

Peter Bauer-Gottwein

List of Publications by Year in descending order

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Version: 2024-02-01

111
papers

4,295
citations

76196

40
h-index

138251

58
g-index

134
all docs

134
docs citations

134
times ranked

4679
citing authors

#	ARTICLE	IF	CITATIONS
1	Review: The Yucatán Peninsula karst aquifer, Mexico. <i>Hydrogeology Journal</i> , 2011, 19, 507-524.	0.9	236
2	Will climate change exacerbate water stress in Central Asia?. <i>Climatic Change</i> , 2012, 112, 881-899.	1.7	151
3	Monitoring recent lake level variations on the Tibetan Plateau using CryoSat-2 SARIn mode data. <i>Journal of Hydrology</i> , 2017, 544, 109-124.	2.3	130
4	Altimetry for the future: Building on 25 years of progress. <i>Advances in Space Research</i> , 2021, 68, 319-363.	1.2	119
5	How can remote sensing contribute in groundwater modeling?. <i>Hydrogeology Journal</i> , 2007, 15, 5-18.	0.9	111
6	Geoelectrical imaging of groundwater salinization in the Okavango Delta, Botswana. <i>Journal of Applied Geophysics</i> , 2006, 60, 126-141.	0.9	103
7	How do GPM IMERG precipitation estimates perform as hydrological model forcing? Evaluation for 300 catchments across Mainland China. <i>Journal of Hydrology</i> , 2019, 572, 486-500.	2.3	98
8	Combining satellite radar altimetry, SAR surface soil moisture and GRACE total storage changes for hydrological model calibration in a large poorly gauged catchment. <i>Hydrology and Earth System Sciences</i> , 2011, 15, 1729-1743.	1.9	94
9	Regional review: the hydrology of the Okavango Delta, Botswana – processes, data and modelling. <i>Hydrogeology Journal</i> , 2009, 17, 1297-1328.	0.9	85
10	Using remote sensing to regionalize local precipitation recharge rates obtained from the Chloride Method. <i>Journal of Hydrology</i> , 2004, 294, 241-250.	2.3	82
11	Assessing the aquatic toxicity and environmental safety of tracer compounds Rhodamine B and Rhodamine WT. <i>Water Research</i> , 2021, 197, 117109.	5.3	82
12	A regional coupled surface water/groundwater model of the Okavango Delta, Botswana. <i>Water Resources Research</i> , 2006, 42, .	1.7	81
13	Hydrogeology of the south-eastern Yucatan Peninsula: New insights from water level measurements, geochemistry, geophysics and remote sensing. <i>Journal of Hydrology</i> , 2010, 389, 1-17.	2.3	77
14	River monitoring from satellite radar altimetry in the Zambezi River basin. <i>Hydrology and Earth System Sciences</i> , 2012, 16, 2181-2192.	1.9	75
15	Transport of a decay chain in homogenous porous media: analytical solutions. <i>Journal of Contaminant Hydrology</i> , 2001, 49, 217-239.	1.6	72
16	Coupled flow and salinity transport modelling in semi-arid environments: The Shashe River Valley, Botswana. <i>Journal of Hydrology</i> , 2006, 316, 163-183.	2.3	69
17	Estimation of the evapotranspiration rate from diurnal groundwater level fluctuations in the Okavango Delta, Botswana. <i>Journal of Hydrology</i> , 2004, 288, 344-355.	2.3	63
18	Calculation of the temporal gravity variation from spatially variable water storage change in soils and aquifers. <i>Journal of Hydrology</i> , 2009, 365, 302-309.	2.3	63

