4, 434-441.	1.7	219
7	Digital mapping of soil carbon fractions with machine learning. Geoderma, 2019, 339, 40-58.	5.1	178
8	A systematic study on the application of scatter-corrective and spectral-derivative preprocessing for multivariate prediction of soil organic carbon by Vis-NIR spectra. Geoderma, 2018, 314, 262-274.	5.1	168
9	Uncertainty in the model parameters due to spatial variability of rainfall. Journal of Hydrology, 1999, 220, 48-61.	5.4	156
10	Development of an environmental virtual field laboratory. Computers and Education, 2005, 45, 21-34.	8.3	139
11	Regression kriging as a workhorse in the digital soil mapper's toolbox. Geoderma, 2018, 326, 22-41.	5.1	127
12	Modelling soil carbon fractions with visible near-infrared (VNIR) and mid-infrared (MIR) spectroscopy. Geoderma, 2015, 239-240, 229-239.	5.1	116
13	Prediction of Soil Physical and Chemical Properties by Visible and Near-Infrared Diffuse Reflectance Spectroscopy in the Central Amazon. Remote Sensing, 2017, 9, 293.	4.0	106
14	Modeling of Soil Organic Carbon Fractions Using Visibleâ€“Nearâ€Infrared Spectroscopy. Soil Science Society of America Journal, 2009, 73, 176-184.	2.2	102
15	Holistic environmental soil-landscape modeling of soil organic carbon. Environmental Modelling and Software, 2014, 57, 202-215.	4.5	100
16	The Brazilian Soil Spectral Library (BSSL): A general view, application and challenges. Geoderma, 2019, 354, 113793.	5.1	100
17	Interaction effects of climate and land use/land cover change on soil organic carbon sequestration. Science of the Total Environment, 2014, 493, 974-982.	8.0	99
18	Soil total carbon analysis in Hawaiian soils with visible, near-infrared and mid-infrared diffuse reflectance spectroscopy. Geoderma, 2012, 189-190, 312-320.	5.1	90

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19	Spectroscopic Models of Soil Organic Carbon in Florida, USA. Journal of Environmental Quality, 2010, 39, 923-934.	2.0	88
20	Comparison of soil reflectance spectra and calibration models obtained using multiple spectrometers. Geoderma, 2011, 161, 202-211.	5.1	84
21	Regional modelling of soil carbon at multiple depths within a subtropical watershed. Geoderma, 2010, 156, 326-336.	5.1	83
22	Carbon Mineralization and Labile Organic Carbon Pools in the Sandy Soils of a North Florida Watershed. Ecosystems, 2009, 12, 672-685.	3.4	76
23	Linking complex forest fuel structure and fire behaviour at fine scales. International Journal of Wildland Fire, 2012, 21, 882.	2.4	75
24	Human-Soil Relations are Changing Rapidly: Proposals from SSSA's Cross-Divisional Soil Change Working Group. Soil Science Society of America Journal, 2011, 75, 2079-2084.	2.2	70
25	Assessment of the Spatial Distribution of Soil Properties in a Northern Everglades Marsh. Journal of Environmental Quality, 2006, 35, 938-949.	2.0	69
26	Modeling Soil Organic Carbon at Regional Scale by Combining Multi-Spectral Images with Laboratory Spectra. PLoS ONE, 2015, 10, e0142295.	2.5	69
27	Spatial Distribution of Soil Properties in Water Conservation Area 3 of the Everglades. Soil Science Society of America Journal, 2006, 70, 1662-1676.	2.2	65
28	Fusion of Soil and Remote Sensing Data to Model Soil Properties. Advances in Agronomy, 2015, 131, 1-109.	5.2	65
29	Comparison and detection of total and available soil carbon fractions using visible/near infrared diffuse reflectance spectroscopy. Geoderma, 2011, 164, 22-32.	5.1	63
30	Two preprocessing techniques to reduce model covariables in soil property predictions by Vis-NIR spectroscopy. Soil and Tillage Research, 2017, 172, 59-68.	5.6	62
