

Sã©rgio Henrique Godinho Silva

List of Publications by Year in descending order

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89
papers

1,624
citations

304743

22
h-index

361022

35
g-index

89
all docs

89
docs citations

89
times ranked

937
citing authors

#	ARTICLE	IF	CITATIONS
1	The Brazilian Soil Spectral Library (BSSL): A general view, application and challenges. <i>Geoderma</i> , 2019, 354, 113793.	5.1	100
2	Multiple linear regression and random forest to predict and map soil properties using data from portable X-ray fluorescence spectrometer (pXRF). <i>Ciencia E Agrotecnologia</i> , 2017, 41, 648-664.	1.5	65
3	Object-based random forest modelling of aboveground forest biomass outperforms a pixel-based approach in a heterogeneous and mountain tropical environment. <i>International Journal of Applied Earth Observation and Geoinformation</i> , 2019, 78, 175-188.	2.8	59
4	Tracing tropical soil parent material analysis via portable X-ray fluorescence (pXRF) spectrometry in Brazilian Cerrado. <i>Geoderma</i> , 2019, 337, 718-728.	5.1	58
5	Soil horizon variation: A review. <i>Advances in Agronomy</i> , 2020, 160, 125-185.	5.2	57
6	Portable X-ray fluorescence (pXRF) applications in tropical Soil Science. <i>Ciencia E Agrotecnologia</i> , 2017, 41, 245-254.	1.5	56
7	Soil weathering analysis using a portable X-ray fluorescence (PXRF) spectrometer in an Inceptisol from the Brazilian Cerrado. <i>Applied Clay Science</i> , 2018, 162, 27-37.	5.2	53
8	Proximal Sensing and Digital Terrain Models Applied to Digital Soil Mapping and Modeling of Brazilian Latosols (Oxisols). <i>Remote Sensing</i> , 2016, 8, 614.	4.0	52
9	Soil texture prediction in tropical soils: A portable X-ray fluorescence spectrometry approach. <i>Geoderma</i> , 2020, 362, 114136.	5.1	52
10	pXRF in tropical soils: Methodology, applications, achievements and challenges. <i>Advances in Agronomy</i> , 2021, , 1-62.	5.2	47
11	Rapid soil fertility prediction using X-ray fluorescence data and machine learning algorithms. <i>Catena</i> , 2021, 197, 105003.	5.0	42
12	Soil subgroup prediction via portable X-ray fluorescence and visible near-infrared spectroscopy. <i>Geoderma</i> , 2020, 365, 114212.	5.1	40
13	Soil texture prediction using portable X-ray fluorescence spectrometry and visible near-infrared diffuse reflectance spectroscopy. <i>Geoderma</i> , 2020, 376, 114553.	5.1	38
14	Retrieving pedologist's mental model from existing soil map and comparing data mining tools for refining a larger area map under similar environmental conditions in Southeastern Brazil. <i>Geoderma</i> , 2016, 267, 65-77.	5.1	36
15	Parent material distribution mapping from tropical soils data via machine learning and portable X-ray fluorescence (pXRF) spectrometry in Brazil. <i>Geoderma</i> , 2019, 354, 113885.	5.1	36
16	Tropical soils characterization at low cost and time using portable X-ray fluorescence spectrometer (pXRF): Effects of different sample preparation methods. <i>Ciencia E Agrotecnologia</i> , 2018, 42, 80-92.	1.5	35
17	Solum depth spatial prediction comparing conventional with knowledge-based digital soil mapping approaches. <i>Scientia Agricola</i> , 2014, 71, 316-323.	1.2	32
18	Portable X-ray fluorescence (pXRF) spectrometry applied to the prediction of chemical attributes in Inceptisols under different land uses. <i>Ciencia E Agrotecnologia</i> , 2018, 42, 501-512.	1.5	32

