

Alain Pierret

List of Publications by Year in descending order

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74
papers

3,456
citations

147726

31
h-index

143943

57
g-index

74
all docs

74
docs citations

74
times ranked

3846
citing authors

#	ARTICLE	IF	CITATIONS
1	Water Uptake by Plant Roots: II " Modelling of Water Transfer in the Soil Root-system with Explicit Account of Flow within the Root System " Comparison with Experiments. <i>Plant and Soil</i> , 2006, 283, 99-117.	1.8	281
2	3D reconstruction and quantification of macropores using X-ray computed tomography and image analysis. <i>Geoderma</i> , 2002, 106, 247-271.	2.3	230
3	How to study deep roots" and why it matters. <i>Frontiers in Plant Science</i> , 2013, 4, 299.	1.7	222
4	Understanding deep roots and their functions in ecosystems: an advocacy for more unconventional research. <i>Annals of Botany</i> , 2016, 118, 621-635.	1.4	211
5	Root Functional Architecture: A Framework for Modeling the Interplay between Roots and Soil. <i>Vadose Zone Journal</i> , 2007, 6, 269-281.	1.3	166
6	Root functional parameters along a land" use gradient: evidence of a community" level economics spectrum. <i>Journal of Ecology</i> , 2015, 103, 361-373.	1.9	166
7	Conventional detection methodology is limiting our ability to understand the roles and functions of fine roots. <i>New Phytologist</i> , 2005, 166, 967-980.	3.5	160
8	Water Uptake by Plant Roots: I " Formation and Propagation of a Water Extraction Front in Mature Root Systems as Evidenced by 2D Light Transmission Imaging. <i>Plant and Soil</i> , 2006, 283, 83-98.	1.8	128
9	Digging Deeper for Agricultural Resources, the Value of Deep Rooting. <i>Trends in Plant Science</i> , 2020, 25, 406-417.	4.3	127
10	Ij_Rhizo: an open-source software to measure scanned images of root samples. <i>Plant and Soil</i> , 2013, 373, 531-539.	1.8	100
11	3D skeleton reconstructions of natural earthworm burrow systems using CAT scan images of soil cores. <i>Biology and Fertility of Soils</i> , 1998, 27, 51-59.	2.3	94
12	Soil exploration and resource acquisition by plant roots: an architectural and modelling point of view. <i>Agronomy for Sustainable Development</i> , 2003, 23, 419-431.	0.8	90
13	Title is missing!. <i>Plant and Soil</i> , 2002, 238, 11-20.	1.8	82
14	Title is missing!. <i>Plant and Soil</i> , 1999, 211, 51-58.	1.8	73
15	X-ray computed tomography to quantify tree rooting spatial distributions. <i>Geoderma</i> , 1999, 90, 307-326.	2.3	71
16	Contradictory hydrological impacts of afforestation in the humid tropics evidenced by long-term field monitoring and simulation modelling. <i>Hydrology and Earth System Sciences</i> , 2016, 20, 2691-2704.	1.9	69
17	Vegetation as a driver of temporal variations in slope stability: The impact of hydrological processes. <i>Geophysical Research Letters</i> , 2017, 44, 4897-4907.	1.5	61
18	Linking crop structure, throughfall, soil surface conditions, runoff and soil detachment: 10 land uses analyzed in Northern Laos. <i>Science of the Total Environment</i> , 2018, 616-617, 1330-1338.	3.9	57