31	Estimating the value of ecosystem services in a mixed-use watershed: A choice experiment approach. Ecosystem Services, 2017, 23, 228-237.	5.4	55
32	A WebGIS and geodatabase for Florida's wetlands. Computers and Electronics in Agriculture, 2005, 47, 69-75.	7.7	53
33	GIS-BASED HYDROLOGIC MODELING IN THE SANDUSKY WATERSHED USING SWAT. Transactions of the American Society of Agricultural Engineers, 2005, 48, 169-180.	0.9	52
34	Incorporation of satellite remote sensing pan-sharpened imagery into digital soil prediction and mapping models to characterize soil property variability in small agricultural fields. ISPRS Journal of Photogrammetry and Remote Sensing, 2017, 123, 1-19.	11.1	47
35	Incorporation of spectral data into multivariate geostatistical models to map soil phosphorus variability in a Florida wetland. Geoderma, 2007, 140, 428-443.	5.1	46
36	Integrating spectral indices into prediction models of soil phosphorus in a subtropical wetland. Remote Sensing of Environment, 2009, 113, 2389-2402.	11.0	46

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37	Spatial variability, distribution and uncertainty assessment of soil phosphorus in a south Florida wetland. Environmetrics, 2004, 15, 811-825.	1.4	42
38	Fit-for-purpose analysis of uncertainty using split-sampling evaluations. Hydrological Sciences Journal, 2008, 53, 1090-1103.	2.6	42
39	Associations between soil carbon and ecological landscape variables at escalating spatial scales in Florida, USA. Landscape Ecology, 2012, 27, 355-367.	4.2	41
40	Estimating soil total nitrogen in smallholder farm settings using remote sensing spectral indices and regression kriging. Catena, 2018, 163, 111-122.	5.0	41
41	CHARACTERIZATION OF THE SPATIAL DISTRIBUTION OF SOIL PROPERTIES IN WATER CONSERVATION AREA 2A, EVERGLADES, FLORIDA. Soil Science, 2007, 172, 149-166.	0.9	40
42	Recent Changes in Soil Total Phosphorus in the Everglades: Water Conservation Area 3. Environmental Monitoring and Assessment, 2007, 129, 379-395.	2.7	38
43	Spatial Patterns of Labile Forms of Phosphorus in a Subtropical Wetland. Journal of Environmental Quality, 2006, 35, 378-389.	2.0	37
44	Digital Soil Mapping. , 2012, , 665-709.		35
45	Modeling of the spatial variability of biogeochemical soil properties in a freshwater ecosystem. Ecological Modelling, 2007, 201, 521-535.	2.5	34
46	Spatiotemporal modeling of soil organic carbon stocks across a subtropical region. Science of the Total Environment, 2013, 461-462, 149-157.	8.0	34
47	GIS-BASED WATER QUALITY MODELING IN THE SANDUSKY WATERSHED, OHIO, USA. Journal of the American Water Resources Association, 2006, 42, 957-973.	2.4	33
48	Longâ€term Water Quality Trends after Implementing Best Management Practices in South Florida. Journal of Environmental Quality, 2009, 38, 1683-1693.	2.0	32
49	Spatial distributions and eco-partitioning of soil biogeochemical properties in the Everglades National Park. Environmental Monitoring and Assessment, 2011, 183, 395-408.	2.7	32
50	Inferences from fluctuations in the local variogram about the assumption of stationarity in the variance. Geoderma, 2008, 143, 123-132.	5.1	31
51	Evaluating the effect of remote sensing image spatial resolution on soil exchangeable potassium prediction models in smallholder farm settings. Journal of Environmental Management, 2017, 200, 423-433.	7.8	30
52	Peak functions for modeling high resolution soil profile data. Geoderma, 2011, 166, 74-83.	5.1	29