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19	Assimilation of radar altimetry to a routing model of the Brahmaputra River. <i>Water Resources Research</i> , 2013, 49, 4807-4816.	1.7	60
20	Measuring water level in rivers and lakes from lightweight Unmanned Aerial Vehicles. <i>Journal of Hydrology</i> , 2017, 548, 237-250.	2.3	60
21	Salt transport on islands in the Okavango Delta: Numerical investigations. <i>Advances in Water Resources</i> , 2006, 29, 11-29.	1.7	59
22	Technical note: Bathymetry observations of inland water bodies using a tethered single-beam sonar controlled by an unmanned aerial vehicle. <i>Hydrology and Earth System Sciences</i> , 2018, 22, 4165-4181.	1.9	59
23	Real-time remote sensing driven river basin modeling using radar altimetry. <i>Hydrology and Earth System Sciences</i> , 2011, 15, 241-254.	1.9	57
24	Evaluation of Sentinel-3 SRAL SAR altimetry over Chinese rivers. <i>Remote Sensing of Environment</i> , 2020, 237, 111546.	4.6	57
25	Okavango Delta Islands: Interaction between density-driven flow and geochemical reactions under evapo-concentration. <i>Journal of Hydrology</i> , 2007, 335, 389-405.	2.3	55
26	Incorporating diffuse radiation into a light use efficiency and evapotranspiration model: An 11-year study in a high latitude deciduous forest. <i>Agricultural and Forest Meteorology</i> , 2018, 248, 479-493.	1.9	53
27	Unmanned Aerial System (UAS) observations of water surface elevation in a small stream: Comparison of radar altimetry, LIDAR and photogrammetry techniques. <i>Remote Sensing of Environment</i> , 2020, 237, 111487.	4.6	53
28	Simultaneous calibration of multiple hydrodynamic model parameters using satellite altimetry observations of water surface elevation in the Songhua River. <i>Remote Sensing of Environment</i> , 2019, 225, 229-247.	4.6	51
29	Hydrologic Dynamics of the Ground-Water-Dependent Sian Ka'an Wetlands, Mexico, Derived from InSAR and SAR Data. <i>Wetlands</i> , 2010, 30, 1-13.	0.7	49
30	Using time-lapse gravity for groundwater model calibration: An application to alluvial aquifer storage. <i>Water Resources Research</i> , 2011, 47, .	1.7	49
31	Application of CryoSat-2 altimetry data for river analysis and modelling. <i>Hydrology and Earth System Sciences</i> , 2017, 21, 751-764.	1.9	49
32	CryoSat-2 Altimetry Applications over Rivers and Lakes. <i>Water (Switzerland)</i> , 2017, 9, 211.	1.2	48
33	Large-scale 3-D modeling by integration of resistivity models and borehole data through inversion. <i>Hydrology and Earth System Sciences</i> , 2014, 18, 4349-4362.	1.9	47
34	CryoSat-2 radar altimetry for monitoring freshwater resources of China. <i>Remote Sensing of Environment</i> , 2017, 200, 125-139.	4.6	47
35	Multi-Objective Optimization for Analysis of Changing Trade-Offs in the Nepalese Water-Energy-Food Nexus with Hydropower Development. <i>Water (Switzerland)</i> , 2017, 9, 162.	1.2	47
36	WHAT-IF: an open-source decision support tool for water infrastructure investment planning within the water-energy-food-climate nexus. <i>Hydrology and Earth System Sciences</i> , 2019, 23, 4129-4152.	1.9	47

