

# Roni Avissar

## List of Publications by Year in descending order

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63  
papers

7,194  
citations

81900

39  
h-index

106344

65  
g-index

67  
all docs

67  
docs citations

67  
times ranked

7583  
citing authors

#	ARTICLE	IF	CITATIONS
1	Trading Water for Carbon with Biological Carbon Sequestration. <i>Science</i> , 2005, 310, 1944-1947.	12.6	1,014
2	Mechanisms of long-distance dispersal of seeds by wind. <i>Nature</i> , 2002, 418, 409-413.	27.8	565
3	Interactions between the atmosphere and terrestrial ecosystems: influence on weather and climate. <i>Global Change Biology</i> , 1998, 4, 461-475.	9.5	524
4	The local and global effects of Amazon deforestation. <i>Journal of Geophysical Research</i> , 2002, 107, LBA 55-1.	3.3	354
5	Protecting climate with forests. <i>Environmental Research Letters</i> , 2008, 3, 044006.	5.2	313
6	An Evaluation of the Scale at which Ground-Surface Heat Flux Patchiness Affects the Convective Boundary Layer Using Large-Eddy Simulations. <i>Journals of the Atmospheric Sciences</i> , 1998, 55, 2666-2689.	1.7	253
7	Impact of Land-Surface Moisture Variability on Local Shallow Convective Cumulus and Precipitation in Large-Scale Models. <i>Journal of Applied Meteorology and Climatology</i> , 1994, 33, 1382-1401.	1.7	237
8	Representation of heterogeneity effects in Earth system modeling: Experience from land surface modeling. <i>Reviews of Geophysics</i> , 1997, 35, 413-437.	23.0	203
9	Three-dimensional numerical study of shallow convective clouds and precipitation induced by land surface forcing. <i>Journal of Geophysical Research</i> , 1996, 101, 7499-7518.	3.3	192
10	Global Hydroclimatological Teleconnections Resulting from Tropical Deforestation. <i>Journal of Hydrometeorology</i> , 2005, 6, 134-145.	1.9	186
11	The climatic impacts of land surface change and carbon management, and the implications for climate-change mitigation policy. <i>Climate Policy</i> , 2003, 3, 149-157.	5.1	177
12	Impact of land use/land cover change on regional hydrometeorology in Amazonia. <i>Journal of Geophysical Research</i> , 2002, 107, LBA 4-1.	3.3	163
13	Atmospheric Disturbances Caused by Human Modification of the Landscape. <i>Bulletin of the American Meteorological Society</i> , 2001, 82, 269-281.	3.3	160
14	Conceptual aspects of a statistical-dynamical approach to represent landscape subgrid-scale heterogeneities in atmospheric models. <i>Journal of Geophysical Research</i> , 1992, 97, 2729-2742.	3.3	145
15	Soil structure is an important omission in Earth System Models. <i>Nature Communications</i> , 2020, 11, 522.	12.8	138
16	The Impact of Spatial Variability of Land-Surface Characteristics on Land-Surface Heat Fluxes. <i>Journal of Climate</i> , 1994, 7, 527-537.	3.2	128
17	The Impact of Land-Surface Wetness Heterogeneity on Mesoscale Heat Fluxes. <i>Journal of Applied Meteorology and Climatology</i> , 1994, 33, 1323-1340.	1.7	126
18	Finite element tree crown hydrodynamics model (FETCH) using porous media flow within branching elements: A new representation of tree hydrodynamics. <i>Water Resources Research</i> , 2005, 41, .	4.2	123

