Philippe D De Smedt

List of Publications by Year
in descending order

65 papers	1,978 citations	331670 21 h-index	265206 42 g-index
65 all docs	65 docs citations	65 times ranked	2207 citing authors

#	Article	IF	Citations
1	Application of the topographic position index to heterogeneous landscapes. Geomorphology, 2013, 186, 39-49.	2.6	412
2	Towards a three-dimensional cost-effective registration of the archaeological heritage. Journal of Archaeological Science, 2013, 40, 1108-1121.	2.4	282
3	On introducing an image-based 3D reconstruction method in archaeological excavation practice. Journal of Archaeological Science, 2014, 41, 251-262.	2.4	157
4	An efficient calibration procedure for correction of drift in EMI survey data. Journal of Applied Geophysics, 2014, 110, 115-125.	2.1	51
5	Reconstructing palaeochannel morphology with a mobile multicoil electromagnetic induction sensor. Geomorphology, 2011, 130, 136-141.	2.6	45
6	Measuring the relative topographic position of archaeological sites in the landscape, a case study on the Bronze Age barrows in northwest Belgium. Journal of Archaeological Science, 2011, 38, 3435-3446.	2.4	45
7	Digital Elevation Model generation for historical landscape analysis based on LiDAR data, a case study in Flanders (Belgium). Expert Systems With Applications, 2011, 38, 8178-8185.	7.6	45
8	Can spectral analyses improve measurement of key soil fertility parameters with X-ray fluorescence spectrometry?. Geoderma, 2019, 350, 29-39.	5.1	41
9	Exploring the potential of multi-receiver EMI survey for geoarchaeological prospection: A 90 ha dataset. Geoderma, 2013, 199, 30-36.	5.1	40
10	Frequency domain electromagnetic induction survey in the intertidal zone: Limitations of low-induction-number and depth of exploration. Journal of Applied Geophysics, 2014, 100, 14-22.	2.1	40
11	Unveiling the prehistoric landscape at Stonehenge through multi-receiver EMI. Journal of Archaeological Science, 2014, 50, 16-23.	2.4	35
12	Key variables for the identification of soil management classes in the aeolian landscapes of northâ€“west Europe. Geoderma, 2013, 199, 99-105.	5.1	29
13	A multidisciplinary approach to reconstructing Late Glacial and Early Holocene landscapes. Journal of Archaeological Science, 2013, 40, 1260-1267.	2.4	28
14	Electrical Conductivity Depth Modelling with a Multireceiver EMI Sensor for Prospecting Archaeological Features. Archaeological Prospection, 2012, 19, 21-30.	2.2	27
15	Comparing Apparent Magnetic Susceptibility Measurements of a Multiâ€receiver EMI Sensor with Topsoil and Profile Magnetic Susceptibility Data over Weak Magnetic Anomalies. Archaeological Prospection, 2014, 21, 103-112.	2.2	27
16	Depth slicing of multi-receiver EMI measurements to enhance the delineation of contrasting subsoil features. Geoderma, 2012, 189-190, 514-521.	5.1	26
17	A Comprehensive Study of Three Different Portable XRF Scanners to Assess the Soil Geochemistry of An Extensive Sample Dataset. Remote Sensing, 2019, 11, 2490.	4.0	26
18	Hunter-gatherer responses to the changing environment of the Moervaart palaeolake (Nw Belgium) during the Late Glacial and Early Holocene. Quaternary International, 2013, 308-309, 162-177.	1.5	25

