Kerstin Wiegand

List of Publications by Year
in descending order

81 papers	5,450 citations	109321 35 h-index	85541 71 g-index
85 all docs	85 docs citations	85 times ranked	6573 citing authors

#	Article	IF	Citations
1	Resource pulses, species interactions, and diversity maintenance in arid and semi-arid environments. Oecologia, 2004, 141, 236-253.	2.0	604
2	landscapemetrics: an openâ€source R tool to calculate landscape metrics. Ecography, 2019, 42, 1648-1657.	4.5	530
3	Heterogeneity influences spatial patterns and demographics in forest stands. Journal of Ecology, 2008, 96, 807-820.	4.0	268
4	Adopting a spatially explicit perspective to study the mysterious fairy circles of Namibia. Ecography, 2015, 38, 1-11.	4.5	239
5	Spatial patterns and competition of tree species in a Douglas-fir chronosequence on Vancouver Island. Ecography, 2006, 29, 671-682.	4.5	236
6	Ecological and socio-economic functions across tropical land use systems after rainforest conversion. Philosophical Transactions of the Royal Society B: Biological Sciences, 2016, 371, 20150275.	4.0	222
7	A review of the ecosystem functions in oil palm plantations, using forests as a reference system. Biological Reviews, 2017, 92, 1539-1569.	10.4	222
8	Assessing biodiversity in forests using very highâ€resolution images and unmanned aerial vehicles. Methods in Ecology and Evolution, 2012, 3, 397-404.	5.2	219
9	A patch-dynamics approach to savanna dynamics and woody plant encroachment â€“ Insights from an arid savanna. Perspectives in Plant Ecology, Evolution and Systematics, 2006, 7, 229-242.	2.7	191
10	Walterâ€™s two-layer hypothesis revisited: back to the roots!. Oecologia, 2013, 172, 617-630.	2.0	182
11	Using Unmanned Aerial Vehicles (UAV) to Quantify Spatial Gap Patterns in Forests. Remote Sensing, 2014, 6, 6988-7004.	4.0	174
12	Discovery of fairy circles in Australia supports self-organization theory. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 3551-3556.	7.1	160
13	Multiâ€scale patterns and bush encroachment in an arid savanna with a shallow soil layer. Journal of Vegetation Science, 2005, 16, 311-320.	2.2	123
14	The Role of Density Regulation in Extinction Processes and Population Viability Analysis. Biodiversity and Conservation, 2004, 13, 9-52.	2.6	91
15	Effects of topography on structuring local species assemblages in a <scp>S</scp>ri <scp>L</scp>ankan mixed dipterocarp forest. Journal of Ecology, 2013, 101, 149-160.	4.0	82
16	From snapshot information to long-term population dynamics of Acacias by a simulation model. Plant Ecology, 2000, 150, 97-114.	1.6	78
17	Water scarcity and oil palm expansion: social views and environmental processes. Ecology and Society, 2016, 21, .	2.3	77
18	Long-term demographic fluctuations in an orchid species driven by weather: implications for conservation planning. Journal of Applied Ecology, 2006, 43, 313-324.	4.0	73

