Catherine OttlÃ©

List of Publications by Year
in descending order

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111 papers	6,035 citations	81900 39 h-index	76900 74 g-index
128 all docs	128 docs citations	128 times ranked	7054 citing authors

#	Article	IF	Citations
1	Surface Urban Heat Island Across 419 Global Big Cities. Environmental Science & Technology, 2012, 46, 696-703.	10.0	864
2	Presentation and Evaluation of the IPSLâ€CM6Aâ€LR Climate Model. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS002010.	3.8	541
3	Partitioning global land evapotranspiration using CMIP5 models constrained by observations. Nature Climate Change, 2018, 8, 640-646.	18.8	219
4	Thermal remote sensing of land surface temperature from satellites: Current status and future prospects. International Journal of Remote Sensing, 1995, 12, 175-224.	1.0	208
5	Plant functional type classification for earth system models: results from the European Space Agency's Land Cover Climate Change Initiative. Geoscientific Model Development, 2015, 8, 2315-2328.	3.6	197
6	The AMMA Land Surface Model Intercomparison Project (ALMIP). Bulletin of the American Meteorological Society, 2009, 90, 1865-1880.	3.3	165
7	Deceleration of Chinaâ€™s human water use and its key drivers. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 7702-7711.	7.1	155
8	ORCHIDEE-MICT (v8.4.1), aÂland surface model for the high latitudes: model description and validation. Geoscientific Model Development, 2018, 11, 121-163.	3.6	135
9	Evaluation of global terrestrial evapotranspiration using state-of-the-art approaches in remote sensing, machine learning and land surface modeling. Hydrology and Earth System Sciences, 2020, 24, 1485-1509.	4.9	130
10	Analytical parameterization of canopy directional emissivity and directional radiance in the thermal infrared. Application on the retrieval of soil and foliage temperatures using two directional measurements. International Journal of Remote Sensing, 1997, 18, 2587-2621.	2.9	123
11	Assimilation of soil moisture inferred from infrared remote sensing in a hydrological model over the HAPEX-MOBILHY region. Journal of Hydrology, 1994, 158, 241-264.	5.4	121
12	The AMMA-CATCH experiment in the cultivated Sahelian area of south-west Niger â€“ Investigating water cycle response to a fluctuating climate and changing environment. Journal of Hydrology, 2009, 375, 34-51.	5.4	114
13	Estimation of land surface temperature with NOAA9 data. Remote Sensing of Environment, 1992, 40, 27-41.	11.0	113
14	The ISBA surface scheme in a macroscale hydrological model applied to the Hapex-Mobilhy area. Journal of Hydrology, 1999, 217, 75-96.	5.4	103
15	Land Surface Temperature product validation using NOAA's surface climate observation networksâ€”Scaling methodology for the Visible Infrared Imager Radiometer Suite (VIIRS). Remote Sensing of Environment, 2012, 124, 282-298.	11.0	101
16	Future directions for advanced evapotranspiration modeling: Assimilation of remote sensing data into crop simulation models and SVAT models. Irrigation and Drainage Systems, 2005, 19, 377-412.	0.5	98
17	Implementation of the CMIP6 Forcing Data in the IPSLâ€CM6Aâ€LR Model. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001940.	3.8	95
18	Tracking the early dispersion of contaminated sediment along rivers draining the Fukushima radioactive pollution plume. Anthropocene, 2013, 1, 23-34.	3.3	90