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37	Plant uptake of NaCl in relation to enzyme kinetics and toxic effects. <i>Environmental and Experimental Botany</i> , 2008, 64, 1-7.	2.0	45
38	Integrated flow and temperature modeling at the catchment scale. <i>Journal of Hydrology</i> , 2013, 495, 238-251.	2.3	45
39	Assessing climate change impacts on the Iberian power system using a coupled water-power model. <i>Climatic Change</i> , 2014, 126, 351-364.	1.7	44
40	Sentinel-3 radar altimetry for river monitoring – a catchment-scale evaluation of satellite water surface elevation from Sentinel-3A and Sentinel-3B. <i>Hydrology and Earth System Sciences</i> , 2021, 25, 333-357.	1.9	44
41	The micro-topography of the wetlands of the Okavango Delta, Botswana. <i>Earth Surface Processes and Landforms</i> , 2005, 30, 27-39.	1.2	43
42	High spatial resolution monitoring land surface energy, water and CO2 fluxes from an Unmanned Aerial System. <i>Remote Sensing of Environment</i> , 2019, 229, 14-31.	4.6	43
43	The role of remote sensing in hydrological modelling of the Okavango Delta, Botswana. <i>Journal of Environmental Management</i> , 2009, 90, 2252-2260.	3.8	39
44	Using Stochastic Dynamic Programming to Support Water Resources Management in the Ziya River Basin, China. <i>Journal of Water Resources Planning and Management - ASCE</i> , 2015, 141, .	1.3	38
45	Joint optimization of regional water-power systems. <i>Advances in Water Resources</i> , 2016, 92, 200-207.	1.7	37
46	Informing a hydrological model of the OgoouÃ© with multi-mission remote sensing data. <i>Hydrology and Earth System Sciences</i> , 2018, 22, 1453-1472.	1.9	37
47	Hydrogeophysical exploration of three-dimensional salinity anomalies with the time-domain electromagnetic method (TDEM). <i>Journal of Hydrology</i> , 2010, 380, 318-329.	2.3	36
48	Systems Analysis Approach to the Design of Efficient Water Pricing Policies under the EU Water Framework Directive. <i>Journal of Water Resources Planning and Management - ASCE</i> , 2013, 139, 574-582.	1.3	36
49	Sequential and joint hydrogeophysical inversion using a field-scale groundwater model with ERT and TDEM data. <i>Hydrology and Earth System Sciences</i> , 2013, 17, 4043-4060.	1.9	36
50	Evaluation of multi-mode CryoSat-2 altimetry data over the Po River against in situ data and a hydrodynamic model. <i>Advances in Water Resources</i> , 2018, 112, 17-26.	1.7	36
51	Characterization and Quantification of Pneumatic Fracturing Effects at a Clay Till Site. <i>Environmental Science & Technology</i> , 2008, 42, 570-576.	4.6	35
52	Evaluation of Remotely Sensed Precipitation and Its Performance for Streamflow Simulations in Basins of the Southeast Tibetan Plateau. <i>Journal of Hydrometeorology</i> , 2015, 16, 2577-2594.	0.7	33
53	Joint optimization of water allocation and water quality management in Haihe River basin. <i>Science of the Total Environment</i> , 2019, 654, 72-84.	3.9	33
54	Influence of local geoid variation on water surface elevation estimates derived from multi-mission altimetry for Lake Namco. <i>Remote Sensing of Environment</i> , 2019, 221, 65-79.	4.6	31

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55	Measuring gravity change caused by water storage variations: Performance assessment under controlled conditions. <i>Journal of Hydrology</i> , 2011, 402, 60-70.	2.3	29
56	The influence of conceptual model uncertainty on management decisions for a groundwater-dependent ecosystem in karst. <i>Journal of Hydrology</i> , 2011, 400, 24-40.	2.3	28
57	Performance evaluation of groundwater model hydrostratigraphy from airborne electromagnetic data and lithological borehole logs. <i>Hydrology and Earth System Sciences</i> , 2015, 19, 3875-3890.	1.9	28
58	A data assimilation system combining CryoSat-2 data and hydrodynamic river models. <i>Journal of Hydrology</i> , 2018, 557, 197-210.	2.3	28
59	Unmanned Aerial System multispectral mapping for low and variable solar irradiance conditions: Potential of tensor decomposition. <i>ISPRS Journal of Photogrammetry and Remote Sensing</i> , 2019, 155, 58-71.	4.9	28
60	Enabling the Use of Earth Observation Data for Integrated Water Resource Management in Africa with the Water Observation and Information System. <i>Remote Sensing</i> , 2014, 6, 7819-7839.	1.8	26
61	Hydroeconomic optimization of reservoir management under downstream water quality constraints. <i>Journal of Hydrology</i> , 2015, 529, 1679-1689.	2.3	26
62	Mapping Root-Zone Soil Moisture Using a Temperature-Vegetation Triangle Approach with an Unmanned Aerial System: Incorporating Surface Roughness from Structure from Motion. <i>Remote Sensing</i> , 2018, 10, 1978.	1.8	26
63	Coupled hydrogeophysical inversion using time-lapse magnetic resonance sounding and time-lapse gravity data for hydraulic aquifer testing: Will it work in practice?. <i>Water Resources Research</i> , 2012, 48, .	1.7	25
64	Calibrating a Salt Water Intrusion Model with Time-Domain Electromagnetic Data. <i>Ground Water</i> , 2013, 51, 385-397.	0.7	23
65	Optimization of regional water - power systems under cooling constraints and climate change. <i>Energy</i> , 2018, 155, 484-494.	4.5	23
66	Operational reservoir inflow forecasting with radar altimetry: the Zambezi case study. <i>Hydrology and Earth System Sciences</i> , 2014, 18, 997-1007.	1.9	22
67	Spatial mapping of submerged cave systems by means of airborne electromagnetics: an emerging technology to support protection of endangered karst aquifers. <i>Near Surface Geophysics</i> , 2009, 7, 613-627.	0.6	21
68	Water level observations from unmanned aerial vehicles for improving estimates of surface water-groundwater interaction. <i>Hydrological Processes</i> , 2017, 31, 4371-4383.	1.1	21
69	A Drone-Borne Method to Jointly Estimate Discharge and Manning's Roughness of Natural Streams. <i>Water Resources Research</i> , 2021, 57, e2020WR028266.	1.7	21
70	Airborne and ground-based transient electromagnetic mapping of groundwater salinity in the Machile-Zambezi Basin, southwestern Zambia. <i>Near Surface Geophysics</i> , 2015, 13, 383-396.	0.6	20
71	A Bigger Picture of how the Tibetan Lakes Have Changed Over the Past Decade Revealed by CryoSat-2 Altimetry. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2020JD033161.	1.2	20
72	On the Performance of Sentinel-3 Altimetry Over New Reservoirs: Approaches to Determine Onboard A Priori Elevation. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL088770.	1.5	19

