Thorsten Behrens

List of Publications by Year
in descending order

42 papers	3,615 citations	186265 28 h-index	289244 40 g-index
42 all docs	42 docs citations	42 times ranked	3231 citing authors

#	Article	IF	Citations
1	Using data mining to model and interpret soil diffuse reflectance spectra. Geoderma, 2010, 158, 46-54.	5.1	912
2	Soil organic carbon concentrations and stocks on Barro Colorado Island â€" Digital soil mapping using Random Forests analysis. Geoderma, 2008, 146, 102-113.	5.1	511
3	Multi-scale digital terrain analysis and feature selection for digital soil mapping. Geoderma, 2010, 155, 175-185.	5.1	236
4	Digital soil mapping using artificial neural networks. Journal of Plant Nutrition and Soil Science, 2005, 168, 21-33.	1.9	185
5	An approach to computing topographic wetness index based on maximum downslope gradient. Precision Agriculture, 2011, 12, 32-43.	6.0	133
6	Improving the Spatial Prediction of Soil Organic Carbon Content in Two Contrasting Climatic Regions by Stacking Machine Learning Models and Rescanning Covariate Space. Remote Sensing, 2020, 12, 1095.	4.0	109
7	Predictive soil mapping with limited sample data. European Journal of Soil Science, 2015, 66, 535-547.	3.9	94
8	Continental-scale soil carbon composition and vulnerability modulated by regional environmental controls. Nature Geoscience, 2019, 12, 547-552.	12.9	92
9	Spatial modelling with Euclidean distance fields and machine learning. European Journal of Soil Science, 2018, 69, 757-770.	3.9	91
10	Hyper-scale digital soil mapping and soil formation analysis. Geoderma, 2014, 213, 578-588.	5.1	90
11	Sampling optimal calibration sets in soil infrared spectroscopy. Geoderma, 2014, 226-227, 140-150.	5.1	89
12	Multi-scale digital soil mapping with deep learning. Scientific Reports, 2018, 8, 15244.	3.3	85
13	Digital soil mapping in Germanyâ€"a review. Journal of Plant Nutrition and Soil Science, 2006, 169, 434-443.	1.9	82
14	The ConMap approach for terrainâ€based digital soil mapping. European Journal of Soil Science, 2010, 61, 133-143.	3.9	62
15	Multi-task convolutional neural networks outperformed random forest for mapping soil particle size fractions in central Iran. Geoderma, 2020, 376, 114552.	5.1	59
16	Instance selection and classification tree analysis for large spatial datasets in digital soil mapping. Geoderma, 2008, 146, 138-146.	5.1	58
17	Improving the spatial prediction of soil salinity in arid regions using wavelet transformation and support vector regression models. Geoderma, 2021, 383, 114793.	5.1	58
18	Assessing the USLE crop and management factor C for soil erosion modeling in a large mountainous watershed in Central China. Journal of Earth Science (Wuhan, China), 2010, 21, 835-845.	3.2	53

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19	Spatial and Temporal Dynamics of Hillslopeâ€Scale Soil Moisture Patterns: Characteristic States and Transition Mechanisms. Vadose Zone Journal, 2015, 14, 1-16.	2.2	51
20	Updating a national soil classification with spectroscopic predictions and digital soil mapping. Catena, 2018, 164, 125-134.	5.0	47
21	Multiscale contextual spatial modelling with the Gaussian scale space. Geoderma, 2018, 310, 128-137.	5.1	46
22	Degradation of cultivated bench terraces in the Three Gorges Area: Field mapping and data mining. Ecological Indicators, 2013, 34, 478-493.	6.3	44
23	Synthetic resampling strategies and machine learning for digital soil mapping in Iran. European Journal of Soil Science, 2020, 71, 352-368.	3.9	42
24	Incorporating limited field operability and legacy soil samples in a hypercube sampling design for digital soil mapping. Journal of Plant Nutrition and Soil Science, 2016, 179, 499-509.	1.9	40
25	Spatial Modeling of a Soil Fertility Index using Visibleâ€“Nearâ€Infrared Spectra and Terrain Attributes. Soil Science Society of America Journal, 2010, 74, 1293-1300.	2.2	38
26	A comparison of calibration sampling schemes at the field scale. Geoderma, 2014, 232-234, 243-256.	5.1	38
27	Predicting reference soil groups using legacy data: A data pruning and Random Forest approach for tropical environment (Dano catchment, Burkina Faso). Scientific Reports, 2018, 8, 9959.	3.3	38
28	Uncertainty-guided sampling to improve digital soil maps. Catena, 2017, 153, 30-38.	5.0	33
29	Chapter 25 A Comparison of Data-Mining Techniques in Predictive Soil Mapping. Developments in Soil Science, 2006, , 353-617.	0.5	24
30	Applicability of groundâ€penetrating radar as a tool for nondestructive soilâ€depth mapping on Pleistocene periglacial slope deposits. Journal of Plant Nutrition and Soil Science, 2010, 173, 173-184.	1.9	23
31	A method to generate soilscapes from soil maps. Journal of Plant Nutrition and Soil Science, 2010, 173, 163-172.	1.9	23
32	Test of statistical means for the extrapolation of soil depth point information using overlays of spatial environmental data and bootstrapping techniques. Hydrological Processes, 2009, 23, 3017-3029.	2.6	20
33	Comparison of catchment scale 3D and 2.5D modelling of soil organic carbon stocks in Jiangxi Province, PR China. PLoS ONE, 2019, 14, e0220881.	2.5	20
34	3D mapping of soil organic carbon content and soil moisture with multiple geophysical sensors and machine learning. Vadose Zone Journal, 2020, 19, e20062.	2.2	18
35	On the interpretability of predictors in spatial data science: the information horizon. Scientific Reports, 2020, 10, 16737.	3.3	17
36	Analysis on pedodiversity and spatial subset representativity-the German soil map 1:1,000,000. Journal of Plant Nutrition and Soil Science, 2009, 172, 91-100.	1.9	13

#	ARTICLE	IF	CITATIONS
37	The relevant range of scales for multi-scale contextual spatial modelling. Scientific Reports, 2019, 9, 14800.	3.3	13
38	Teleconnections in spatial modelling. Geoderma, 2019, 354, 113854.	5.1	9
39	An Approach to Removing Uncertainties in Nominal Environmental Covariates and Soil Class Maps. , 2008, , 213-224.		7
40	iSOIL: An EU Project to Integrate Geophysics, Digital Soil Mapping, and Soil Science. , 2010, , 103-110.		5
41	Digital soil mapping in Germanyâ€"a review. Journal of Plant Nutrition and Soil Science, 2007, 170, 181-181.	1.9	4
42	Contextual spatial modelling in the horizontal and vertical domains. Scientific Reports, 2022, 12, .	3.3	3