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19	The influence of local spring temperature variance on temperature sensitivity of spring phenology. Global Change Biology, 2014, 20, 1473-1480.	9.5	90
20	Effect of atmospheric absorption and surface emissivity on the determination of land surface temperature from infrared satellite data. International Journal of Remote Sensing, 1993, 14, 2025-2037.	2.9	82
21	Sequential Assimilation ofERS-1SAR Data into a Coupled Land Surfaceâ€“Hydrological Model Using an Extended Kalman Filter. Journal of Hydrometeorology, 2003, 4, 473-487.	1.9	81
22	Simulation of the water budget and the river flows of the Rhone basin. Journal of Geophysical Research, 1999, 104, 31145-31172.	3.3	76
23	Land water storage variability over West Africa estimated by Gravity Recovery and Climate Experiment (GRACE) and land surface models. Water Resources Research, 2011, 47, .	4.2	76
24	Surface soil moisture estimation from the synergistic use of the (multi-incidence and) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 547 Td (mul Environment, 2003, 86, 30-41.	11.0	73
25	Atmospheric corrections in the thermal infrared: global and water vapor dependent split-window algorithms-applications to ATSR and AVHRR data. IEEE Transactions on Geoscience and Remote Sensing, 1996, 34, 457-470.	6.3	72
26	The impact of typhoons on sediment connectivity: lessons learnt from contaminated coastal catchments of the Fukushima Prefecture (Japan). Earth Surface Processes and Landforms, 2017, 42, 306-317.	2.5	65
27	Evaluation of an improved intermediate complexity snow scheme in the ORCHIDEE land surface model. Journal of Geophysical Research D: Atmospheres, 2013, 118, 6064-6079.	3.3	63
28	IRSUTE. Remote Sensing of Environment, 1999, 68, 357-369.	11.0	62
29	Soil moisture mapping based on ASAR/ENVISAT radar data over a Sahelian region. International Journal of Remote Sensing, 2007, 28, 3547-3565.	2.9	62
30	Using a multiobjective approach to retrieve information on surface properties used in a SVAT model. Journal of Hydrology, 2004, 287, 214-236.	5.4	61
31	Water and energy budgets simulation over the AMMA-Niger super-site spatially constrained with remote sensing data. Journal of Hydrology, 2009, 375, 287-295.	5.4	56
32	Evaluation of the ERS 1/Synthetic Aperture Radar Capacity to Estimate Surface Soil Moisture: Two-Year Results Over the Naizin Watershed. Water Resources Research, 1995, 31, 975-982.	4.2	53
33	The MISTIGRI thermal infrared project: scientific objectives and mission specifications. International Journal of Remote Sensing, 2013, 34, 3437-3466.	2.9	52
34	Evolution of radioactive dose rates in fresh sediment deposits along coastal rivers draining Fukushima contamination plume. Scientific Reports, 2013, 3, 3079.	3.3	51
35	Land surface temperature retrieval over circumpolar Arctic using SSM/Iâ€“SSMIS and MODIS data. Remote Sensing of Environment, 2015, 162, 1-10.	11.0	51
36	A multi-layer land surface energy budget model for implicit coupling with global atmospheric simulations. Geoscientific Model Development, 2016, 9, 223-245.	3.6	51

