Petra DÃ¶ll

List of Publications by Year
in descending order

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115	22,578	28274	29157
papers	citations	55 h-index	104 g-index

177	177	177	20329
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Global sea-level budget and ocean-mass budget, with a focus on advanced data products and uncertainty characterisation. Earth System Science Data, 2022, 14, 411-447.	9.9	30
2	Making waves: Pulling the plugâ€"Climate change effects will turn gaining into losing streams with detrimental effects on groundwater quality. Water Research, 2022, 220, 118649.	11.3	11
3	Uncertainty of simulated groundwater recharge at different global warming levels: a global-scale multi-model ensemble study. Hydrology and Earth System Sciences, 2021, 25, 787-810.	4.9	65
4	The global water resources and use model WaterGAP v2.2d: model description and evaluation. Geoscientific Model Development, 2021, 14, 1037-1079.	3.6	139
5	Analyzing the Impact of Streamflow Drought on Hydroelectricity Production: A Globalâ€Scale Study. Water Resources Research, 2021, 57, e2020WR028087.	4.2	28
6	Soil moisture and streamflow deficit anomaly index: an approach to quantify drought hazards by combining deficit and anomaly. Natural Hazards and Earth System Sciences, 2021, 21, 1337-1354.	3.6	2
7	Understanding each other's models: an introduction and a standard representation of 16 global water models to support intercomparison, improvement, and communication. Geoscientific Model Development, 2021, 14, 3843-3878.	3.6	41
8	GMD perspective: The quest to improve the evaluation of groundwater representation in continental- to global-scale models. Geoscientific Model Development, 2021, 14, 7545-7571.	3.6	38
9	A globalâ€scale analysis of water storage dynamics of inland wetlands: Quantifying the impacts of human water use and manâ€made reservoirs as well as the unavoidable and avoidable impacts of climate change. Ecohydrology, 2020, 13, e2175.	2.4	10
10	Importance of Spatial Resolution in Global Groundwater Modeling. Ground Water, 2020, 58, 363-376.	1.3	23
11	Global-scale drought risk assessment for agricultural systems. Natural Hazards and Earth System Sciences, 2020, 20, 695-712.	3.6	136
12	Quantifying the impacts of human water use and climate variations on recent drying of Lake Urmia basin: the value of different sets of spaceborne and in situ data for calibrating a global hydrological model. Hydrology and Earth System Sciences, 2020, 24, 1939-1956.	4.9	40
13	Assessing global water mass transfers from continents to oceans over the period 1948â€“2016. Hydrology and Earth System Sciences, 2020, 24, 4831-4851.	4.9	21
14	Challenges in developing a global gradient-based groundwater model (G³M v1.0) for the integration into a global hydrological model. Geoscientific Model Development, 2019, 12, 2401-2418.	3.6	42
15	Observational Requirements for Long-Term Monitoring of the Global Mean Sea Level and Its Components Over the Altimetry Era. Frontiers in Marine Science, 2019, 6, .	2.5	31
16	Global Assessment of Current and Future Groundwater Stress With a Focus on Transboundary Aquifers. Water Resources Research, 2019, 55, 4760-4784.	4.2	49
17	Tracking Seasonal Fluctuations in Land Water Storage Using Global Models and GRACE Satellites. Geophysical Research Letters, 2019, 46, 5254-5264.	4.0	84
18	How to set up a transdisciplinary research project in Central Asia: description and evaluation. Sustainability Science, 2019, 14, 697-711.	4.9	6