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19	Advances in Tropical Soil Characterization via Portable X-Ray Fluorescence Spectrometry. <i>Pedosphere</i> , 2019, 29, 468-482.	4.0	30
20	Prediction of soil fertility via portable X-ray fluorescence (pXRF) spectrometry and soil texture in the Brazilian Coastal Plains. <i>Geoderma</i> , 2020, 357, 113960.	5.1	30
21	From sensor data to Munsell color system: Machine learning algorithm applied to tropical soil color classification via Nixâ,ç Pro sensor. <i>Geoderma</i> , 2020, 375, 114471.	5.1	30
22	Digital soil mapping approach based on fuzzy logic and field expert knowledge. <i>Ciencia E Agrotecnologia</i> , 2013, 37, 287-298.	1.5	26
23	Mapping soils in two watersheds using legacy data and extrapolation for similar surrounding areas. <i>Ciencia E Agrotecnologia</i> , 2016, 40, 534-546.	1.5	23
24	Drivers of Organic Carbon Stocks in Different LULC History and along Soil Depth for a 30 Years Image Time Series. <i>Remote Sensing</i> , 2021, 13, 2223.	4.0	22
25	Spatial prediction of soil properties in two contrasting physiographic regions in Brazil. <i>Scientia Agricola</i> , 2016, 73, 274-285.	1.2	21
26	Assessing models for prediction of some soil chemical properties from portable X-ray fluorescence (pXRF) spectrometry data in Brazilian Coastal Plains. <i>Geoderma</i> , 2020, 357, 113957.	5.1	21
27	A Technique for Low Cost Soil Mapping and Validation Using Expert Knowledge on a Watershed in Minas Gerais, Brazil. <i>Soil Science Society of America Journal</i> , 2014, 78, 1310-1319.	2.2	20
28	Soil type spatial prediction from Random Forest: different training datasets, transferability, accuracy and uncertainty assessment. <i>Scientia Agricola</i> , 2019, 76, 243-254.	1.2	20
29	Proximal sensor data fusion and auxiliary information for tropical soil property prediction: Soil texture. <i>Geoderma</i> , 2022, 422, 115936.	5.1	19
30	Evaluation of Conditioned Latin Hypercube Sampling as a Support for Soil Mapping and Spatial Variability of Soil Properties. <i>Soil Science Society of America Journal</i> , 2015, 79, 603-611.	2.2	18
31	Soils of the Brazilian Coastal Plains biome: prediction of chemical attributes via portable X-ray fluorescence (pXRF) spectrometry and robust prediction models. <i>Soil Research</i> , 2020, 58, 683.	1.1	18
32	Tropical Soil Toposequence Characterization via pXRF Spectrometry. <i>Soil Science Society of America Journal</i> , 2019, 83, 1153-1166.	2.2	17
33	Tropical soil pH and sorption complex prediction via portable X-ray fluorescence spectrometry. <i>Geoderma</i> , 2020, 361, 114132.	5.1	16
34	Formation and variation of a 4.5Âm deep Oxisol in southeastern Brazil. <i>Catena</i> , 2021, 206, 105492.	5.0	16
35	Synthesis of proximal sensing, terrain analysis, and parent material information for available micronutrient prediction in tropical soils. <i>Precision Agriculture</i> , 2019, 20, 746-766.	6.0	15
36	Soil quality indices as affected by longâ€term burning, irrigation, tillage, and fertility management. <i>Soil Science Society of America Journal</i> , 2021, 85, 379-395.	2.2	15