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37	Determination of vegetation cover fraction by inversion of a four-parameter model based on isoline parametrization. Remote Sensing of Environment, 2007, 111, 553-566.	11.0	47
38	The ISBA surface scheme in a macroscale hydrological model applied to the Hapex-Mobilhy area. Journal of Hydrology, 1999, 217, 97-118.	5.4	43
39	Constraining a physically based Soil-Vegetation-Atmosphere Transfer model with surface water content and thermal infrared brightness temperature measurements using a multiobjective approach. Water Resources Research, 2005, 41, .	4.2	43
40	Evaluating the performance of land surface model ORCHIDEE-CANÂv1.0 on water and energy flux estimation with a single- and multi-layer energy budget scheme. Geoscientific Model Development, 2016, 9, 2951-2972.	3.6	43
41	Controls on winter ecosystem respiration in temperate and boreal ecosystems. Biogeosciences, 2011, 8, 2009-2025.	3.3	42
42	Contribution of Thermal Infrared Remote Sensing Data in Multiobjective Calibration of a Dual-Source SVAT Model. Journal of Hydrometeorology, 2006, 7, 404-420.	1.9	41
43	Multi-model comparison of a major flood in the groundwater-fed basin of the Somme River (France). Hydrology and Earth System Sciences, 2010, 14, 99-117.	4.9	40
44	Multi-scale data fusion using Dempster-Shafer evidence theory. Integrated Computer-Aided Engineering, 2003, 10, 9-22.	4.6	37
45	Improved Nearâ€Surface Continental Climate in IPSLâ€CM6Aâ€LR by Combined Evolutions of Atmospheric and Land Surface Physics. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS002005.	3.8	36
46	Improving the dynamics of Northern Hemisphere high-latitude vegetation in the ORCHIDEE ecosystem model. Geoscientific Model Development, 2015, 8, 2263-2283.	3.6	36
47	Land cover change detection at coarse spatial scales based on iterative estimation and previous state information. Remote Sensing of Environment, 2005, 95, 464-479.	11.0	35
48	Introduction of the soil/vegetation/atmosphere continuum in a conceptual rainfall/runoff model. Hydrological Sciences Journal, 1996, 41, 889-902.	2.6	34
49	Analysis of vegetation seasonality in Sahelian environments using MODIS LAI, in association with land cover and rainfall. Journal of Arid Environments, 2012, 84, 38-50.	2.4	34
50	Remote sensing applications to hydrological modeling. Journal of Hydrology, 1989, 105, 369-384.	5.4	32
51	SVAT modeling over the Alpilles-ReSeDA experiment: comparing SVAT models over wheat fields. Agronomy for Sustainable Development, 2002, 22, 651-668.	0.8	32
52	Monitoring land surface processes with thermal infrared data: Calibration of SVAT parameters based on the optimisation of diurnal surface temperature cycling features. Remote Sensing of Environment, 2008, 112, 872-887.	11.0	29
53	The Indian-French Trishna Mission: Earth Observation in the Thermal Infrared with High Spatio-Temporal Resolution. , 2018, , .		27
54	Spatio-temporal surface soil heat flux estimates from satellite data; results for the AMMA experiment at the Fakara (Niger) supersite. Agricultural and Forest Meteorology, 2012, 154-155, 55-66.	4.8	26

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55	Spring snow cover deficit controlled by intraseasonal variability of the surface energy fluxes. Environmental Research Letters, 2015, 10, 024018.	5.2	26
56	Estimation of total atmospheric water vapor content from split-window radiance measurements. Remote Sensing of Environment, 1997, 61, 410-418.	11.0	24
57	Use of various remote sensing land cover products for plant functional type mapping over Siberia. Earth System Science Data, 2013, 5, 331-348.	9.9	24
58	Contributions of Climate Change, CO2, Land-Use Change, and Human Activities to Changes in River Flow across 10 Chinese Basins. Journal of Hydrometeorology, 2018, 19, 1899-1914.	1.9	24
59	SEtHyS_Savannah: A multiple source land surface model applied to Sahelian landscapes. Agricultural and Forest Meteorology, 2009, 149, 1421-1432.	4.8	23
60	Land surface temperature retrieval techniques and applications. , 2004, , .		22
61	Monitoring energy and mass transfers during the Alpilles-ReSeDA experiment. Agronomy for Sustainable Development, 2002, 22, 597-610.	0.8	21
62	ERS scatterometer surface soil moisture analysis of two sites in the south and north of the Sahel region of West Africa. Journal of Hydrology, 2009, 375, 253-261.	5.4	20
63	Genetic particle filter application to land surface temperature downscaling. Journal of Geophysical Research D: Atmospheres, 2014, 119, 2131-2146.	3.3	19
64	Irrigation, damming, and streamflow fluctuations of the Yellow River. Hydrology and Earth System Sciences, 2021, 25, 1133-1150.	4.9	19
65	State-dependent errors in a land surface model across biomes inferred from eddy covariance observations on multiple timescales. Ecological Modelling, 2012, 246, 11-25.	2.5	18
66	Confronting Soil Moisture Dynamics from the ORCHIDEE Land Surface Model With the ESA-CCI Product: Perspectives for Data Assimilation. Remote Sensing, 2018, 10, 1786.	4.0	18
67	Conversion of 400-1100 nm vegetation albedo measurements into total shortwave broadband albedo using a canopy radiative transfer model. Agronomy for Sustainable Development, 2002, 22, 611-618.	0.8	18
68	Application of satellite remote sensing to estimate areal evapotranspiration over a watershed. Journal of Hydrology, 1990, 121, 321-333.	5.4	17
69	An improved SVAT model calibration strategy based on the optimisation of surface temperature temporal dynamics. Geophysical Research Letters, 2007, 34, .	4.0	17
70	Canopy bidirectional reflectance calculation based on Adding method and SAIL formalism: AddingS/AddingSD. Remote Sensing of Environment, 2008, 112, 3639-3655.	11.0	17
71	Estimation of the angular variation of the sea surface emissivity with the ATSR/ERS-1 data. Remote Sensing of Environment, 1994, 48, 302-308.	11.0	16
72	Impacts of Satellite-Based Snow Albedo Assimilation on Offline and Coupled Land Surface Model Simulations. PLoS ONE, 2015, 10, e0137275.	2.5	16

