Daniel Leitner

List of Publications by Year
in descending order

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26 papers	1,428 citations	430874 18 h-index	580821 25 g-index
32 all docs	32 docs citations	32 times ranked	1665 citing authors

#	Article	IF	Citations
1	Modelling rootâ€“soil interactions using threeâ€“dimensional models of root growth, architecture and function. Plant and Soil, 2013, 372, 93-124.	3.7	238
2	A dynamic root system growth model based on L-Systems. Plant and Soil, 2010, 332, 177-192.	3.7	145
3	CRootBox: a structuralâ€“functional modelling framework for root systems. Annals of Botany, 2018, 121, 1033-1053.	2.9	123
4	Root System Markup Language: Toward a Unified Root Architecture Description Language. Plant Physiology, 2015, 167, 617-627.	4.8	105
5	Can diversity in root architecture explain plant water use efficiency? A modeling study. Ecological Modelling, 2015, 312, 200-210.	2.5	94
6	Recovering Root System Traits Using Image Analysis Exemplified by Two-Dimensional Neutron Radiography Images of Lupine Â Â Â. Plant Physiology, 2014, 164, 24-35.	4.8	91
7	Impact of contrasted maize root traits at flowering on water stress tolerance â€“ A simulation study. Field Crops Research, 2014, 165, 125-137.	5.1	79
8	High-resolution chemical imaging of labile phosphorus in the rhizosphere of Brassica napus L. cultivars. Environmental and Experimental Botany, 2012, 77, 219-226.	4.2	73
9	A statistical approach to root system classification. Frontiers in Plant Science, 2013, 4, 292.	3.6	55
10	Hyperspectral imaging: a novel approach for plant root phenotyping. Plant Methods, 2018, 14, 84.	4.3	53
11	Root architecture simulation improves the inference from seedling root phenotyping towards mature root systems. Journal of Experimental Botany, 2017, 68, 965-982.	4.8	45
12	Mechanistic framework to link root growth models with weather and soil physical properties, including example applications to soybean growth in Brazil. Plant and Soil, 2018, 428, 67-92.	3.7	45
13	Soil compaction impacts soybean root growth in an Oxisol from subtropical Brazil. Soil and Tillage Research, 2020, 200, 104611.	5.6	45
14	The algorithmic beauty of plant roots â€“ an L-System model for dynamic root growth simulation. Mathematical and Computer Modelling of Dynamical Systems, 2010, 16, 575-587.	2.2	41
15	CPlantBox, a whole-plant modelling framework for the simulation of water- and carbon-related processes. In Silico Plants, 2020, 2, .	1.9	37
16	RGB and Spectral Root Imaging for Plant Phenotyping and Physiological Research: Experimental Setup and Imaging Protocols. Journal of Visualized Experiments, 2017, , .	0.3	22
17	Connecting the dots between computational tools to analyse soilâ€“root water relations. Journal of Experimental Botany, 2019, 70, 2345-2357.	4.8	22
18	Mechanical and Hydric Stress Effects on Maize Root System Development at Different Soil Compaction Levels. Frontiers in Plant Science, 2019, 10, 1358.	3.6	21

#	Article	IF	Citations
19	Modelling Phosphorus Dynamics in the Soilâ€“Plant System. Soil Biology, 2011, , 113-133.	0.8	19
20	Call for Participation: Collaborative Benchmarking of Functional-Structural Root Architecture Models. The Case of Root Water Uptake. Frontiers in Plant Science, 2020, 11, 316.	3.6	18
21	Root architecture development in stony soils. Vadose Zone Journal, 2021, 20, e20133.	2.2	12
22	Simulating rhizodeposition patterns around growing and exuding root systems. In Silico Plants, 2021, 3, .	1.9	11
23	Parameter sensitivity analysis of a root system architecture model based on virtual field sampling. Plant and Soil, 2019, 438, 101-126.	3.7	9
24	Root System Scale Models Significantly Overestimate Root Water Uptake at Drying Soil Conditions. Frontiers in Plant Science, 2022, 13, 798741.	3.6	8
25	Editorial: Benchmarking 3D-Models of Root Growth, Architecture and Functioning. Frontiers in Plant Science, 2022, 13, .	3.6	2
26	Presentation of CPlantBox: a whole functional-structural plant model (root and shoot) coupled with a mechanistic resolution of carbon and water flows. , 2018, , .		1