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37	Variable selection for estimating individual tree height using genetic algorithm and random forest. <i>Forest Ecology and Management</i> , 2022, 504, 119828.	3.2	14
38	Knowledge-based digital soil mapping for predicting soil properties in two representative watersheds. <i>Scientia Agricola</i> , 2018, 75, 144-153.	1.2	13
39	Proximal sensing applied to soil texture prediction and mapping in Brazil. <i>Geoderma Regional</i> , 2020, 23, e00321.	2.1	13
40	Modeling and prediction of sulfuric acid digestion analyses data from PXRF spectrometry in tropical soils. <i>Scientia Agricola</i> , 2020, 77, .	1.2	13
41	Deep furrow and additional liming for coffee cultivation under first year in a naturally dense inceptisol. <i>Geoderma</i> , 2020, 357, 113934.	5.1	12
42	Soil physicochemical properties and terrain information predict soil enzymes activity in phytophysionomies of the QuadrilÁtero FerrÁfero region in Brazil. <i>Catena</i> , 2021, 199, 105083.	5.0	12
43	Land-use effect on hydropedology in a mountainous region of Southeastern Brazil. <i>Ciencia E Agrotecnologia</i> , 2017, 41, 413-427.	1.5	11
44	Conditions affecting oxide quantification in unknown tropical soils via handheld X-ray fluorescence spectrometer. <i>Soil Research</i> , 2018, 56, 648.	1.1	11
45	Tropical soil order and suborder prediction combining optical and X-ray approaches. <i>Geoderma Regional</i> , 2020, 23, e00331.	2.1	11
46	National-scale spatial variations of soil magnetic susceptibility in Brazil. <i>Journal of South American Earth Sciences</i> , 2021, 108, 103191.	1.4	11
47	The Brazilian soil Mid-infrared Spectral Library: The Power of the Fundamental Range. <i>Geoderma</i> , 2022, 415, 115776.	5.1	11
48	Geomorphometric tool associated with soil types and properties spatial variability at watersheds under tropical conditions. <i>Scientia Agricola</i> , 2016, 73, 363-370.	1.2	10
49	Changes in soil profile hydraulic properties and porosity as affected by deep tillage soil preparation and <i>Brachiaria</i> grass intercropping in a recent coffee plantation on a naturally dense Inceptisol. <i>Soil and Tillage Research</i> , 2021, 213, 105127.	5.6	10
50	Micronutrients prediction via pXRF spectrometry in Brazil: Influence of weathering degree. <i>Geoderma Regional</i> , 2021, 27, e00431.	2.1	10
51	Proximal sensor data fusion for tropical soil property prediction: Soil fertility properties. <i>Journal of South American Earth Sciences</i> , 2022, 116, 103873.	1.4	10
52	Soil moisture assessed by digital mapping techniques and its field validation. <i>Ciencia E Agrotecnologia</i> , 2014, 38, 140-148.	1.5	9
53	Root spatial distribution in coffee plants of different ages under conservation management system. <i>African Journal of Agricultural Research Vol Pp</i> , 2016, 11, 4970-4978.	0.5	9
54	Prediction of soil nutrient content via pXRF spectrometry and its spatial variation in a highly variable tropical area. <i>Precision Agriculture</i> , 2022, 23, 18-34.	6.0	9

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55	Pedotransfer functions for water retention in different soil classes from the center-southern Rio Grande do Sul State. <i>Ciencia E Agrotecnologia</i> , 2013, 37, 49-60.	1.5	9
56	Frações de carbono em toposequências de solos sob eucalipto com diferentes históricos de uso. <i>Revista Brasileira De Ciencia Do Solo</i> , 2012, 36, 1167-1178.	1.3	8
57	Similar Soils but Different Soil-Forming Factors: Converging Evolution of Inceptisols in Brazil. <i>Pedosphere</i> , 2017, 27, 747-757.	4.0	8
58	Transferability, accuracy, and uncertainty assessment of different knowledge-based approaches for soil types mapping. <i>Catena</i> , 2019, 182, 104134.	5.0	8
59	Diagnosing, Ameliorating, and Monitoring Soil Compaction in No-Till Brazilian Soils. , 2019, 2, 1-14.		8
60	Soil parent material prediction for Brazil via proximal soil sensing. <i>Geoderma Regional</i> , 2020, 22, e00310.	2.1	8
61	Elemental analysis of biochar-based fertilizers via portable X-ray fluorescence spectrometry. <i>Environmental Technology and Innovation</i> , 2021, 23, 101788.	6.1	8
62	Xanthic- and Rhodic-Acrudoxes under cerrado vegetation: differential internal drainage and covarying micromorphological properties. <i>Ciencia E Agrotecnologia</i> , 2016, 40, 443-453.	1.5	8
63	Correcting field determination of elemental contents in soils via portable X-ray fluorescence spectrometry. <i>Ciencia E Agrotecnologia</i> , 0, 44, .	1.5	8
64	Detailed soil survey of an experimental watershed representative of the Brazilian Coastal Plains and its practical application. <i>Ciencia E Agrotecnologia</i> , 2014, 38, 50-60.	1.5	8
65	The fundamental of the effects of water, organic matter, and iron forms on the pXRF information in soil analyses. <i>Catena</i> , 2022, 210, 105868.	5.0	8
66	Soil parent material prediction through satellite multispectral analysis on a regional scale at the Western Paulista Plateau, Brazil. <i>Geoderma Regional</i> , 2021, 26, e00412.	2.1	7
67	Using Nix color sensor and Munsell soil color variables to classify contrasting soil types and predict soil organic carbon in Eastern India. <i>Computers and Electronics in Agriculture</i> , 2022, 199, 107192.	7.7	7
68	PEDOTRANSFER FUNCTIONS FOR WATER RETENTION IN THE MAIN SOILS FROM THE BRAZILIAN COASTAL PLAINS. <i>Ciencia E Agrotecnologia</i> , 2015, 39, 331-338.	1.5	6
69	Prediction of soil organic matter content by combining data from Nix Pro™ color sensor and portable X-ray fluorescence spectrometry in tropical soils. <i>Geoderma Regional</i> , 2022, 28, e00461.	2.1	6
70	Proximal sensor-enhanced soil mapping in complex soil-landscape areas of Brazil. <i>Pedosphere</i> , 2021, 31, 615-626.	4.0	5
71	Influence of auxiliary soil variables to improve PXRF-based soil fertility evaluation in India. <i>Geoderma Regional</i> , 2022, 30, e00557.	2.1	5
72	Microbiological Indicators of Soil Quality Under Native Forests are Influenced by Topographic Factors. <i>Anais Da Academia Brasileira De Ciencias</i> , 2019, 91, e20180696.	0.8	4