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19	What Controls Evapotranspiration in the Amazon Basin?. <i>Journal of Hydrometeorology</i> , 2007, 8, 380-395.	1.9	123
20	Effects of canopy heterogeneity, seed abscission and inertia on wind-driven dispersal kernels of tree seeds. <i>Journal of Ecology</i> , 2008, 96, 569-580.	4.0	122
21	Regional Impacts of Future Land-Cover Changes on the Amazon Basin Wet-Season Climate. <i>Journal of Climate</i> , 2008, 21, 1153-1170.	3.2	113
22	The representation of continental surface processes in atmospheric models. <i>Reviews of Geophysics</i> , 1990, 28, 35-52.	23.0	112
23	The Large-Scale Biosphere-Atmosphere Experiment in Amazonia (LBA): Insights and future research needs. <i>Journal of Geophysical Research</i> , 2002, 107, LBA 54-1.	3.3	102
24	Long-distance biological transport processes through the air: can nature's complexity be unfolded in silico?. <i>Diversity and Distributions</i> , 2005, 11, 131-137.	4.1	98
25	Exploring the Effects of Microscale Structural Heterogeneity of Forest Canopies Using Large-Eddy Simulations. <i>Boundary-Layer Meteorology</i> , 2009, 132, 351-382.	2.3	93
26	Development and Analysis of Prognostic Equations for Mesoscale Kinetic Energy and Mesoscale (Subgrid Scale) Fluxes for Large-Scale Atmospheric Models. <i>Journals of the Atmospheric Sciences</i> , 1993, 50, 3751-3774.	1.7	92
27	The Regional Evapotranspiration of the Amazon. <i>Journal of Hydrometeorology</i> , 2004, 5, 100-109.	1.9	81
28	Scales of response of the convective boundary layer to land-surface heterogeneity. <i>Geophysical Research Letters</i> , 2000, 27, 533-536.	4.0	80
29	Effects of Tropical Deforestation on Global Hydroclimate: A Multimodel Ensemble Analysis. <i>Journal of Climate</i> , 2009, 22, 1124-1141.	3.2	74
30	Effects of Deforestation on Spatiotemporal Distributions of Precipitation in South America. <i>Journal of Climate</i> , 2011, 24, 2147-2163.	3.2	74
31	The Importance of Mesoscale Circulations Generated by Subgrid-Scale Landscape Heterogeneities in General Circulation Models. <i>Journal of Climate</i> , 1995, 8, 191-205.	3.2	70
32	A Study of Persistence in the Land-Atmosphere System Using a General Circulation Model and Observations. <i>Journal of Climate</i> , 1999, 12, 2139-2153.	3.2	63
33	Using Similarity Theory to Parameterize Mesoscale Heat Fluxes Generated by Subgrid-Scale Landscape Discontinuities in GCMs. <i>Journal of Climate</i> , 1995, 8, 932-951.	3.2	58
34	A statistical-dynamical approach to parameterize subgrid-scale land-surface heterogeneity in climate models. <i>Surveys in Geophysics</i> , 1991, 12, 155-178.	4.6	55
35	Simulated Changes in Northwest U.S. Climate in Response to Amazon Deforestation*. <i>Journal of Climate</i> , 2013, 26, 9115-9136.	3.2	53
36	Preface to special issue on the Large-Scale Biosphere-Atmosphere Experiment in Amazonia (LBA). <i>Journal of Geophysical Research</i> , 2002, 107, LBA 1-1.	3.3	50