53	Effects of Subsetting by Carbon Content, Soil Order, and Spectral Classification on Prediction of Soil Total Carbon with Diffuse Reflectance Spectroscopy. Applied and Environmental Soil Science, 2012, 2012, 1-14.	1.7	29
54	Effects of image pansharpening on soil total nitrogen prediction models in South India. Geoderma, 2018, 320, 52-66.	5.1	29

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55	Ontology-based simulation in agricultural systems modeling. Agricultural Systems, 2010, 103, 463-477.	6.1	27
56	Total and available soil carbon fractions under the perennial grass Cynodon dactylon (L.) Pers and the bioenergy crop ArundoÂdonax L.. Biomass and Bioenergy, 2012, 41, 122-130.	5.7	27
57	Upscaling of Dynamic Soil Organic Carbon Pools in a Northâ€Central Florida Watershed. Soil Science Society of America Journal, 2010, 74, 870-879.	2.2	26
58	The Importance of Self-Reflection and Awareness for Human Development in Hard Times. Research in Human Development, 2018, 15, 187-199.	1.3	26
59	When does stratification of a subtropical soil spectral library improve predictions of soil organic carbon content?. Science of the Total Environment, 2020, 737, 139895.	8.0	26
60	Temporal trajectories of phosphorus and pedo-patterns mapped in Water Conservation Area 2, Everglades, Florida, USA. Geoderma, 2008, 146, 1-13.	5.1	25
61	Tree-based modeling of complex interactions of phosphorus loadings and environmental factors. Science of the Total Environment, 2009, 407, 3772-3783.	8.0	25
62	Assessing uncertainty in soil organic carbon modeling across a highly heterogeneous landscape. Geoderma, 2015, 251-252, 105-116.	5.1	25
63	Assessment of Carbon Stocks in the Topsoil Using Random Forest and Remote Sensing Images. Journal of Environmental Quality, 2016, 45, 1910-1918.	2.0	23
64	Soil Phosphorus and Nitrogen Predictions Across Spatial Escalating Scales in an Aquatic Ecosystem Using Remote Sensing Images. IEEE Transactions on Geoscience and Remote Sensing, 2014, 52, 6724-6737.	6.3	21
65	Regional hybrid geospatial modeling of soil nitrateâ€“nitrogen in the Santa Fe River Watershed. Geoderma, 2006, 135, 233-247.	5.1	20
66	Multiâ€scale Modeling of Soil Series Using Remote Sensing in a Wetland Ecosystem. Soil Science Society of America Journal, 2012, 76, 2327-2341.	2.2	20
67	Overview of the U.S. Rapid Carbon Assessment Project: Sampling Design, Initial Summary and Uncertainty Estimates. , 2014, , 95-104.		19
68	Incorporation of Auxiliary Information in the Geostatistical Simulation of Soil Nitrate Nitrogen. Vadose Zone Journal, 2006, 5, 391-404.	2.2	18
69	Current State of Digital Soil Mapping and What Is Next. , 2010, , 3-12.		18
70	New Soil Index Development and Integration with Econometric Theory. Soil Science Society of America Journal, 2018, 82, 1017-1032.	2.2	16
71	Environmental covariates improve the spectral predictions of organic carbon in subtropical soils in southern Brazil. Geoderma, 2021, 393, 114981.	5.1	16
72	Influence of the spatial extent and resolution of input data on soil carbon models in Florida, USA. Journal of Geophysical Research, 2012, 117, .	3.3	15

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73	Land use, land use change and soil carbon sequestration in the St. Johns River Basin, Florida, USA. Geoderma Regional, 2016, 7, 19-28.	2.1	15
74	Evaluation of calibration subsetting and new chemometric methods on the spectral prediction of key soil properties in a dataâ€limited environment. European Journal of Soil Science, 2019, 70, 107-126.	3.9	15