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19	Limiting global warming to 1.5 Â°C will lower increases in inequalities of four hazard indicators of climate change. Environmental Research Letters, 2019, 14, 124022.	5.2	12
20	Spatially distributed sensitivity of simulated global groundwater heads and flows to hydraulic conductivity, groundwater recharge, and surface water body parameterization. Hydrology and Earth System Sciences, 2019, 23, 4561-4582.	4.9	29
21	Global models underestimate large decadal declining and rising water storage trends relative to GRACE satellite data. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E1080-E1089.	7.1	376
22	Risks for the global freshwater system at 1.5â€‰Â°C and 2â€‰Â°C global warming. Environmental Research Letters, 2018, 13, 044038.	5.2	66
23	Improving drought simulations within the Murray-Darling Basin by combined calibration/assimilation of GRACE data into the WaterGAP Global Hydrology Model. Remote Sensing of Environment, 2018, 204, 212-228.	11.0	88
24	Reconstruction of global gridded monthly sectoral water withdrawals for 1971â€“2010 and analysis of their spatiotemporal patterns. Hydrology and Earth System Sciences, 2018, 22, 2117-2133.	4.9	106
25	Global sea-level budget 1993â€“present. Earth System Science Data, 2018, 10, 1551-1590.	9.9	409
26	Inter- und transdisziplinÃre Integration von Wissen Ã¼ber sozial-Ã¶kologische Systeme als Grundlage fÃ¼r eine nachhaltige Entwicklung: das interdisziplinÃre Seminar â€žStÃdte und Wasserâ€œ. Theorie Und Praxis Der Nachhaltigkeit, 2018, , 23-35.	0.2	0
27	Water scarcity hotspots travel downstream due to human interventions in the 20th and 21st century. Nature Communications, 2017, 8, 15697.	12.8	287
28	Using streamflow observations to estimate the impact of hydrological regimes and anthropogenic water use on European stream macroinvertebrate occurrences. Ecohydrology, 2017, 10, e1895.	2.4	19
29	Cartograms Facilitate Communication of Climate Change Risks and Responsibilities. Earth's Future, 2017, 5, 1182-1195.	6.3	5
30	Understanding the LCA and ISO water footprint: A response to Hoekstra (2016) â€œA critique on the water-scarcity weighted water footprint in LCAâ€• Ecological Indicators, 2017, 72, 352-359.	6.3	158
31	How to embrace uncertainty in participatory climate change risk managementâ€”A roadmap. Earth's Future, 2017, 5, 18-36.	6.3	44
32	Variations of global and continental water balance components as impacted by climate forcing uncertainty and human water use. Hydrology and Earth System Sciences, 2016, 20, 2877-2898.	4.9	151
33	Assessing the ecosystem service flood protection of a riparian forest by applying a cascade approach. Ecosystem Services, 2016, 21, 39-52.	5.4	32
34	Transdisciplinary research in support of land and water management in China and Southeast Asia: evaluation of four research projects. Sustainability Science, 2016, 11, 813-829.	4.9	35
35	Modelling Freshwater Resources at the Global Scale: Challenges and Prospects. Space Sciences Series of ISSI, 2016, , 5-31.	0.0	4
36	Municipal water reuse for urban agriculture in Namibia: Modeling nutrient and salt flows as impacted by sanitation user behavior. Journal of Environmental Management, 2016, 169, 272-284.	7.8	19