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19	Reconstructing Phreatic Palaeogroundwater Levels in a Geoarchaeological Context: A Case Study in Flanders, Belgium. Geoarchaeology - an International Journal, 2013, 28, 170-189.	1.5	25
20	The 3-D reconstruction of medieval wetland reclamation through electromagnetic induction survey. Scientific Reports, 2013, 3, 1517.	3.3	23
21	Combining multiple signals of an electromagnetic induction sensor to prospect land for metal objects. Near Surface Geophysics, 2011, 9, 309-318.	1.2	22
22	Absolute Dating (14C and OSL) of the Formation of Coversand Ridges Occupied by Prehistoric Hunter-Gatherers in NW Belgium. Radiocarbon, 2012, 54, 715-726.	1.8	21
23	Multiple oscillations during the Lateglacial as recorded in a multi-proxy, high-resolution record of the Moervaart palaeolake (NW Belgium). Quaternary Science Reviews, 2017, 162, 26-41.	3.0	21
24	Durrington walls and the Stonehenge Hidden Landscape Project 2010â€“2016. Archaeological Prospection, 2018, 25, 255-269.	2.2	21
25	Evaluating the potential of topsoil magnetic pollution mapping across different land use classes. Science of the Total Environment, 2019, 685, 345-356.	8.0	20
26	Frequency-Domain Electromagnetic Forward and Sensitivity Modeling: Practical Aspects of Modeling a Magnetic Dipole in a Multilayered Half-Space. IEEE Geoscience and Remote Sensing Magazine, 2019, 7, 74-85.	9.6	20
27	Integrating multiâ€receiver electromagnetic induction measurements into the interpretation of the soil landscape around the school of gladiators at <scp>C</scp>arnuntum. European Journal of Soil Science, 2013, 64, 716-727.	3.9	19
28	Identifying Soil Patterns at Different Spatial Scales with a Multi-Receiver EMI Sensor. Soil Science Society of America Journal, 2013, 77, 382-390.	2.2	18
29	Characterizing Compaction Variability with an Electromagnetic Induction Sensor in a Puddled Paddy Rice Field. Soil Science Society of America Journal, 2014, 78, 579-588.	2.2	18
30	Identifying and removing micro-drift in ground-based electromagnetic induction data. Journal of Applied Geophysics, 2016, 131, 14-22.	2.1	18
31	Weichselian Lateglacial environmental and vegetation development in the Moervaart palaeolake area (NW Belgium); implications for former human occupation patterns. Review of Palaeobotany and Palynology, 2018, 248, 1-14.	1.5	18
32	Combining resistivity and frequency domain electromagnetic methods to investigate submarine groundwater discharge in the littoral zone. Hydrology and Earth System Sciences, 2020, 24, 3539-3555.	4.9	17
33	Mapping depth-to-clay using fitted multiple depth response curves of a proximal EMI sensor. Geoderma, 2011, 162, 151-158.	5.1	16
34	Using a multi-receiver survey of apparent electrical conductivity to reconstruct a Holocene tidal channel in a polder area. Catena, 2012, 95, 104-111.	5.0	16
35	Spatio-temporal modeling of soil characteristics for soilscape reconstruction. Geoderma, 2013, 207-208, 166-179.	5.1	16
36	Mapping complex soil patterns with multipleâ€point geostatistics. European Journal of Soil Science, 2013, 64, 183-191.	3.9	16

