Andrea Flossmann

List of Publications by Year
in descending order

88 papers	4,636 citations
35 h-index (109264)	66 g-index (102432)
97 all docs	97 docs citations
97 times ranked	5754 citing authors

#	Article	IF	Citations
1	Soil Water Balance and Ecosystem Response to Climate Change. American Naturalist, 2004, 164, 625-632.	1.0	554
2	Changes in rainfall seasonality in the tropics. Nature Climate Change, 2013, 3, 811-815.	8.1	464
3	Water resources transfers through Chinese interprovincial and foreign food trade. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 9774-9779.	3.3	199
4	The ecohydrological role of soil texture in a water-limited ecosystem. Water Resources Research, 2001, 37, 2863-2872.	1.7	181
5	River networks as ecological corridors: A complex systems perspective for integrating hydrologic, geomorphologic, and ecologic dynamics. Water Resources Research, 2009, 45, .	1.7	148
6	Balancing water resource conservation and food security in China. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 4588-4593.	3.3	145
7	Nonlinear Dynamics of Soil Moisture at Climate Scales: 1. Stochastic Analysis. Water Resources Research, 1991, 27, 1899-1906.	1.7	144
8	Long-term features of cloud microbiology at the puy de Dôme (France). Atmospheric Environment, 2012, 56, 88-100.	1.9	138
9	Coupled Dynamics of Photosynthesis, Transpiration, and Soil Water Balance. Part I: Upscaling from Hourly to Daily Level. Journal of Hydrometeorology, 2004, 5, 546-558.	0.7	119
10	Challenges in humid land ecohydrology: Interactions of water table and unsaturated zone with climate, soil, and vegetation. Water Resources Research, 2007, 43, .	1.7	109
11	Nonlinear storage–discharge relations and catchment streamflow regimes. Water Resources Research, 2009, 45, .	1.7	100
12	Ecohydrology-a challenging multidisciplinary research perspective / Ecohydrologie: une perspective stimulante de recherche multidisciplinaire. Hydrological Sciences Journal, 2002, 47, 811-821.	1.2	97
13	Geomorphic controls on elevational gradients of species richness. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 1737-1742.	3.3	97
14	Classification of clouds sampled at the puy de Dôme (France) based on 10 yr of monitoring of their physicochemical properties. Atmospheric Chemistry and Physics, 2014, 14, 1485-1506.	1.9	92
15	Tree-grass coexistence in Savannas: The role of spatial dynamics and climate fluctuations. Geophysical Research Letters, 1999, 26, 247-250.	1.5	84
16	Toward a unified science of the Earth's surface: Opportunities for synthesis among hydrology, geomorphology, geochemistry, and ecology. Water Resources Research, 2006, 42, .	1.7	83
17	Tree-grass competition in space and time: Insights from a simple cellular automata model based on ecohydrological dynamics. Water Resources Research, 2002, 38, 18-1-18-15.	1.7	80
18	Ecohydrology of groundwater–dependent ecosystems: 1. Stochastic water table dynamics. Water Resources Research, 2009, 45, .	1.7	80

#	Article	IF	Citations
19	A review of our understanding of the aerosol–cloud interaction from the perspective of a bin resolved cloud scale modelling. Atmospheric Research, 2010, 97, 478-497.	1.8	76
20	Ecohydrological optimization of pattern and processes in water‐limited ecosystems: A trade‐off‐based hypothesis. Water Resources Research, 2009, 45, .	1.7	71
21	Geomorphic signatures on Brutsaert base flow recession analysis. Water Resources Research, 2013, 49, 5462-5472.	1.7	70
22	Intensive or extensive use of soil moisture: Plant strategies to cope with stochastic water availability. Geophysical Research Letters, 2001, 28, 4495-4497.	1.5	68
23	On the ecohydrology of structurally heterogeneous semiarid landscapes. Water Resources Research, 2006, 42, .	1.7	64
24	Ecohydrological model of flow duration curves and annual minima. Water Resources Research, 2008, 44, .	1.7	64
25	Soil moisture and plant stress dynamics along the Kalahari precipitation gradient. Journal of Geophysical Research, 2003, 108, n/a-n/a.	3.3	63
26	Feasible optimality of vegetation patterns in river basins. Geophysical Research Letters, 2004, 31, n/a-n/a.	1.5	59
27	Review of Advances in Precipitation Enhancement Research. Bulletin of the American Meteorological Society, 2019, 100, 1465-1480.	1.7	56
28	Ecohydrology of groundwater‐dependent ecosystems: 2. Stochastic soil moisture dynamics. Water Resources Research, 2009, 45, .	1.7	49
29	HYDROLOGICALLY DRIVEN HIERARCHICAL COMPETITION–COLONIZATION MODELS: THE IMPACT OF INTERANNUAL CLIMATE FLUCTUATIONS. Ecological Monographs, 2003, 73, 207-222.	2.4	48
30	Interaction of Aerosol Particles and Clouds. Journals of the Atmospheric Sciences, 1998, 55, 879-887.	0.6	46
31	Comparative study of ecohydrological streamflow probability distributions. Water Resources Research, 2010, 46, .	1.7	45
32	Relation between rainfall intensity and savanna tree abundance explained by water use strategies. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 12992-12996.	3.3	44
33	Stochastic soil water balance under seasonal climates. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2015, 471, 20140623.	1.0	43
34	How restructuring river connectivity changes freshwater fish biodiversity and biogeography. Water Resources Research, 2011, 47, .	1.7	40
35	Metapopulation capacity of evolving fluvial landscapes. Water Resources Research, 2015, 51, 2696-2706.	1.7	39
36	Tragedy of the commons in plant water use. Water Resources Research, 2006, 42, .	1.7	38

