

Robert J Scholes

List of Publications by Year in descending order

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Version: 2024-02-01

89
papers

23,111
citations

31976

53
h-index

56724

83
g-index

95
all docs

95
docs citations

95
times ranked

28149
citing authors

#	ARTICLE	IF	CITATIONS
1	TREE-GRASS INTERACTIONS IN SAVANNAS. Annual Review of Ecology, Evolution, and Systematics, 1997, 28, 517-544.	6.7	2,023
2	Science for managing ecosystem services: Beyond the Millennium Ecosystem Assessment. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 1305-1312.	7.1	1,736
3	The IPBES Conceptual Framework “connecting nature and people. Current Opinion in Environmental Sustainability, 2015, 14, 1-16.	6.3	1,658
4	The Global Carbon Cycle: A Test of Our Knowledge of Earth as a System. Science, 2000, 290, 291-296.	12.6	1,601
5	Scenarios for Global Biodiversity in the 21st Century. Science, 2010, 330, 1496-1501.	12.6	1,570
6	Determinants of woody cover in African savannas. Nature, 2005, 438, 846-849.	27.8	1,543
7	Recent patterns and mechanisms of carbon exchange by terrestrial ecosystems. Nature, 2001, 414, 169-172.	27.8	1,162
8	Essential Biodiversity Variables. Science, 2013, 339, 277-278.	12.6	1,150
9	Observations and modeling of biomass and soil organic matter dynamics for the grassland biome worldwide. Global Biogeochemical Cycles, 1993, 7, 785-809.	4.9	1,101
10	Principles for knowledge co-production in sustainability research. Nature Sustainability, 2020, 3, 182-190.	23.7	697
11	Greenness in semi-arid areas across the globe 1981–2007 – an Earth Observing Satellite based analysis of trends and drivers. Remote Sensing of Environment, 2012, 121, 144-158.	11.0	596
12	What limits fire? An examination of drivers of burnt area in Southern Africa. Global Change Biology, 2009, 15, 613-630.	9.5	590
13	Policy and technological constraints to implementation of greenhouse gas mitigation options in agriculture. Agriculture, Ecosystems and Environment, 2007, 118, 6-28.	5.3	459
14	ECOLOGY: Enhanced: Millennium Ecosystem Assessment: Research Needs. Science, 2006, 314, 257-258.	12.6	442
15	A biodiversity intactness index. Nature, 2005, 434, 45-49.	27.8	400
16	A Synthesis of Information on Rapid Land-cover Change for the Period 1981–2000. BioScience, 2005, 55, 115.	4.9	367
17	Biodiversity, climate change, and ecosystem services. Current Opinion in Environmental Sustainability, 2009, 1, 46-54.	6.3	337
18	Conundrums in mixed woody-herbaceous plant systems. Journal of Biogeography, 2003, 30, 1763-1777.	3.0	308

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19	IPCC reasons for concern regarding climate change risks. <i>Nature Climate Change</i> , 2017, 7, 28-37.	18.8	266
20	Limits to detectability of land degradation by trend analysis of vegetation index data. <i>Remote Sensing of Environment</i> , 2012, 125, 10-22.	11.0	253
21	Biogeochemical cycles and biodiversity as key drivers of ecosystem services provided by soils. <i>Soil</i> , 2015, 1, 665-685.	4.9	249
22	Approaches to defining a planetary boundary for biodiversity. <i>Global Environmental Change</i> , 2014, 28, 289-297.	7.8	236
23	Toward a Global Biodiversity Observing System. <i>Science</i> , 2008, 321, 1044-1045.	12.6	234
24	Africa burning: A thematic analysis of the Southern African Regional Science Initiative (SAFARI 2000). <i>Journal of Geophysical Research</i> , 2003, 108, n/a-n/a.	3.3	204
25	Multi-scale and cross-scale assessments of social-ecological systems and their ecosystem services. <i>Current Opinion in Environmental Sustainability</i> , 2013, 5, 16-25.	6.3	196
26	Southern African fire regimes as revealed by remote sensing. <i>International Journal of Wildland Fire</i> , 2010, 19, 861.	2.4	188
27	A full greenhouse gases budget of Africa: synthesis, uncertainties, and vulnerabilities. <i>Biogeosciences</i> , 2014, 11, 381-407.	3.3	162
28	Africa and the global carbon cycle. <i>Carbon Balance and Management</i> , 2007, 2, 3.	3.2	144
29	Downward flux of water through roots (i.e. inverse hydraulic lift) in dry Kalahari sands. <i>Oecologia</i> , 1998, 115, 460-462.	2.0	142
30	Diversity without representation. <i>Nature</i> , 2006, 442, 245-246.	27.8	139
31	What Next for Agriculture After Durban?. <i>Science</i> , 2012, 335, 289-290.	12.6	133
32	Leaf green-up in a semi-arid African savanna – separating tree and grass responses to environmental cues. <i>Journal of Vegetation Science</i> , 2007, 18, 583.	2.2	128
33	Essential Variables help to focus Sustainable Development Goals monitoring. <i>Current Opinion in Environmental Sustainability</i> , 2017, 26-27, 97-105.	6.3	126
34	Building a global observing system for biodiversity. <i>Current Opinion in Environmental Sustainability</i> , 2012, 4, 139-146.	6.3	125
35	Evaluation of MODIS gross primary productivity for Africa using eddy covariance data. <i>Remote Sensing of Environment</i> , 2013, 131, 275-286.	11.0	125
36	Biodiversity targets after 2010. <i>Current Opinion in Environmental Sustainability</i> , 2010, 2, 3-8.	6.3	124