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19	Economic and ecological trade-offs of agricultural specialization at different spatial scales. Ecological Economics, 2016, 122, 111-120.	5.7	72
20	Minimum recruitment frequency in plants with episodic recruitment. Oecologia, 2004, 141, 363-372.	2.0	71
21	Large shrubs increase soil nutrients in a semi-arid savanna. Geoderma, 2018, 310, 153-162.	5.1	65
22	Asymmetric tree growth at the stand level: Random crown patterns and the response to slope. Forest Ecology and Management, 2007, 242, 165-174.	3.2	64
23	Analysis of the population dynamics of Acacia trees in the Negev desert, Israel with a spatially-explicit computer simulation model. Ecological Modelling, 1999, 117, 203-224.	2.5	59
24	The rhythm of savanna patch dynamics. Journal of Ecology, 2007, 95, 1306-1315.	4.0	54
25	Do spatial effects play a role in the spatial distribution of desert-dwelling Acacia raddiana ?. Journal of Vegetation Science, 2000, 11, 473-484.	2.2	51
26	Spatial scales of interactions among bacteria and between bacteria and the leaf surface. FEMS Microbiology Ecology, 2015, 91, .	2.7	50
27	Multi-proxy evidence for competition between savanna woody species. Perspectives in Plant Ecology, Evolution and Systematics, 2008, 10, 63-72.	2.7	46
28	Scale-dependent competition at the stand level assessed from crown areas. Forest Ecology and Management, 2008, 255, 2478-2485.	3.2	46
29	Effect of spatial processes and topography on structuring species assemblages in a Sri Lankan dipterocarp forest. Ecology, 2014, 95, 376-386.	3.2	46
30	Land-use change in oil palm dominated tropical landscapesâ€"An agent-based model to explore ecological and socio-economic trade-offs. PLoS ONE, 2018, 13, e0190506.	2.5	46
31	Biological control in Indonesian oil palm potentially enhanced by landscape context. Agriculture, Ecosystems and Environment, 2016, 232, 141-149.	5.3	44
32	Minimum forest cover required for sustainable water flow regulation of a watershed: a case study in Jambi Province, Indonesia. Hydrology and Earth System Sciences, 2018, 22, 581-594.	4.9	43
33	Spatial distribution and association patterns in a tropical evergreen broadâ€leaved forest of northâ€central Vietnam. Journal of Vegetation Science, 2016, 27, 318-327.	2.2	40
34	Big is not better: small Acacia mellifera shrubs are more vital after fire. African Journal of Ecology, 2005, 43, 131-136.	0.9	38
35	The importance of heterogeneity revisited from a multiscale and multitaxa approach. Biological Conservation, 2013, 166, 212-220.	4.1	37
36	The <scp>nlrx r</scp> package: A nextâ€generation framework for reproducible NetLogo model analyses. Methods in Ecology and Evolution, 2019, 10, 1854-1863.	5.2	36

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37	The role of size inequality in self-thinning: A pattern-oriented simulation model for arid savannas. Ecological Modelling, 2008, 210, 431-445.	2.5	35
38	Spacing patterns of an Acacia tree in the Kalahari over a 61-year period: How clumped becomes regular and vice versa. Acta Oecologica, 2008, 33, 355-364.	1.1	35
39	Evaluating the trade-off between machinery efficiency and loss of biodiversity-friendly habitats in arable landscapes: The role of field size. Agriculture, Ecosystems and Environment, 2009, 129, 361-366.	5.3	32
40	Environmental heterogeneity predicts global species richness patterns better than area. Global Ecology and Biogeography, 2021, 30, 842-851.	5.8	32
41	SATCHMO: A spatial simulation model of growth, competition, and mortality in cycling savanna patches. Ecological Modelling, 2007, 209, 377-391.	2.5	31
42	Neighborhood diversity of large trees shows independent species patterns in a mixed dipterocarp forest in Sri Lanka. Ecology, 2015, 96, 1823-1834.	3.2	30
43	Patch dynamics integrate mechanisms for savanna treeâ€“grass coexistence. Basic and Applied Ecology, 2009, 10, 491-499.	2.7	27
44	Disentangling facilitation and seed dispersal from environmental heterogeneity as mechanisms generating associations between savanna plants. Journal of Vegetation Science, 2011, 22, 1038-1048.	2.2	27
45	Size dominance regulates tree spacing more than competition within height classes in tropical Cameroon. Journal of Tropical Ecology, 2011, 27, 93-102.	1.1	26
46	Are savannas patch-dynamic systems? A landscape model. Ecological Modelling, 2009, 220, 3576-3588.	2.5	25
47	Clarifying misunderstandings regarding vegetation selfâ€organisation and spatial patterns of fairy circles in <scp>N</scp>amibia: a response to recent termite hypotheses. Ecological Entomology, 2015, 40, 669-675.	2.2	25
48	Longâ€term mortality patterns of the deepâ€rooted Acacia erioloba : The middle class shall die!. Journal of Vegetation Science, 2006, 17, 473-480.	2.2	24
49	How can we bring together empiricists and modellers in functional biodiversity research?. Basic and Applied Ecology, 2013, 14, 93-101.	2.7	24
50	Interactions between ecological, evolutionary and environmental processes unveil complex dynamics of insular plant diversity. Journal of Biogeography, 2019, 46, 1582-1597.	3.0	24
51	Non-linear effects of pesticide application on biodiversity-driven ecosystem services and disservices in a cacao agroecosystem: A modeling study. Basic and Applied Ecology, 2013, 14, 115-125.	2.7	23
52	Extinction and Spatial Structure in Simulation Models. Conservation Biology, 2002, 16, 117-128.	4.7	22
53	Multi-scale patterns and bush encroachment in an arid savanna with a shallow soil layer. Journal of Vegetation Science, 2005, 16, 311.	2.2	22
54	Assessing predicted isolation effects from the general dynamic model of island biogeography with an ecoâ€evolutionary model for plants. Journal of Biogeography, 2019, 46, 1569-1581.	3.0	21