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73	Estimating resource costs of compliance with EU WFD ecological status requirements at the river basin scale. <i>Journal of Hydrology</i> , 2011, 396, 197-214.	2.3	18
74	Polar Drift in the 1990s Explained by Terrestrial Water Storage Changes. <i>Geophysical Research Letters</i> , 2021, 48, e2020GL092114.	1.5	17
75	Impacts of water resources management on land water storage in the North China Plain: Insights from multi-mission earth observations. <i>Journal of Hydrology</i> , 2021, 603, 126933.	2.3	17
76	Calibrating Vadose Zone Models with Time-Elapsed Gravity Data. <i>Vadose Zone Journal</i> , 2011, 10, 1034-1044.	1.3	16
77	Operational river discharge forecasting in poorly gauged basins: the Kavango River basin case study. <i>Hydrology and Earth System Sciences</i> , 2015, 19, 1469-1485.	1.9	16
78	Optimization of Multipurpose Reservoir Systems Using Power Market Models. <i>Journal of Water Resources Planning and Management - ASCE</i> , 2015, 141, .	1.3	16
79	Combining Clustering Methods With MPS to Estimate Structural Uncertainty for Hydrological Models. <i>Frontiers in Earth Science</i> , 2019, 7, .	0.8	16
80	Optimizing water resources allocation in the Haihe River basin under groundwater sustainability constraints. <i>Journal of Chinese Geography</i> , 2019, 29, 935-958.	1.5	16
81	Using radar altimetry to update a large-scale hydrological model of the Brahmaputra river basin. <i>Hydrology Research</i> , 2014, 45, 148-164.	1.1	15
82	Informing hydrological models of poorly gauged river catchments – A parameter regionalization and calibration approach. <i>Journal of Hydrology</i> , 2020, 587, 124999.	2.3	15
83	Variable density groundwater flow: from modelling to applications. , 2010, , 87-118.		14
84	The cost of ending groundwater overdraft on the North China Plain. <i>Hydrology and Earth System Sciences</i> , 2016, 20, 771-785.	1.9	14
85	Unmanned aerial vehicle observations of water surface elevation and bathymetry in the cenotes and lagoons of the Yucatan Peninsula, Mexico. <i>Hydrogeology Journal</i> , 2018, 26, 2213-2228.	0.9	14
86	Phytotoxicity of salt and plant salt uptake: Modeling ecohydrological feedback mechanisms. <i>Water Resources Research</i> , 2008, 44, .	1.7	13
87	The Value of Distributed High-Resolution UAV-Borne Observations of Water Surface Elevation for River Management and Hydrodynamic Modeling. <i>Remote Sensing</i> , 2020, 12, 1171.	1.8	13
88	Mapping localised freshwater anomalies in the brackish paleo-lake sediments of the Machile-Zambezi Basin with transient electromagnetic sounding, geoelectrical imaging and induced polarisation. <i>Journal of Applied Geophysics</i> , 2015, 123, 81-92.	0.9	12
89	Optimizing Wellfield Operation in a Variable Power Price Regime. <i>Ground Water</i> , 2016, 54, 92-103.	0.7	12
90	Regional-scale airborne electromagnetic surveying of the Yucatan karst aquifer (Mexico): geological and hydrogeological interpretation. <i>Hydrogeology Journal</i> , 2012, 20, 1407-1425.	0.9	11