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73	Variation of properties of two contrasting Oxisols enhanced by pXRF and Vis-NIR. <i>Journal of South American Earth Sciences</i> , 2022, 115, 103748.	1.4	4
74	A sensors-based profile heterogeneity index for soil characterization. <i>Catena</i> , 2021, 207, 105670.	5.0	3
75	MACRO simulator (version 5.0) for predicting atrazine herbicide behavior in brazilian latosols. <i>Ciencia E Agrotecnologia</i> , 2013, 37, 211-220.	1.5	3
76	Relationship between elemental content determined. <i>Soil Research</i> , 2022, 60, 661-677.	1.1	3
77	Carbon pool ratios as scientific support to field morphology in the differentiation of dark subsurface soil horizons. <i>Scientia Agricola</i> , 2015, 72, 334-342.	1.2	2
78	X-ray fluorescence spectrometry applied to digital mapping of soil fertility attributes in tropical region with elevated spatial variability. <i>Anais Da Academia Brasileira De Ciencias</i> , 2021, 93, e20200646.	0.8	2
79	Long-term phosphate fertilization, mycorrhizal inoculation and historical land use influence on soybean growth and P uptake. <i>Ciencia E Agrotecnologia</i> , 2016, 40, 418-431.	1.5	2
80	Study of an abnormal occurrence of Oxisols in strongly undulated relief in the south of Minas Gerais, Brazil, with support of pXRF and geomorphology. <i>Ciencia E Agrotecnologia</i> , 0, 45, .	1.5	2
81	Chemical and mineralogical changes in the textural fractions of quartzite-derived tropical soils, along weathering, assessed by portable X-ray fluorescence spectrometry and X-ray diffraction. <i>Journal of South American Earth Sciences</i> , 2021, 112, 103634.	1.4	2
82	<i>Urochloa decumbens</i> growth and P uptake as affected by long-term phosphate fertilization, mycorrhizal inoculation and historical land use in contrasting Oxisols of the Brazilian Cerrado. <i>Ciencia E Agrotecnologia</i> , 2017, 41, 209-219.	1.5	1
83	Microbiological indicators of soil quality predicted via proximal and remote sensing. <i>European Journal of Soil Biology</i> , 2021, 104, 103315.	3.2	1
84	A importância da avaliação da concentração natural de Pb em solos do Estado de Minas Gerais. <i>Research, Society and Development</i> , 2020, 9, e350985022.	0.1	1
85	Land suitability for final waste disposal with emphasis on septic systems installation in southern Minas Gerais, Brazil. <i>Ciencia E Agrotecnologia</i> , 2016, 40, 37-45.	1.5	1
86	Pedology-based management class establishment: a study case in Brazilian coffee crops. <i>Precision Agriculture</i> , 0, , 1.	6.0	1
87	Surface reflectance and pXRF for assessing soil weathering indexes. <i>Journal of South American Earth Sciences</i> , 2022, 115, 103747.	1.4	1
88	Using proximal sensors to assess pedogenetic development of Inceptisols and Oxisols in Brazil. <i>Geoderma Regional</i> , 2022, 28, e00465.	2.1	0
89	Assessing soil mineralogy and weathering degree by a multi-range sensor synergistic approach: From parent rock to topsoil. <i>Journal of South American Earth Sciences</i> , 2022, 116, 103855.	1.4	0