#	ARTICLE	IF	CITATIONS
37	The scavenging of two different types of marine aerosol particles calculated using a two-dimensional detailed cloud model. Tellus, Series B: Chemical and Physical Meteorology, 1991, 43, 301-321.	0.8	36
38	Coupled hydrologic and vegetation dynamics in wetland ecosystems. Water Resources Research, 2008, 44, .	1.7	36
39	Tree Canopy Effects on Simulated Water Stress in Southern African Savannas. Ecosystems, 2005, 8, 17-32.	1.6	34
40	Daily streamflow analysis based on a two‐scaled gamma pulse model. Water Resources Research, 2010, 46, .	1.7	32
41	Metabolic principles of river basin organization. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 11751-11755.	3.3	30
42	The Cloud Ice Mountain Experiment (CIME) 1998: experiment overview and modelling of the microphysical processes during the seeding by isentropic gas expansion. Atmospheric Research, 2001, 58, 231-265.	1.8	28
43	Cholera in the Lake Kivu region (DRC): Integrating remote sensing and spatially explicit epidemiological modeling. Water Resources Research, 2014, 50, 5624-5637.	1.7	27
44	An experiment to measure raindrop collection efficiencies: influence of rear capture. Atmospheric Measurement Techniques, 2014, 7, 1321-1330.	1.2	26
45	CÃ©zeaux-Aulnat-Opme-Puy De DÃ´me: a multi-site for the long-term survey of the tropospheric composition and climate change. Atmospheric Measurement Techniques, 2020, 13, 3413-3445.	1.2	26
46	An ecohydrological approach to predicting hillslope‐scale vegetation patterns in dryland ecosystems. Water Resources Research, 2012, 48, .	1.7	25
47	On neutral metacommunity patterns of river basins at different scales of aggregation. Water Resources Research, 2009, 45, .	1.7	24
48	Stochastic description of water table fluctuations in wetlands. Geophysical Research Letters, 2010, 37, .	1.5	23
49	The importance of new collection efficiency values including the effect of rear capture for the below-cloud scavenging of aerosol particles. Atmospheric Research, 2014, 142, 57-66.	1.8	23
50	The influence of stochastic soil moisture dynamics on gaseous emissions of NO, N2O, and N2. Hydrological Sciences Journal, 2003, 48, 781-798.	1.2	21
51	On the spatial and temporal sampling of soil moisture fields. Water Resources Research, 2006, 42, .	1.7	21
52	A numerical study of the effects of the aerosol particle spectrum on the development of the ice phase and precipitation formation. Atmospheric Research, 2006, 80, 15-45.	1.8	21
53	On the role of human mobility in the spread of cholera epidemics: towards an epidemiological movement ecology. Ecohydrology, 2012, 5, 531-540.	1.1	21
54	Probabilistic model predicts dynamics of vegetation biomass in a desert ecosystem in NW China. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E4944-E4950.	3.3	21