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73	Testing water fluxes and storage from two hydrology configurations within the ORCHIDEE land surface model across US semi-arid sites. Hydrology and Earth System Sciences, 2020, 24, 5203-5230.	4.9	16
74	Response to Comment on â€œSurface Urban Heat Island Across 419 Global Big Citiesâ€. Environmental Science & Technology, 2012, 46, 6889-6890.	10.0	15
75	Improvement of the Irrigation Scheme in the ORCHIDEE Land Surface Model and Impacts of Irrigation on Regional Water Budgets Over China. Journal of Advances in Modeling Earth Systems, 2020, 12, e2019MS001770.	3.8	15
76	Surface Temperature Downscaling From Multiresolution Instruments Based on Markov Models. IEEE Transactions on Geoscience and Remote Sensing, 2013, 51, 1588-1612.	6.3	14
77	Rainfall Intra-Seasonal Variability and Vegetation Growth in the Ferlo Basin (Senegal). Remote Sensing, 2016, 8, 66.	4.0	14
78	Causes of uncertainty in China's net primary production over the 21st century projected by the <scp>CMIP5</scp> Earth system models. International Journal of Climatology, 2016, 36, 2323-2334.	3.5	14
79	Evaluation of ORCHIDEE-MICT-simulated soil moisture over China and impacts of different atmospheric forcing data. Hydrology and Earth System Sciences, 2018, 22, 5463-5484.	4.9	13
80	Remote sensing of the land surface during the African Monsoon Multidisciplinary Analysis (AMMA). Atmospheric Science Letters, 2011, 12, 129-134.	1.9	12
81	Optimizing Lake Surface Water Temperature Simulations Over Large Lakes in China With FLake Model. Earth and Space Science, 2021, 8, e2021EA001737.	2.6	12
82	Multi-scale data fusion using Dempster-Shafer evidence theory. , 0, , .		11
83	Evaluating and Optimizing Surface Soil Moisture Drydowns in the ORCHIDEE Land Surface Model at In Situ Locations. Journal of Hydrometeorology, 2021, 22, 1025-1043.	1.9	10
84	FLuorescence EXplorer (FLEX): an optimised payload to map vegetation photosynthesis from space. , 2006, , .		9
85	Fusion of Vegetation Indices Using Continuous Belief Functions and Cautious-Adaptive Combination Rule. IEEE Transactions on Geoscience and Remote Sensing, 2008, 46, 1499-1513.	6.3	9
86	A New Land Surface Hydrology within the Noah-WRF Land-Atmosphere Mesoscale Model Applied to Semiarid Environment: Evaluation over the Dantiandou Kori (Niger). Advances in Meteorology, 2009, 2009, 1-13.	1.6	9
87	Testing the capability of <scp>ORCHIDEE</scp> land surface model to simulate <scp>A</scp>rctic ecosystems: Sensitivity analysis and siteâ€level model calibration. Journal of Advances in Modeling Earth Systems, 2017, 9, 1212-1230.	3.8	9
88	Hydro-meteorological modelling of the Rhone basin: general presentation and objectives. Physics and Chemistry of the Earth, 2001, 26, 443-453.	0.3	8
89	Quantifying and Reducing Uncertainty in Global Carbon Cycle Predictions: Lessons and Perspectives From 15ÂYears of Data Assimilation Studies With the ORCHIDEE Terrestrial Biosphere Model. Global Biogeochemical Cycles, 2022, 36, .	4.9	8
90	Downscaling Meteosat Land Surface Temperature over a Heterogeneous Landscape Using a Data Assimilation Approach. Remote Sensing, 2016, 8, 586.	4.0	7

