FrÃ©dÃ©ric Boudon

List of Publications by Year
in descending order

31 papers	1,366 citations	471509 17 h-index	501196 28 g-index
33 all docs	33 docs citations	33 times ranked	1536 citing authors

#	Article	IF	Citations
1	OpenAlea: a visual programming and component-based software platform for plant modelling. Functional Plant Biology, 2008, 35, 751.	2.1	261
2	An Auxin-Mediated Shift toward Growth Isotropy Promotes Organ Formation at the Shoot Meristem in Arabidopsis. Current Biology, 2014, 24, 2335-2342.	3.9	161
3	A Computational Framework for 3D Mechanical Modeling of Plant Morphogenesis with Cellular Resolution. PLoS Computational Biology, 2015, 11, e1003950.	3.2	110
4	Sugar availability suppresses the auxinâ€induced strigolactone pathway to promote bud outgrowth. New Phytologist, 2020, 225, 866-879.	7.3	93
5	L-Py: An L-System Simulation Framework for Modeling Plant Architecture Development Based on a Dynamic Language. Frontiers in Plant Science, 2012, 3, 76.	3.6	90
6	PlantGL: A Python-based geometric library for 3D plant modelling at different scales. Graphical Models, 2009, 71, 1-21.	2.4	87
7	Structure from silhouettes: a new paradigm for fast sketchâ€based design of trees. Computer Graphics Forum, 2009, 28, 541-550.	3.0	63
8	Estimating wheat green area index from ground-based LiDAR measurement using a 3D canopy structure model. Agricultural and Forest Meteorology, 2017, 247, 12-20.	4.8	57
9	Light Regulation of Axillary Bud Outgrowth Along Plant Axes: An Overview of the Roles of Sugars and Hormones. Frontiers in Plant Science, 2019, 10, 1296.	3.6	54
10	Interactive Design of Bonsai Tree Models. Computer Graphics Forum, 2003, 22, 591-599.	3.0	50
11	Quantitative assessment of automatic reconstructions of branching systems obtained from laser scanning. Annals of Botany, 2014, 114, 853-862.	2.9	40
12	Multiscale Framework for Modeling and Analyzing Light Interception by Trees. Multiscale Modeling and Simulation, 2008, 7, 910-933.	1.6	39
13	Multi-scale high-throughput phenotyping of apple architectural and functional traits in orchard reveals genotypic variability under contrasted watering regimes. Horticulture Research, 2019, 6, 52.	6.3	35
14	Efficient and robust reconstruction of botanical branching structure from laser scanned points. , 2009, , .		27
15	V-Mango: a functionalâ€“structural model of mango tree growth, development and fruit production. Annals of Botany, 2020, 126, 745-763.	2.9	26
16	Understanding Patchy Landscape Dynamics: Towards a Landscape Language. PLoS ONE, 2012, 7, e46064.	2.5	25
17	ESTIMATING THE FRACTAL DIMENSION OF PLANTS USING THE TWO-SURFACE METHOD: AN ANALYSIS BASED ON 3D-DIGITIZED TREE FOLIAGE. Fractals, 2006, 14, 149-163.	3.7	20
18	Modeling of light transmission under heterogeneous forest canopy: an appraisal of the effect of the precision level of crown description. Annals of Forest Science, 2012, 69, 181-193.	2.0	20

#	Article	IF	Citations
19	A novel profile based model for virtual representation of quasi-symmetric plant organs. Computers and Electronics in Agriculture, 2011, 75, 113-124.	7.7	16
20	Integrating Physiology and Architecture in Models of Fruit Expansion. Frontiers in Plant Science, 2016, 7, 1739.	3.6	15
21	Streaming of plants in distributed virtual environments. , 2008, , .		14
22	Nature abhors a vacuum: Deciphering the vegetative reaction of the mango tree to pruning. European Journal of Agronomy, 2019, 104, 85-96.	4.1	14
23	Investigating the influence of geometrical traits on light interception efficiency of apple trees: A modelling study with MAppleT. , 2012, , .		12
24	Phase change-related variations of dome shape in Eucalyptus urophyllaÂÃ—ÂEucalyptus grandis shoot apical meristems. Trees - Structure and Function, 2010, 24, 743-752.	1.9	8
25	3D Plant Phenotyping: All You Need isÂLabelled Point Cloud Data. Lecture Notes in Computer Science, 2020, , 244-260.	1.3	7
26	Reconstructing Plants in 3D from a Single Image Using Analysis-by-Synthesis. Lecture Notes in Computer Science, 2013, , 322-332.	1.3	6
27	Compact and progressive plant models for streaming in networked virtual environments. ACM Transactions on Multimedia Computing, Communications and Applications, 2009, 5, 1-22.	4.3	4
28	Characteristics of Acacia mangium shoot apical meristems in natural and in vitro conditions in relation to heteroblasty. Trees - Structure and Function, 2012, 26, 1031-1044.	1.9	3
29	Towards virtual modelling environments for functionalâ€“structural plant models based on Jupyter notebooks: application to the modelling of mango tree growth and development. In Silico Plants, 2022, 4, .	1.9	3
30	When architectural plasticity fails to counter the light competition imposed by planting design: an in silico approach using a functionalâ€“structural model of oil palm. In Silico Plants, 2022, 4, .	1.9	3
31	Realistic Plant Modeling from Images Based on Analysis-by-Synthesis. Lecture Notes in Computer Science, 2014, , 213-229.	1.3	2