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37	A systematic impact assessment of GRACE error correlation on data assimilation in hydrological models. Journal of Geodesy, 2016, 90, 537-559.	3.6	48
38	Modelling Freshwater Resources at the Global Scale: Challenges and Prospects. Surveys in Geophysics, 2016, 37, 195-221.	4.6	100
39	Causal networks and scenarios: participatory strategy development for promoting renewable electricity generation. Journal of Cleaner Production, 2016, 121, 218-230.	9.3	11
40	Hyper-resolution global hydrological modelling: what is next?. Hydrological Processes, 2015, 29, 310-320.	2.6	280
41	Rainwater Harvesting for Small-Holder Horticulture in Namibia: Design of Garden Variants and Assessment of Climate Change Impacts and Adaptation. Water (Switzerland), 2015, 7, 1402-1421.	2.7	12
42	A global data set of the extent of irrigated land from 1900 to 2005. Hydrology and Earth System Sciences, 2015, 19, 1521-1545.	4.9	301
43	A framework for the cross-sectoral integration of multi-model impact projections: land use decisions under climate impacts uncertainties. Earth System Dynamics, 2015, 6, 447-460.	7.1	38
44	Covariance Analysis and Sensitivity Studies for GRACE Assimilation into WGHM. International Association of Geodesy Symposia, 2015, , 241-247.	0.4	13
45	Consensus building on the development of a stress-based indicator for LCA-based impact assessment of water consumption: outcome of the expert workshops. International Journal of Life Cycle Assessment, 2015, 20, 577-583.	4.7	84
46	Small-scale water reuse for urban agriculture in Namibia: Modeling water flows and productivity. Urban Water Journal, 2015, 12, 414-429.	2.1	7
47	Integrating risks of climate change into water management. Hydrological Sciences Journal, 2015, 60, 4-13.	2.6	119
48	Sensitivity of simulated global-scale freshwater fluxes and storages to input data, hydrological model structure, human water use and calibration. Hydrology and Earth System Sciences, 2014, 18, 3511-3538.	4.9	285
49	Water footprints of cities â€“ indicators for sustainable consumption and production. Hydrology and Earth System Sciences, 2014, 18, 213-226.	4.9	69
50	Calibration/Data Assimilation Approach for Integrating GRACE Data into the WaterGAP Global Hydrology Model (WGHM) Using an Ensemble Kalman Filter: First Results. Surveys in Geophysics, 2014, 35, 1285-1309.	4.6	136
51	Seasonal Water Storage Variations as Impacted by Water Abstractions: Comparing the Output of a Global Hydrological Model with GRACE and GPS Observations. Surveys in Geophysics, 2014, 35, 1311-1331.	4.6	81
52	Globalâ€scale assessment of groundwater depletion and related groundwater abstractions: Combining hydrological modeling with information from well observations and GRACE satellites. Water Resources Research, 2014, 50, 5698-5720.	4.2	531
53	Semi-quantitative actor-based modelling as a tool to assess the drivers of change and physical variables in participatory integrated assessments. Environmental Modelling and Software, 2013, 46, 21-32.	4.5	14
54	Ground water and climate change. Nature Climate Change, 2013, 3, 322-329.	18.8	1,513

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55	Impact of climate change on renewable groundwater resources: assessing the benefits of avoided greenhouse gas emissions using selected CMIP5 climate projections. Environmental Research Letters, 2013, 8, 024023.	5.2	81
56	How is the impact of climate change on river flow regimes related to the impact on mean annual runoff? A global-scale analysis. Environmental Research Letters, 2012, 7, 014037.	5.2	261
57	Global-scale validation of model-based load deformation of the Earth's crust from continental watermass and atmospheric pressure variations using GPS. Journal of Geodynamics, 2012, 59-60, 133-142.	1.6	43
58	Impact of water withdrawals from groundwater and surface water on continental water storage variations. Journal of Geodynamics, 2012, 59-60, 143-156.	1.6	477
59	Reply to comment by Keith J. Beven and Hannah L. Cloke on â€œHyperresolution global land surface modeling: Meeting a grand challenge for monitoring Earth's terrestrial waterâ€• Water Resources Research, 2012, 48, .	4.2	26
60	Transdisciplinary research for supporting the inte-gration of ecosystem services into land and water management in the Tarim River Basin, Xinjiang, China. Journal of Arid Land, 2012, 4, 196-210.	2.3	23
61	Highâ€resolution mapping of the world's reservoirs and dams for sustainable riverâ€flow management. Frontiers in Ecology and the Environment, 2011, 9, 494-502.	4.0	1,540
62	Hyperresolution global land surface modeling: Meeting a grand challenge for monitoring Earth's terrestrial water. Water Resources Research, 2011, 47, .	4.2	634
63	Assessing river flood risk and adaptation in Europeâ€”review of projections for the future. Mitigation and Adaptation Strategies for Global Change, 2010, 15, 641-656.	2.1	110
64	Quantifying blue and green virtual water contents in global crop production as well as potential production losses without irrigation. Journal of Hydrology, 2010, 384, 198-217.	5.4	570
65	Global-scale modeling of glacier mass balances for water resources assessments: Glacier mass changes between 1948 and 2006. Journal of Hydrology, 2010, 390, 245-256.	5.4	70
66	Global Patterns of Cropland Use Intensity. Remote Sensing, 2010, 2, 1625-1643.	4.0	117
67	Groundwater use for irrigation â€“ a global inventory. Hydrology and Earth System Sciences, 2010, 14, 1863-1880.	4.9	1,267
68	Impact of climate change on freshwater ecosystems: a global-scale analysis of ecologically relevant river flow alterations. Hydrology and Earth System Sciences, 2010, 14, 783-799.	4.9	226
69	MIRCA2000â€”Global monthly irrigated and rainfed crop areas around the year 2000: A new highâ€resolution data set for agricultural and hydrological modeling. Global Biogeochemical Cycles, 2010, 24, .	4.9	1,032
70	Monthly and Daily Variations of Continental Water Storage and Flows. Advanced Technologies in Earth Sciences, 2010, , 407-415.	0.9	1
71	Will groundwater ease freshwater stress under climate change?. Hydrological Sciences Journal, 2009, 54, 665-675.	2.6	235
72	Actor modelling and its contribution to the development of integrative strategies for management of pharmaceuticals in drinking water. Social Science and Medicine, 2009, 68, 672-681.	3.8	22