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91	Effect of aerodynamic resistance modelling on SiSPAT-RS simulated surface fluxes. Agronomy for Sustainable Development, 2002, 22, 641-650.	0.8	7
92	Use of thermal infrared remote sensing for water budget studies. Advances in Space Research, 1991, 11, 163-167.	2.6	4
93	Further Insights into the Use of the Split-Window Covariance Technique for Precipitable Water Retrieval. Remote Sensing of Environment, 1999, 69, 84-86.	11.0	4
94	Automatic detection of field furrows from very high resolution optical imagery. International Journal of Remote Sensing, 2013, 34, 3467-3484.	2.9	4
95	Characterization of SWOT Water Level Errors on Seine Reservoirs and La BassÃ©e Gravel Pits: Impacts on Water Surface Energy Budget Modeling. Remote Sensing, 2020, 12, 2911.	4.0	4
96	Variational assimilation of land surface temperature within the ORCHIDEE Land Surface Model Version 1.2.6. Geoscientific Model Development, 2017, 10, 85-104.	3.6	3
97	Variance Based Sensitivity Analysis of FLake Lake Model for Global Land Surface Modeling. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2019JD031928.	3.3	3
98	Canopy Bidirectional Reflectance Calculation based on adding method and SAIL formalism. , 2007, , .		2
99	Subpixel Temperature Estimation from Low Resolution Thermal Infrared Remote Sensing. , 2008, , .		2
100	Introduction of a Realistic Soil-Vegetation Component in a Hydrological Model: Application to HAPEX-MOBILHY Experiment. , 1991, , 137-144.		2
101	Modeling subgrid lake energy balance in ORCHIDEE terrestrial scheme using the FLake lake model. Geoscientific Model Development, 2022, 15, 4275-4295.	3.6	2
102	Integration of remote sensing data into hydrological models for reservoir management. Hydrological Sciences Journal, 2002, 47, 159-161.	2.6	1
103	ModÃ©lisation hydro-mÃ©tÃ©orologique du bassin du RhÃ´ne : apport de la tÃ©lÃ©dÃ©tection spatiale. Houille Blanche, 2002, 88, 57-61.	0.3	1
104	Mesh size selection in a soil-biosphere-atmosphere transfer model. Journal of Environmental Engineering and Science, 2003, 2, 77-81.	0.8	1
105	Data Assimilation of Satellite Observations. , 2016, , 357-382.		1
106	Modeling Land Surface Fluxes from Uncertain Rainfall: A Case Study in the Sahel with Field-Driven Stochastic Rainfields. Atmosphere, 2020, 11, 465.	2.3	1
107	Quelques applications de la tÃ©lÃ©dÃ©tection Ã la physique des surfaces continentales. Annales Des Telecommunications/Annals of Telecommunications, 2001, 56, 617-631.	2.5	0
108	Comparison of measured and SISPAT-RS simulated brightness temperatures and reflectances at field scale during ReSeDA experiment. , 2002, 4542, 130.		0

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109	Surface soil moisture estimation using active microwave ERS wind scatterometer and SAR data. , 0, , .		0
110	Genetic Particle Smoother thermal sharpener: Methodology and application to pseudo-observations. , 2014, , .		0
111	Inversion of Surface Soil Moisture from Radar Altimetry Backscattering in Semi-Arid Environments. , 2018, , .		0