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91	Modeling ecohydrological impacts of land management and water use in the Silver Creek basin, Idaho. <i>Journal of Geophysical Research G: Biogeosciences</i> , 2014, 119, 487-507.	1.3	11
92	Hyperspectral reflectance measurements from UAS under intermittent clouds: Correcting irradiance measurements for sensor tilt. <i>Remote Sensing of Environment</i> , 2021, 267, 112719.	4.6	11
93	Evaluating terrestrial water storage variations from regionally constrained GRACE mascon data and hydrological models over Southern Africa – preliminary results. <i>International Journal of Remote Sensing</i> , 2010, 31, 3899-3912.	1.3	9
94	Well Field Management Using Multi-Objective Optimization. <i>Water Resources Management</i> , 2013, 27, 629-648.	1.9	9
95	Probabilistic predictions using a groundwater model informed with airborne EM data. <i>Advances in Water Resources</i> , 2017, 103, 86-98.	1.7	9
96	A Regional Scale Hydrostratigraphy Generated from Geophysical Data of Varying Age, Type, and Quality. <i>Water Resources Management</i> , 2019, 33, 539-553.	1.9	9
97	Benefits of Cooperation in Transnational Water-Energy Systems. <i>Journal of Water Resources Planning and Management - ASCE</i> , 2019, 145, .	1.3	8
98	Temporal interpolation of land surface fluxes derived from remote sensing – results with an unmanned aerial system. <i>Hydrology and Earth System Sciences</i> , 2020, 24, 3643-3661.	1.9	8
99	Calibrating 1D hydrodynamic river models in the absence of cross-section geometry using satellite observations of water surface elevation and river width. <i>Hydrology and Earth System Sciences</i> , 2021, 25, 6359-6379.	1.9	8
100	The use of Time Domain Electromagnetic method and Continuous Vertical Electrical Sounding to map groundwater salinity in the Barotse sub-basin, Zambia. <i>Physics and Chemistry of the Earth</i> , 2011, 36, 798-805.	1.2	7
101	Multi-objective optimization of the management of a waterworks using an integrated well field model. <i>Hydrology Research</i> , 2012, 43, 430-444.	1.1	7
102	Hydraulic Model Calibration Using CryoSat-2 Observations in the Zambezi Catchment. <i>Water Resources Research</i> , 2021, 57, e2020WR029261.	1.7	7
103	On the Contribution of Satellite Altimetry-Derived Water Surface Elevation to Hydrodynamic Model Calibration in the Han River. <i>Remote Sensing</i> , 2020, 12, 4087.	1.8	6
104	A convex programming framework for optimal and bounded suboptimal well field management. <i>Water Resources Research</i> , 2012, 48, .	1.7	4
105	Optimization of Well Field Operation: Case Study of ÅndersÅ Waterworks, Denmark. <i>Journal of Water Resources Planning and Management - ASCE</i> , 2013, 139, 109-116.	1.3	4
106	Estimating Reservoir Release Using Multi-Source Satellite Datasets and Hydrological Modeling Techniques. <i>Remote Sensing</i> , 2022, 14, 815.	1.8	3
107	Terrestrial Water Storage from GRACE and Satellite Altimetry in the Okavango Delta (Botswana). <i>International Association of Geodesy Symposia</i> , 2010, , 521-526.	0.2	2
108	Challenges with Regard to Unmanned Aerial Systems (UASs) Measurement of River Surface Velocity Using Doppler Radar. <i>Remote Sensing</i> , 2022, 14, 1277.	1.8	2

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109	The Impact of Assuming Perfect Foresight in Hydroeconomic Analysis of Yellow River Diversions to the Hai River Basin, China: A Framework Combining Linear Programming and Model Predictive Control. <i>Frontiers in Water</i> , 2021, 3, .	1.0	1
110	Automatic Generation of Groundwater Model Hydrostratigraphy from AEM Resistivity and Boreholes. , 2014, , .		1
111	The Impact of Assuming Perfect Foresight When Planning Infrastructure in the Waterâ€“Energyâ€“Food Nexus. <i>Frontiers in Water</i> , 2021, 3, .	1.0	1