#	Article	IF	Citations
55	The role of boundary layer aerosol particles for the development of deep convective clouds: A high-resolution 3D model with detailed (bin) microphysics applied to CRYSTAL-FACE. Atmospheric Research, 2009, 91, 62-78.	1.8	17
56	From random variability to ordered structures: a search for general synthesis in ecohydrology. Ecohydrology, 2013, 6, 333-342.	1.1	17
57	The influence of aerosol particle number and hygroscopicity on the evolution of convective cloud systems and their precipitation: A numerical study based on the COPS observations on 12 August 2007. Atmospheric Research, 2010, 98, 40-56.	1.8	16
58	Theoretical study of aerosol particle electroscavenging by clouds. Journal of Aerosol Science, 2019, 135, 1-20.	1.8	16
59	The effect of cloud-processing of aerosol particles on clouds and radiation. Tellus, Series B: Chemical and Physical Meteorology, 2022, 50, 478.	0.8	14
60	Point rainfall statistics for ecohydrological analyses derived from satellite integrated rainfall measurements. Water Resources Research, 2015, 51, 2974-2985.	1.7	14
61	Probabilistic structure of the distance between tributaries of given size in river networks. Water Resources Research, 2007, 43, .	1.7	13
62	Scaling properties of tidal networks. Water Resources Research, 2014, 50, 4585-4602.	1.7	13
63	Behaviour of H2O2, NH3, and black carbon in mixed-phase clouds during CIME. Atmospheric Research, 2001, 58, 315-336.	1.8	12
64	Stochastic coupling of rainfall and biomass dynamics. Water Resources Research, 2007, 43, .	1.7	12
65	Experimental evidence of the rear capture of aerosol particles by raindrops. Atmospheric Chemistry and Physics, 2017, 17, 4159-4176.	1.9	12
66	Plant biomass and soil moisture dynamics: analytical results. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2015, 471, 20150179.	1.0	11
67	Cloud Processing of Aerosol Particles in Marine Stratocumulus Clouds. Atmosphere, 2019, 10, 520.	1.0	10
68	Small scale topography influence on the formation of three convective systems observed during COPS over the Vosges Mountains. Meteorologische Zeitschrift, 2013, 22, 395-411.	0.5	9
69	Comparison of observed and modelled hailstone spectra during a severe storm over the Northern Pyrenean foothills. Atmospheric Research, 2003, 67-68, 685-703.	1.8	8
70	The continuous melting process in a cloud-scale model using a bin microphysics scheme. Quarterly Journal of the Royal Meteorological Society, 2014, 140, 1986-1996.	1.0	8
71	Modeling belowground water table fluctuations in the Everglades. Water Resources Research, 2010, 46, .	1.7	7
72	Contribution of Phoretic and Electrostatic Effects to the Collection Efficiency of Submicron Aerosol Particles by Raindrops. Atmosphere, 2020, 11, 1028.	1.0	7

#	Article	IF	Citations
73	The effect of the impaction scavenging efficiency on the wet deposition by a convective warm cloud. Tellus, Series B: Chemical and Physical Meteorology, 1993, 45, 34-39.	0.8	6
74	Signatures of vegetational functional diversity in river basins. Water Resources Research, 2008, 44, .	1.7	6
75	Laboratory study of the collection efficiency of submicron aerosol particles by cloud droplets â€" Part II: Influence of electric charges. Atmospheric Chemistry and Physics, 2021, 21, 6963-6984.	1.9	6
76	Non-uniqueness of evapotranspiration due to spatial heterogeneity of plant species. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2006, 462, 2359-2371.	1.0	5
77	Laboratory study of the collection efficiency of submicron aerosol particles by cloud droplets â€" Part I: Influence of relative humidity. Atmospheric Chemistry and Physics, 2021, 21, 6945-6962.	1.9	5
78	Dynamics of wetland vegetation under multiple stresses: a case study of changes in sawgrass trait, structure, and productivity under coupled plantâ€soilâ€microbe dynamics. Ecohydrology, 2011, 4, 757-790.	1.1	3
79	Implications of rainfall temporal resolution for soil-moisture and transpiration modeling. Transport in Porous Media, 2007, 68, 37-67.	1.2	2
80	The sensitivity of intense rainfall to aerosol particle loading â€" a comparison of bin-resolved microphysics modelling with observations of heavy precipitation from HyMeX IOP7a. Natural Hazards and Earth System Sciences, 2020, 20, 1469-1483.	1.5	2
81	Demodulation of time series highlights impacts of hydrologic drivers on the Everglades ecosystem. Ecohydrology, 2015, 8, 204-213.	1.1	1
82	Water-limited vegetated ecosystems driven by stochastic rainfall: feedbacks and bimodality. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2018, 474, 20170649.	1.0	1
83	Oxygen Isotopic Fractionation in Clouds: A Binâ€Resolved Microphysics Model Approach. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD031753.	1.2	1
84	Study of Aerosol Scavenging by Rain in Case of a Radioactive Contamination of the Atmosphere. , 2012, , .		0
85	Evaluation of Two Cloud-Resolving Models Using Bin or Bulk Microphysics Representation for the HyMeX-IOP7a Heavy Precipitation Event. Atmosphere, 2020, 11, 1177.	1.0	0
86	Study of Aerosol Particle Scavenging by Rain, Experiments and Modelling. NATO Science for Peace and Security Series C: Environmental Security, 2014, , 169-174.	0.1	0
87	Cloud Processing of Aerosol Particles: Consequences for Precipitation?. Springer Proceedings in Complexity, 2016, , 219-223.	0.2	0
88	Theoretical Investigations of the Wet Deposition of Atmospheric Pollutants. , 0, , 45-70.		0