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37	The Hydrometeorology of a Deforested Region of the Amazon Basin. <i>Journal of Hydrometeorology</i> , 2006, 7, 1028-1042.	1.9	45
38	A Study of Persistence in the Land-Atmosphere System with a Fourth-Order Analytical Model. <i>Journal of Climate</i> , 1999, 12, 2154-2168.	3.2	43
39	A preferred scale for landscape forced mesoscale circulations?. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	43
40	Timing and flight mode of departure in migrating European bee-eaters in relation to multi-scale meteorological processes. <i>Behavioral Ecology and Sociobiology</i> , 2011, 65, 1353-1365.	1.4	40
41	Scaling of land-atmosphere interactions: An atmospheric modelling perspective. <i>Hydrological Processes</i> , 1995, 9, 679-695.	2.6	37
42	Observations of leaf stomatal conductance at the canopy scale: An atmospheric modeling perspective. <i>Boundary-Layer Meteorology</i> , 1993, 64, 127-148.	2.3	36
43	The Global Energy and Water Cycle Experiment (GEWEX) Continental-Scale International Project (GCIP): An overview. <i>Journal of Geophysical Research</i> , 1996, 101, 7139-7147.	3.3	36
44	Sensitivity of simulated mesoscale atmospheric circulations resulting from landscape heterogeneity to aspects of model configuration. <i>Journal of Geophysical Research</i> , 2002, 107, LBA 8-1.	3.3	36
45	The local and global effects of Southeast Asian deforestation. <i>Geophysical Research Letters</i> , 2005, 32, .	4.0	35
46	Which type of soil-vegetation-atmosphere transfer scheme is needed for general circulation models: a proposal for a higher-order scheme. <i>Journal of Hydrology</i> , 1998, 212-213, 136-154.	5.4	32
47	Sensitivity of the water resources of Rio Yaqui Basin, Mexico, to agriculture extensification under multiscale climate conditions. <i>Water Resources Research</i> , 2009, 45, .	4.2	27
48	Sensitivity of shallow convective precipitation induced by land surface heterogeneities to dynamical and cloud microphysical parameters. <i>Journal of Geophysical Research</i> , 1996, 101, 7477-7497.	3.3	26
49	The local and global effects of African deforestation. <i>Geophysical Research Letters</i> , 2005, 32, n/a-n/a.	4.0	26
50	Toward a parameterization of mesoscale fluxes and moist convection induced by landscape heterogeneity. <i>Journal of Geophysical Research</i> , 1999, 104, 19515-19533.	3.3	23
51	Mass conservation and atmospheric dynamics in the Regional Atmospheric Modeling System (RAMS). <i>Environmental Fluid Mechanics</i> , 2005, 5, 109-134.	1.6	21
52	A Precipitation Climatology and Dataset Intercomparison for the Western United States. <i>Journal of Hydrometeorology</i> , 2008, 9, 825-841.	1.9	21
53	Sensitivity of model-simulated summertime precipitation over the Mississippi River Basin to the spatial distribution of initial soil moisture. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	20
54	A virtual canopy generator (V-CaGe) for modelling complex heterogeneous forest canopies at high resolution. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2007, 59, 566-576.	1.6	19

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55	The Oceanâ€“Landâ€“Atmosphere Model: Optimization and Evaluation of Simulated Radiative Fluxes and Precipitation. <i>Monthly Weather Review</i> , 2010, 138, 1923-1939.	1.4	18
56	Simulated Links between Deforestation and Extreme Cold Events in South America. <i>Journal of Climate</i> , 2012, 25, 3851-3866.	3.2	16
57	An Analysis of Precipitation Variability, Persistence, and Observational Data Uncertainty in the Western United States. <i>Journal of Hydrometeorology</i> , 2008, 9, 843-865.	1.9	15
58	The Duke University Helicopter Observation Platform. <i>Bulletin of the American Meteorological Society</i> , 2009, 90, 939-954.	3.3	13
59	Compensation for lateral drift due to crosswind in migrating European Bee-eaters. <i>Journal of Ornithology</i> , 2014, 155, 745-753.	1.1	11
60	The impacts of the Luni-Solar oscillation on the Arctic oscillation. <i>Geophysical Research Letters</i> , 2005, 32, n/a-n/a.	4.0	10
61	Sensitivity of Ice Storms in the Southeastern United States to Atlantic SSTâ€“Insights from a Case Study of the December 2002 Storm. <i>Monthly Weather Review</i> , 2006, 134, 1454-1464.	1.4	9
62	Implications of tropical deforestation for regional and global hydroclimate. <i>Geophysical Monograph Series</i> , 2004, , 73-83.	0.1	5
63	Bridging the gap between microscale land-surface processes and land-atmosphere interactions at the scale of GCMâ€™s. <i>AIP Conference Proceedings</i> , 1992, , .	0.4	1