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37	Improving the reliability of soil EC-mapping: Robust apparent electrical conductivity (rECa) estimation in ground-based frequency domain electromagnetics. Geoderma, 2019, 337, 1155-1163.	5.1	16
38	Delineating water management zones in a paddy rice field using a Floating Soil Sensing System. Agricultural Water Management, 2011, 102, 8-12.	5.6	14
39	Towards an Integrated Methodology for Assessing Rural Settlement Landscapes in the Belgian Lowlands. Archaeological Prospection, 2012, 19, 141-145.	2.2	14
40	Evaluating corrections for a horizontal offset between sensor and position data for surveys on land. Precision Agriculture, 2016, 17, 349-364.	6.0	14
41	Low signal-to-noise FDEM in-phase data: Practical potential for magnetic susceptibility modelling. Journal of Applied Geophysics, 2018, 152, 17-25.	2.1	14
42	On the use of integrated process models to reconstruct prehistoric occupation, with examples from Sandy Flanders, Belgium. Geoarchaeology - an International Journal, 2010, 25, 784-814.	1.5	12
43	Modeling within field variation of the compaction layer in a paddy rice field using a proximal soil sensing system. Soil Use and Management, 2014, 30, 99-108.	4.9	12
44	Comparing one- and two-dimensional EMI conductivity inverse modeling procedures for characterizing a two-layered soil. Geoderma, 2015, 241-242, 12-23.	5.1	12
45	Probabilistic 1-D Inversion of Frequency-Domain Electromagnetic Data Using a Kalman Ensemble Generator. IEEE Transactions on Geoscience and Remote Sensing, 2020, 58, 3287-3297.	6.3	12
46	Imaging a Polygonal Network of Ice-Wedge Casts with an Electromagnetic Induction Sensor. Soil Science Society of America Journal, 2011, 75, 2095-2100.	2.2	11
47	Comparing apparent electrical conductivity measurements on a paddy field under flooded and drained conditions. Precision Agriculture, 2012, 13, 384-392.	6.0	11
48	Integrating EMI and GPR data to enhance the three-dimensional reconstruction of a circular ditch system. Journal of Applied Geophysics, 2014, 101, 42-50.	2.1	11
49	Using bivariate multiple-point statistics and proximal soil sensor data to map fossil ice-wedge polygons. Geoderma, 2014, 213, 571-577.	5.1	11
50	Combining multiâ€receiver electromagnetic induction and stepped frequency ground penetrating radar for industrial site investigation. European Journal of Soil Science, 2015, 66, 688-698.	3.9	10
51	Combining <scp>EMI</scp> and <scp>GPR</scp> for nonâ€invasive soil sensing at the Stonehenge World Heritage Site: the reconstruction of a <scp>WW1</scp> practice trench. European Journal of Soil Science, 2015, 66, 166-178.	3.9	10
52	The Younger Dryas and Preboreal landscape in the Moervaart area (northwestern Belgium) and the apparent decrease in human occupation. Vegetation History and Archaeobotany, 2018, 27, 697-715.	2.1	8
53	THE SOIL SCIENCE & ARCHAEO-GEOPHYSICS ALLIANCE (SAGA): going beyond prospection. Research Ideas and Outcomes, 0, 4, .	1.0	8
54	Validating land-based FDEM data and derived conductivity maps: Assessment of signal calibration, signal attenuation and the impact of heterogeneity. Journal of Applied Geophysics, 2019, 164, 179-190.	2.1	7

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55	A multi-proxy magnetic approach for monitoring large-scale airborne pollution impact. Science of the Total Environment, 2020, 743, 140718.	8.0	7
56	High-Resolution Surveying With Small-Loop Frequency Domain Electromagnetic Systems: Efficient Survey Design and Adaptive Processing. IEEE Geoscience and Remote Sensing Magazine, 2021, 9, 167-183.	9.6	6
57	A floating sensing system to evaluate soil and crop variability within flooded paddy rice fields. Precision Agriculture, 2011, 12, 850-859.	6.0	5
58	Integrating cone penetration testing into the 1D inversion of multi-receiver EMI data to reconstruct a complex stratigraphic landscape.. Catena, 2016, 147, 356-371.	5.0	5
59	Making sense of anomalies: Practices and challenges in the archaeological interpretation of geophysical data. , 2019, , 151-194.		5
60	Ambient temperature and relative humidityâ€“based drift correction in frequency domain electromagnetics using machine learning. Near Surface Geophysics, 2021, 19, 541-556.	1.2	5
61	Beyond the unknown: understanding prehistoric patterns in the urbanised landscape of Flanders. Journal of Historical Geography, 2013, 40, 1-15.	0.7	4
62	Urban soil exploration through multi-receiver electromagnetic induction and stepped-frequency ground penetrating radar. Environmental Sciences: Processes and Impacts, 2015, 17, 1271-1281.	3.5	4
63	Novel insights into prehistoric land use at Stonehenge by combining electromagnetic and invasive methods with a semi-automated interpretation scheme. Journal of Archaeological Science, 2022, 143, 105557.	2.4	3
64	Removal of sensor tilt noise in fluxgate gradiometer survey data by applying oneâ€dimensional wavelet filtering. Archaeological Prospection, 2017, 24, 353-360.	2.2	1
65	Integrated geophysical archaeological prospection resulting in the discovery of the school of gladiators in the Roman town of Carnuntum in Austria. , 2012, , .		0