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19	Title is missing!. Plant and Soil, 2000, 223, 101-117.	1.8	51
20	Land Use and Water Quality Along a Mekong Tributary in Northern Lao P.D.R.. Environmental Management, 2011, 47, 291-302.	1.2	47
21	Effect of land use and hydrological processes on Escherichia coli concentrations in streams of tropical, humid headwater catchments. Scientific Reports, 2016, 6, 32974.	1.6	47
22	Characterisation of the three-dimensional structure of earthworm burrow systems using image analysis and mathematical morphology. Biology and Fertility of Soils, 2003, 38, 301-310.	2.3	44
23	Seasonal Patterns of Fine Root Production and Turnover in a Mature Rubber Tree (<i>Hevea brasiliensis</i>) Tj ETQq1 1 0.784314 rgBT /Overland flow in Plant Science, 2015, 6, 1022.	1.7	43
24	Hydrological Regime and Water Shortage as Drivers of the Seasonal Incidence of Diarrheal Diseases in a Tropical Montane Environment. PLoS Neglected Tropical Diseases, 2016, 10, e0005195.	1.3	43
25	Hydrological modeling of Fecal Indicator Bacteria in a tropical mountain catchment. Water Research, 2017, 119, 102-113.	5.3	43
26	From shifting cultivation to teak plantation: effect on overland flow and sediment yield in a montane tropical catchment. Scientific Reports, 2017, 7, 3987.	1.6	41
27	Observing plant roots in their environment: current imaging options and specific contribution of two-dimensional approaches. Agronomy for Sustainable Development, 2003, 23, 471-479.	0.8	39
28	Simultaneous X-ray imaging of plant root growth and water uptake in thin-slab systems. Plant and Soil, 2003, 255, 361-373.	1.8	35
29	Possibilities of carbon and nitrogen sequestration under conventional tillage and no-till cover crop farming (Mekong valley, Laos). Agriculture, Ecosystems and Environment, 2010, 136, 148-161.	2.5	35
30	Influence of xylem development on axial hydraulic conductance within Prunus root systems. Trees - Structure and Function, 2002, 16, 479-487.	0.9	33
31	Land use and soil type determine the presence of the pathogen <i>Burkholderia pseudomallei</i> in tropical rivers. Environmental Science and Pollution Research, 2016, 23, 7828-7839.	2.7	33
32	<i>Burkholderia pseudomallei</i> in a lowland rice paddy: seasonal changes and influence of soil depth and physico-chemical properties. Scientific Reports, 2017, 7, 3031.	1.6	33
33	Conflict, migration and land cover changes in Indochina: a hydrological assessment. Ecohydrology, 2010, 3, 382-391.	1.1	29
34	Calibration and Visualization of Wall-Thickness and Porosity Distributions of Ceramics Using X-radiography and Image Processing. Journal of Archaeological Science, 1996, 23, 419-428.	1.2	28
35	Estimating root elongation rates from morphological measurements of the root tip. Plant and Soil, 2010, 328, 35-44.	1.8	28
36	Evaluation of Molecular Methods To Improve the Detection of <i>Burkholderia pseudomallei</i> in Soil and Water Samples from Laos. Applied and Environmental Microbiology, 2015, 81, 3722-3727.	1.4	28

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37	Spatio-temporal Variations in Axial Conductance of Primary and First-order Lateral Roots of a Maize Crop as Predicted by a Model of the Hydraulic Architecture of Root Systems. <i>Plant and Soil</i> , 2006, 282, 117-126.	1.8	26
38	Interactions between root growth, slope and soil detachment depending on land use: a case study in a small mountain catchment of Northern Laos. <i>Plant and Soil</i> , 2007, 301, 51-64.	1.8	26
39	Trapping Efficiencies of Cultivated and Natural Riparian Vegetation of Northern Laos. <i>Journal of Environmental Quality</i> , 2008, 37, 889-897.	1.0	26
40	Interacting land use and soil surface dynamics control groundwater outflow in a montane catchment of the lower Mekong basin. <i>Agriculture, Ecosystems and Environment</i> , 2018, 268, 90-102.	2.5	20
41	Potential and limitations of Payments for Environmental Services (PES) as a means to manage watershed services in mainland Southeast Asia. <i>International Journal of the Commons</i> , 2009, 3, 16.	0.6	20
42	Rivers as carriers and potential sentinels for <i>Burkholderia pseudomallei</i> in Laos. <i>Scientific Reports</i> , 2018, 8, 8674.	1.6	19
43	Discovery of an outstanding Hoabinhian site from the Late Pleistocene at Doi Pha Kan (Lampang) Tj ETQq1 1 0.784314 rgBT /Overlock 19	0.2	19
44	Evolution of burrow systems after the accidental introduction of a new earthworm species into a Swiss pre-alpine meadow. <i>Biology and Fertility of Soils</i> , 2000, 31, 494-500.	2.3	18
45	Irreconcilable differences between stratigraphy and direct dating cast doubts upon the status of Tam Pa Ling fossil. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, E3523; author reply E3524-5.	3.3	14
46	Testing local dependence of spatial structures on images. <i>Journal of Microscopy</i> , 2000, 200, 32-41.	0.8	13
47	Understorey Limits Surface Runoff and Soil Loss in Teak Tree Plantations of Northern Lao PDR. <i>Water (Switzerland)</i> , 2020, 12, 2327.	1.2	13
48	Quantification of Orientation of Pore Patterns in X-ray Images of Deformed Clay. <i>Microscopy Microanalysis Microstructures</i> , 1996, 7, 421-431.	0.4	13
49	Multi-spectral imaging of rhizobox systems: New perspectives for the observation and discrimination of rhizosphere components. <i>Plant and Soil</i> , 2008, 310, 263-268.	1.8	12
50	Contiguous multi-proxy analyses (X-ray radiography, diatom, pollen, and microcharcoal) of Holocene archaeological features at Kuk Swamp, Upper Wahgi Valley, Papua New Guinea. <i>Geoarchaeology - an International Journal</i> , 2009, 24, 715-742.	0.7	12
51	Multi-millennial occupation in northwestern Laos: Preliminary results of excavations at the Ngeubhinh Mouxeu rock-shelter. <i>Comptes Rendus - Palevol</i> , 2012, 11, 305-313.	0.1	12
52	The perforated stones of the Doi Pha Kan burials (Northern Thailand): A Mesolithic singularity?. <i>Comptes Rendus - Palevol</i> , 2017, 16, 351-361.	0.1	11
53	Discovery of a new open-air Hoabinhian site in Luang Prabang province (Lao PDR). Dating and technological study of the lithic assemblage. <i>Comptes Rendus - Palevol</i> , 2019, 18, 142-157.	0.1	11
54	Effects of hydrological regime and land use on in-stream <i>Escherichia coli</i> concentration in the Mekong basin, Lao PDR. <i>Scientific Reports</i> , 2021, 11, 3460.	1.6	11