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55	A multiâ€scale study of Australian fairy circles using soil excavations and droneâ€based image analysis. Ecosphere, 2019, 10, e02620.	2.2	21
56	Long-term mortality patterns of the deep-rooted Acacia erioloba: The middle class shall die!. Journal of Vegetation Science, 2006, 17, 473.	2.2	21
57	Mitigation options for improving the ecosystem function of water flow regulation in a watershed with rapid expansion of oil palm plantations. Sustainability of Water Quality and Ecology, 2016, 8, 4-13.	2.0	20
58	Trees, grass, and fire in humid savannasâ€"The importance of life history traits and spatial processes. Ecological Modelling, 2016, 320, 135-144.	2.5	20
59	Spatial and Biological Aspects of Reserve Design. Environmental Modeling and Assessment, 2002, 7, 115-122.	2.2	17
60	Spatial distributions of tropical tree species in northern Vietnam under environmentally variable site conditions. Journal of Forestry Research, 2014, 25, 257-268.	3.6	17
61	Conservation Biocontrol in Fragmented Landscapes: Persistence and Parasitation in a Host-Parasitoid Model. Open Ecology Journal, 2009, 2, 52-61.	2.0	17
62	Bridging ecology and physics: Australian fairy circles regenerate following model assumptions on ecohydrological feedbacks. Journal of Ecology, 2021, 109, 399-416.	4.0	16
63	DEMOGRAPHIC STOCHASTICITY DOES NOT PREDICT PERSISTENCE OF GECKO POPULATIONS. , 2001, 11, 1738-1749.		15
64	Production and Robustness of a Cacao Agroecosystem: Effects of Two Contrasting Types of Management Strategies. PLoS ONE, 2013, 8, e80352.	2.5	14
65	Relative contribution of evapotranspiration and soil compaction to the fluctuation of catchment discharge: case study from a plantation landscape. Hydrological Sciences Journal, 2020, 65, 1239-1248.	2.6	13
66	Linking a spatially-explicit model of acacias to GIS and remotely-sensed data. Folia Geobotanica, 2000, 35, 211-230.	0.9	12
67	SpatialDemography: a spatially explicit, stageâ€structured, metacommunity model. Ecography, 2016, 39, 1129-1137.	4.5	10
68	Interaction between ungulates and bruchid beetles and its effect on Acacia trees: modeling the costs and benefits of seed dispersal to plant demography. Oecologia, 2011, 167, 97-105.	2.0	9
69	Validating the use of unique trait combinations for measuring multivariate functional richness. Methods in Ecology and Evolution, 2016, 7, 929-936.	5.2	9
70	PioLaG: a piosphere landscape generator for savanna rangeland modelling. Landscape Ecology, 2020, 35, 2061-2082.	4.2	9
71	High-resolution images and drone-based LiDAR reveal striking patterns of vegetation gaps in a wooded spinifex grassland of Western Australia. Landscape Ecology, 2022, 37, 829-845.	4.2	9
72	Reply to Walsh et al.: Hexagonal patterns of Australian fairy circles develop without correlation to termitaria. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E5368-9.	7.1	5

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73	Efficiency of sample-based indices for spatial pattern recognition of wild pistachio (Pistacia atlantica) trees in semi-arid woodlands. Journal of Forestry Research, 2016, 27, 583-594.	3.6	5
74	Revisiting Theronâ€™s hypothesis on the origin of fairy circles after four decades: Euphorbias are not the cause. Bmc Ecology and Evolution, 2021, 21, 102.	1.6	5
75	In the Rhythm of the Vegetation. German Research, 2010, 32, 12-16.	0.0	4
76	perspective: Learning new tricks from old trees: revisiting the savanna question. Frontiers of Biogeography, 2012, 2, .	1.8	3
77	EFForTS-LGraf: A landscape generator for creating smallholder-driven land-use mosaics. PLoS ONE, 2019, 14, e0222949.	2.5	3
78	Determining patch size. African Journal of Ecology, 2008, 46, 440-442.	0.9	2
79	Laser scanning advancing 3D forest ecology. , 2019, , .		1
80	Towards 3D tree spatial pattern analysis: Setting the cornerstone of LiDAR advancing 3D forest structural and spatial ecology. International Journal of Applied Earth Observation and Geoinformation, 2021, 103, 102506.	2.8	1
81	Im Rhythmus der Vegetation. Forschung, 2009, 34, 8-12.	0.0	0