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37	Scientific concepts for an integrated analysis of desertification. <i>Land Degradation and Development</i> , 2011, 22, 166-183.	3.9	122
38	Relationships Between Ecosystem Services: Comparing Methods for Assessing Tradeoffs and Synergies. <i>Ecological Economics</i> , 2018, 150, 96-106.	5.7	122
39	Climate and the inter-annual variability of fire in southern Africa: a meta-analysis using long-term field data and satellite-derived burnt area data. <i>Global Ecology and Biogeography</i> , 2010, 19, 794-809.	5.8	116
40	Exploring the potential of MODIS EVI for modeling gross primary production across African ecosystems. <i>Remote Sensing of Environment</i> , 2011, 115, 1081-1089.	11.0	113
41	Tree-grass co-existence in savanna: Interactions of rain and fire. <i>Journal of Theoretical Biology</i> , 2010, 267, 235-242.	1.7	103
42	CLIMATE CHANGE: Storing Carbon on Land. <i>Science</i> , 2001, 294, 1012-1013.	12.6	102
43	Designing protected areas to conserve riverine biodiversity: Lessons from a hypothetical redesign of the Kruger National Park. <i>Biological Conservation</i> , 2008, 141, 100-117.	4.1	93
44	Climate and desertification: looking at an old problem through new lenses. <i>Frontiers in Ecology and the Environment</i> , 2009, 7, 421-428.	4.0	93
45	Scenarios of biodiversity loss in southern Africa in the 21st century. <i>Global Environmental Change</i> , 2008, 18, 296-309.	7.8	90
46	Complexity in water and carbon dioxide fluxes following rain pulses in an African savanna. <i>Oecologia</i> , 2009, 161, 469-480.	2.0	89
47	Program on ecosystem change and society: an international research strategy for integrated social-ecological systems. <i>Current Opinion in Environmental Sustainability</i> , 2012, 4, 134-138.	6.3	89
48	Winter Is Coming: A Southern Hemisphere Perspective of the Environmental Drivers of SARS-CoV-2 and the Potential Seasonality of COVID-19. <i>International Journal of Environmental Research and Public Health</i> , 2020, 17, 5634.	2.6	82
49	The IPBES Global Assessment: Pathways to Action. <i>Trends in Ecology and Evolution</i> , 2020, 35, 407-414.	8.7	77
50	Nature: the many benefits of ecosystem services. <i>Nature</i> , 2006, 443, 749-749.	27.8	69
51	Biodiversity and ecosystem services science for a sustainable planet: the DIVERSITAS vision for 2012-2020. <i>Current Opinion in Environmental Sustainability</i> , 2012, 4, 101-105.	6.3	62
52	Canopy structure in savannas along a moisture gradient on Kalahari sands. <i>Global Change Biology</i> , 2004, 10, 292-302.	9.5	61
53	Influence of timing and spatial extent of savanna fires in southern Africa on atmospheric emissions. <i>Journal of Arid Environments</i> , 2003, 54, 395-404.	2.4	59
54	Climate change and ecosystem services. <i>Wiley Interdisciplinary Reviews: Climate Change</i> , 2016, 7, 537-550.	8.1	50