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73	Water and climate projections. Hydrological Sciences Journal, 2009, 54, 406-415.	2.6	16
74	Vulnerability to the impact of climate change on renewable groundwater resources: a global-scale assessment. Environmental Research Letters, 2009, 4, 035006.	5.2	373
75	Global-scale analysis of river flow alterations due to water withdrawals and reservoirs. Hydrology and Earth System Sciences, 2009, 13, 2413-2432.	4.9	398
76	The implications of projected climate change for freshwater resources and their management. Hydrological Sciences Journal, 2008, 53, 3-10.	2.6	668
77	Chapter Seven Scale Issues in Environmental Scenario Development. Developments in Integrated Environmental Assessment, 2008, , 151-168.	0.0	2
78	Global-scale modeling of groundwater recharge. Hydrology and Earth System Sciences, 2008, 12, 863-885.	4.9	334
79	Value of river discharge data for global-scale hydrological modeling. Hydrology and Earth System Sciences, 2008, 12, 841-861.	4.9	124
80	A 59-year (1948-2006) global near-surface meteorological data set for land surface models. Part I: Development of daily forcing and assessment of precipitation intensity. Hydrological Research Letters, 2008, 2, 36-40.	0.5	62
81	A 59-year (1948-2006) global meteorological forcing data set for land surface models. Part II: Global snowfall estimation. Hydrological Research Letters, 2008, 2, 65-69.	0.5	21
82	A global analysis of temporal and spatial variations in continental water storage. Water Resources Research, 2007, 43, .	4.2	158
83	Supporting large-scale hydrogeological monitoring and modelling by time-variable gravity data. Hydrogeology Journal, 2007, 15, 167-170.	2.1	28
84	GRACE observations of changes in continental water storage. Global and Planetary Change, 2006, 50, 112-126.	3.5	204
85	Estimating the Impact of Global Change on Flood and Drought Risks in Europe: A Continental, Integrated Analysis. Climatic Change, 2006, 75, 273-299.	3.6	670
86	Development and validation of the global map of irrigation areas. Hydrology and Earth System Sciences, 2005, 9, 535-547.	4.9	462
87	Global-scale gridded estimates of thermoelectric power and manufacturing water use. Water Resources Research, 2005, 41, .	4.2	96
88	Global-scale vs. regional-scale scenario assumptions: implications for estimating future water withdrawals in the Elbe River basin. Regional Environmental Change, 2004, 4, 169-181.	2.9	6
89	A Pilot Global Assessment of Environmental Water Requirements and Scarcity. Water International, 2004, 29, 307-317.	1.0	376
90	Water Scarcity Under Scenarios for Global Climate Change and Regional Development in Semiarid Northeastern Brazil. Water International, 2004, 29, 209-220.	1.0	37