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55	MEASUREMENT OF ROOT LENGTH DENSITY IN INTACT SAMPLES USING X-RADIOGRAPHY AND IMAGE ANALYSIS. <i>Image Analysis and Stereology</i> , 2000, 19, 145.	0.4	11
56	Evaluation of consensus method for the culture of <i>Burkholderia pseudomallei</i> in soil samples from Laos. <i>Wellcome Open Research</i> , 2018, 3, 132.	0.9	10
57	The Multiscale TROPICAL CatchmentS critical zone observatory M&TROPICS dataset II : Land use, hydrology and sediment production monitoring in Houay Pano, northern Lao PDR. <i>Hydrological Processes</i> , 2021, 35, e14126.	1.1	9
58	Effects of corn (<i>Zea mays</i> L.) on the local and overall root development of young rubber tree (<i>Hevea</i>) <i>Tj ETQq0 0 0 rgBT /Overlock 10 Tf</i>	1.8	7
59	Can Organic Amendments Improve Soil Physical Characteristics and Increase Maize Performances in Contrasting Soil Water Regimes?. <i>Agriculture (Switzerland)</i> , 2021, 11, 132.	1.4	6
60	Will deeper roots be enough? Engineering drought-resistant crops will entail in-depth understanding of root hydraulic architecture. A Commentary on "Root and xylem anatomy varies with root length, root order, soil depth and environment". <i>Annals of Botany</i> , 2022, 130, xv-xvii.	1.4	6
61	Hydrologic regulation of plant rooting depth: Breakthrough or observational conundrum?. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E2669-E2670.	3.3	5
62	Decay Rate of <i>Escherichia coli</i> in a Mountainous Tropical Headwater Wetland. <i>Water (Switzerland)</i> , 2021, 13, 2068.	1.2	5
63	Distribution of <i>Burkholderia pseudomallei</i> within a 300-cm deep soil profile: implications for environmental sampling. <i>Scientific Reports</i> , 2022, 12, .	1.6	5
64	An outlook on prehistoric research in Laos: An inventory and some perspectives. <i>Quaternary International</i> , 2016, 416, 177-182.	0.7	4
65	Simultaneous X-ray imaging of plant root growth and water uptake in thin-slab systems. , 2003, , 361-373.		4
66	Evaluation of consensus method for the culture of <i>Burkholderia pseudomallei</i> in soil samples from Laos. <i>Wellcome Open Research</i> , 2018, 3, 132.	0.9	4
67	Spatial distribution of <i>Hevea brasiliensis</i> trunk phloem necrosis within a plot: aggregation but no evidence of constraint on cumulated growth. <i>Forest Pathology</i> , 2011, 41, 90-100.	0.5	3
68	Hydrological impact of war&induced deforestation in the Mekong Basin. <i>Ecohydrology</i> , 2013, 6, 901-903.	1.1	3
69	Linking tree-rooting profiles to leaf phenology: a first attempt on <i>Tectona Grandis</i> Linn F.. <i>Trees - Structure and Function</i> , 2019, 33, 1491-1504.	0.9	3
70	Whole-Genome Assemblies of 16 <i>Burkholderia pseudomallei</i> Isolates from Rivers in Laos. <i>Microbiology Resource Announcements</i> , 2021, 10, .	0.3	3
71	Melioidosis in Laos. , 2015, , 89-104.		2
72	Soil Exploration and Resource Acquisition by Plant Roots: An Architectural and Modelling Point of View. , 2009, , 583-600.		1

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73	Does forest conversion to tree plantations affect properties of subsoil horizons? Findings from mainland Southeast Asia (Lao PDR, Yunnan-China). <i>Geoderma Regional</i> , 2022, 28, e00457.	0.9	1
74	<i>Escherichia coli</i> concentration, multiscale monitoring over the decade 2011–2021 in the Mekong River basin, Lao PDR. <i>Earth System Science Data</i> , 2022, 14, 2883-2894.	3.7	0