75	Examining the Spatial Distribution of Flower Thrips in Southern Highbush Blueberries by Utilizing Geostatistical Methods. Environmental Entomology, 2011, 40, 893-903.	1.4	13
76	Soil nitrate-nitrogen in forested versus non-forested ecosystems in a mixed-use watershed. Geoderma, 2008, 148, 220-231.	5.1	12
77	Ontology-based simulation of water flow in organic soils applied to Florida sugarcane. Agricultural Water Management, 2010, 97, 112-122.	5.6	12
78	Development and Update Process of VNIR-Based Models Built to Predict Soil Organic Carbon. Soil Science Society of America Journal, 2014, 78, 903-913.	2.2	12
79	Transferability and Scalability of Soil Total Carbon Prediction Models in Florida, USA. Pedosphere, 2018, 28, 856-872.	4.0	12
80	Accounting for two-billion tons of stabilized soil carbon. Science of the Total Environment, 2020, 703, 134615.	8.0	12
81	Integrating New Perspectives to Address Global Soil Security: Ideas from Integral Ecology. Progress in Soil Science, 2017, , 319-329.	0.8	11
82	Soil depth prediction by digital soil mapping and its impact in pine forestry productivity in South Brazil. Forest Ecology and Management, 2021, 488, 118983.	3.2	11
83	The Brazilian Soil Spectral Service (BraSpecS): A User-Friendly System for Global Soil Spectra Communication. Remote Sensing, 2022, 14, 740.	4.0	11
84	Predicting Soil Properties and Interpreting Vis-NIR Models from across Continental United States. Sensors, 2022, 22, 3187.	3.8	11
85	Spatial Behavior of Phosphorus and Nitrogen in a Subtropical Wetland. Soil Science Society of America Journal, 2008, 72, 1174-1183.	2.2	9
86	Scale-dependent variability of soil organic carbon coupled to land use and land cover. Soil and Tillage Research, 2016, 160, 101-109.	5.6	9
87	Sensitivity assessment of metafrontier data envelopment analysis for soil carbon sequestration efficiency. Ecological Indicators, 2021, 125, 107602.	6.3	8
88	The Meta Soil Model: An Integrative Multi-model Framework for Soil Security. Progress in Soil Science, 2017, , 305-317.	0.8	8
89	Loblolly and slash pine control organic carbon in soil aggregates and carbon mineralization. Forest Ecology and Management, 2012, 263, 1-8.	3.2	6
90	Land Use Influence on Carbon, Nitrogen, and Phosphorus in Size Fractions of Sandy Surface Soils. Soil Science, 2013, 178, 654-661.	0.9	6

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91	Semiparametric regression models for spatial prediction and uncertainty quantification of soil attributes. Stochastic Environmental Research and Risk Assessment, 2017, 31, 2691-2703.	4.0	6
92	Integrative environmental modeling of soil carbon fractions based on a new latent variable model approach. Science of the Total Environment, 2020, 711, 134566.	8.0	6
93	Developmental History of Soil Concepts from a Scientific Perspective. Applied Sciences (Switzerland), 2021, 11, 4275.	2.5	6
94	New Indication Method Using Pedo-Econometric Approach. Data Envelopment Analysis Journal, 2019, 4, 207-241.	0.6	6
95	Combining Proximal and Penetrating Soil Electrical Conductivity Sensors for High-Resolution Digital Soil Mapping. , 2010, , 233-243.		5
96	Effect of Mississippi River discharge and local hydrological variables on salinity of nearby estuaries using a machine learning algorithm. Estuarine, Coastal and Shelf Science, 2021, 263, 107628.	2.1	5
97	Regional Assessment of Carbon Pool Response to Intensive Silvicultural Practices in Loblolly Pine Plantations. Forests, 2022, 13, 36.	2.1	5
98	Soil Phosphorus Landscape Models for Precision Soil Conservation. Journal of Environmental Quality, 2015, 44, 739-753.	2.0	4