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91	Development and validation of a global database of lakes, reservoirs and wetlands. Journal of Hydrology, 2004, 296, 1-22.	5.4	1,867
92	Qualitative-quantitative scenarios as a means to support sustainability-oriented regional planning. , 2004, , 47-60.		1
93	A global hydrological model for deriving water availability indicators: model tuning and validation. Journal of Hydrology, 2003, 270, 105-134.	5.4	911
94	Global estimates of water withdrawals and availability under current and future â€œbusiness-as-usualâ€• conditions. Hydrological Sciences Journal, 2003, 48, 339-348.	2.6	353
95	Development and testing of the WaterGAP 2 global model of water use and availability. Hydrological Sciences Journal, 2003, 48, 317-337.	2.6	663
96	Modeling of Present and Future Water Use in PiauÃ-and CearÃ¡ as a Basis for Water Resources Planning. , 2003, , 239-251.		0
97	Model-based Regional Assessment of Water UseAn Example for Semi-arid Northeastern Brazil. Water International, 2002, 27, 310-320.	1.0	19
98	Global modeling of irrigation water requirements. Water Resources Research, 2002, 38, 8-1-8-10.	4.2	564
99	Validation of a new global 30-min drainage direction map. Journal of Hydrology, 2002, 258, 214-231.	5.4	223
100	Model-based scenarios of water use in two semi-arid Brazilian states. Regional Environmental Change, 2002, 2, 150-162.	2.9	14
101	Impact of Climate Change and Variability on Irrigation Requirements: A Global Perspective. Climatic Change, 2002, 54, 269-293.	3.6	450
102	Integrated Scenarios of Regional Development in Two Semi-Arid States of North-Eastern Brazil. Integrated Assessment: an International Journal, 2002, 3, 308-320.	0.8	16
103	Modeling Water Availability: Scaling Issues. , 2001, , 245-253.		0
104	Integrated modelling of water availability and water use in the semi-arid Northeast of Brazil. Physics and Chemistry of the Earth, 2000, 25, 227-232.	0.3	28
105	Desiccation of Mineral Liners Below Landfills with Heat Generation. Journal of Geotechnical and Geoenvironmental Engineering - ASCE, 1997, 123, 1001-1009.	3.0	45
106	Wasserhaushalt mineralischer Deponiebasisabdichtungen unter dem EinfluÃŸ von Temperaturgradienten. Zeitschrift Fur Pflanzenernahrung Und Bodenkunde = Journal of Plant Nutrition and Plant Science, 1995, 158, 23-30.	0.4	0
107	Lab and Field Measurements of the Hydraulic Conductivity of Clayey Silts. Ground Water, 1995, 33, 884-891.	1.3	8
108	A discrete kernel method of characteristics model of solute transport in water table aquifers. Water Resources Research, 1989, 25, 857-867.	4.2	18

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109	Global modelling of continental water storage changes â€“ sensitivity to different climate data sets. Advances in Geosciences, 0, 11, 63-68.	12.0	22
110	Assessment of ecologically relevant hydrological change in China due to water use and reservoirs. Advances in Geosciences, 0, 18, 25-30.	12.0	8
111	Advances and visions in large-scale hydrological modelling: findings from the 11th Workshop on Large-Scale Hydrological Modelling. Advances in Geosciences, 0, 18, 51-61.	12.0	22
112	Global-scale analysis of satellite-derived time series of naturally inundated areas as a basis for floodplain modeling. Advances in Geosciences, 0, 27, 45-50.	12.0	12
113	Simulating river flow velocity on global scale. Advances in Geosciences, 0, 5, 133-136.	12.0	61
114	Impact of climate forcing uncertainty and human water use on global and continental water balance components. Proceedings of the International Association of Hydrological Sciences, 0, 374, 53-62.	1.0	11
115	Securing Biodiversity, Functional Integrity, and Ecosystem Services in Drying River Networks (DRYvER). Research Ideas and Outcomes, 0, 7, .	1.0	4