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55	Interacting Regional-Scale Regime Shifts for Biodiversity and Ecosystem Services. <i>BioScience</i> , 2014, 64, 665-679.	4.9	41
56	The Future of Semi-Arid Regions: A Weak Fabric Unravels. <i>Climate</i> , 2020, 8, 43.	2.8	39
57	The charcoal trap: Miombo forests and the energy needs of people. <i>Carbon Balance and Management</i> , 2011, 6, 5.	3.2	38
58	Test for Covid-19 seasonality and the risk of second waves. <i>One Health</i> , 2021, 12, 100202.	3.4	37
59	A method for calculating the variance and confidence intervals for tree biomass estimates obtained from allometric equations. <i>South African Journal of Science</i> , 2011, 107, .	0.7	36
60	Dust Unto Dust. <i>Science</i> , 2013, 342, 565-566.	12.6	36
61	A Conceptual Framework for Assessing the Benefits of a Global Earth Observation System of Systems. <i>IEEE Systems Journal</i> , 2008, 2, 338-348.	4.6	35
62	Observation and integrated Earth-system science: A roadmap for 2016–2025. <i>Advances in Space Research</i> , 2016, 57, 2037-2103.	2.6	35
63	Climate change and desertification: Where do we stand, where should we go?. <i>Global and Planetary Change</i> , 2008, 64, 105-110.	3.5	34
64	Taking the Mumbo Out of the Jumbo: Progress Towards a Robust Basis for Ecological Scaling. <i>Ecosystems</i> , 2017, 20, 4-13.	3.4	27
65	Assessing non-CO ₂ climate-forcing emissions and mitigation in sub-Saharan Africa. <i>Current Opinion in Environmental Sustainability</i> , 2014, 9-10, 65-72.	6.3	25
66	Estimates of CO ₂ fluxes over the city of Cape Town, South Africa, through Bayesian inverse modelling. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 4765-4801.	4.9	22
67	Towards a feasible and representative pan-African research infrastructure network for GHG observations. <i>Environmental Research Letters</i> , 2018, 13, 085003.	5.2	20
68	Ecosystem Services. , 2017, , 39-78.		19
69	A framework for deriving and triggering thresholds for management intervention in uncertain, varying and time-lagged systems. <i>Koedoe</i> , 2011, 53, .	0.9	17
70	Measuring uncertainty in estimates of biodiversity loss: The example of biodiversity intactness variance. <i>Biological Conservation</i> , 2008, 141, 1091-1094.	4.1	15
71	Evidence for facultative deciduousness in <i>Cyclophospermum mopane</i> in semi-arid African savannas. <i>Austral Ecology</i> , 2016, 41, 87-96.	1.5	15
72	Generating 275-m Resolution Land Surface Products From the Multi-Angle Imaging SpectroRadiometer Data. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2012, 50, 3980-3990.	6.3	14

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73	The role of climate, foliar stoichiometry and plant diversity on ecosystem carbon balance. <i>Global Change Biology</i> , 2020, 26, 7067-7078.	9.5	13
74	Key impacts of climate engineering on biodiversity and ecosystems, with priorities for future research. <i>Journal of Integrative Environmental Sciences</i> , 0, , 1-26.	2.5	11
75	Greenhouse gas observation network design for Africa. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2022, 72, 1824486.	1.6	8
76	Opportunities for an African greenhouse gas observation system. <i>Regional Environmental Change</i> , 2021, 21, 1.	2.9	8
77	An atmospheric inversion over the city of Cape Town: sensitivity analyses. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 7789-7816.	4.9	7
78	South African Food Security and Climate Change: Agriculture Futures. <i>Economics</i> , 2013, 7, .	0.6	7
79	Estimating carbon in savanna ecosystems: rational distribution of effort. <i>Mitigation and Adaptation Strategies for Global Change</i> , 2009, 14, 579-604.	2.1	6
80	Differing Responses to Rainfall Suggest More Than One Functional Type of Grassland in South Africa. <i>Remote Sensing</i> , 2018, 10, 2055.	4.0	6
81	Comparison of the genetic algorithm and incremental optimisation routines for a Bayesian inverse modelling based network design. <i>Inverse Problems</i> , 2018, 34, 055006.	2.0	6
82	Long-term sunspot forcing of savanna structure inferred from carbon and oxygen isotopes. <i>Geophysical Research Letters</i> , 2008, 35, .	4.0	5
83	Development of a Climate Forcing Observation System for Africa: Data-Related Considerations. <i>Data Science Journal</i> , 2019, 18, 42.	1.3	4
84	The climate impact of land use change in the miombo region of south central Africa. <i>Journal of Integrative Environmental Sciences</i> , 2020, 17, 187-203.	2.5	3
85	Functional Convergence in Ecosystem Carbon Exchange in Adjacent Savanna Vegetation Types of the Kruger National Park, South Africa. , 2010, , 77-95.		2
86	Spatial and temporal disaggregation of anthropogenic CO2 emissions from the City of Cape Town. <i>South African Journal of Science</i> , 2015, 111, 8.	0.7	2
87	Preface. <i>Environmental Monitoring and Assessment</i> , 1995, 38-38, vii-vii.	2.7	0
88	Using MISR full spatial resolution level 1B2 data to characterize the savannah environment around the Skukuza CSIR research site. , 2009, , .		0
89	Big-picture ecology for a small planet. <i>Koedoe</i> , 2015, 57, .	0.9	0