99	Modeling of Phosphorus Loads in Sugarcane in a Lowâ€Relief Landscape Using Ontologyâ€based Simulation. Journal of Environmental Quality, 2010, 39, 1751-1761.	2.0	3
100	Inverse Modeling of CO2 Evolved During Laboratory Soil Incubation to Link Modeled Pools in CENTURY With Measured Soil Properties. Soil Science, 2015, 180, 28-32.	0.9	3
101	Total soil carbon assessment: linking field, lab, and landscape through VNIR modelling. Landscape Ecology, 2018, 33, 2137-2152.	4.2	3
102	Grand Challenges in Pedometrics-AI Research. Frontiers in Soil Science, 2021, 1, .	2.2	3
103	Ontology-Based Simulation Applied to Soil, Water, and Nutrient Management. Springer Optimization and Its Applications, 2009, , 209-242.	0.9	3
104	Evaluation of the Transferability of a Knowledge-Based Soil-Landscape Model. , 2010, , 165-178.		3
105	Predicting the Distribution of Naturally Occurring Phosphatic Soils across a Countywide Landscape, Florida, USA. Communications in Soil Science and Plant Analysis, 2015, 46, 1391-1410.	1.4	2
106	The Meta Soil Modelâ€"An Integrative Framework to Model Soil Carbon Across Various Ecosystems and Scales. Springer Environmental Science and Engineering, 2016, , 165-179.	0.1	2
107	Transferability and Scaling of VNIR Prediction Models for Soil Total Carbon in Florida. Springer Environmental Science and Engineering, 2016, , 259-273.	0.1	2
108	Emergence of the Pedo-Econometric Approach. Frontiers in Soil Science, 2021, 1, .	2.2	2

#	ARTICLE	IF	CITATIONS
109	Part IIIâ€"Integration of data to work towards a Meta Soil Carbon Model in the U.S.. , 2014, , 239-244.		2
110	Holistic aboveground ecological productivity efficiency modeling using data envelopment analysis in the southeastern U.S. Science of the Total Environment, 2022, 824, 153802.	8.0	2
111	AUTOMATIC CALIBRATION OF A HYDROLOGIC MODEL FOR SIMULATING GROUNDWATER TABLE FLUCTUATIONS ON FARMS IN THE EVERGLADES AGRICULTURAL AREA OF SOUTH FLORIDA. Irrigation and Drainage, 2014, 63, 538-549.	1.7	1
112	Examining the Relationship between Flower Thrips (Thysanoptera: Thripidae) Spatial Distribution and Blueberry (Ericales: Ericaceae) Flower Density. Florida Entomologist, 2016, 99, 128-129.	0.5	1
113	Estimation of the Actual and Attainable Terrestrial Carbon Budget. Springer Environmental Science and Engineering, 2016, , 153-164.	0.1	1
114	Spatial downscaling of soil prediction models based on weighted generalized additive models in smallholder farm settings. Environmental Monitoring and Assessment, 2017, 189, 502.	2.7	1
115	Embodied Liberation in Participatory Theory and Buddhist Modernism VajrayÄna. Journal of Dharma Studies, 2021, 4, 159-177.	0.2	1
116	Disaggregation and scientific visualization of earthscapes considering trends and spatial dependence structures. New Journal of Physics, 2008, 10, 125011.	2.9	0
117	Spatial Assessment of Soil Organic Carbon Using Bayesian Maximum Entropy and Partial Least Square Regression Model. Springer Environmental Science and Engineering, 2016, , 141-152.	0.1	0
118	Fusing environmental variables into soil spectroscopy modeling using a novel two-step regression method. IOP Conference Series: Earth and Environmental Science, 2019, 393, 012100.	0.3	0
119	Applying the Meta Soil Model: The Complexities of Soil and Water Security in a Permanent Protection Area in Brazil. Progress in Soil Science, 2017, , 331-340.	0.8	0
120	Modeling paddy field soil conditions in East Java, Indonesia. Soil Security, 2021, 5, 100025.	2.3	0