Philip Brunner

List of Publications by Year
in descending order

#	Article	IF	Citations
1	HydroGeoSphere: A Fully Integrated, Physically Based Hydrological Model. Ground Water, 2012, 50, 170-176.	1.3	365
2	Hydrogeologic controls on disconnection between surface water and groundwater. Water Resources Research, 2009, 45, .	4.2	160
3	Advances in understanding riverâ€groundwater interactions. Reviews of Geophysics, 2017, 55, 818-854.	23.0	158
4	How can remote sensing contribute in groundwater modeling?. Hydrogeology Journal, 2007, 15, 5-18.	2.1	111
5	Evaluation of outputs from automated baseflow separation methods against simulated baseflow from a physically based, surface water-groundwater flow model. Journal of Hydrology, 2012, 458-459, 28-39.	5.4	111
6	Solute dynamics during bank storage flows and implications for chemical base flow separation. Water Resources Research, 2010, 46, .	4.2	104
7	Spatial and temporal aspects of the transition from connection to disconnection between rivers, lakes and groundwater. Journal of Hydrology, 2009, 376, 159-169.	5.4	97
8	Modeling Surface Waterâ€Groundwater Interaction with MODFLOW: Some Considerations. Ground Water, 2010, 48, 174-180.	1.3	95
9	Introductory overview of identifiability analysis: A guide to evaluating whether you have the right type of data for your modeling purpose. Environmental Modelling and Software, 2019, 119, 418-432.	4.5	93
10	Disconnected Surface Water and Groundwater: From Theory to Practice. Ground Water, 2011, 49, 460-467.	1.3	91
11	Heterogeneous or homogeneous? Implications of simplifying heterogeneous streambeds in models of losing streams. Journal of Hydrology, 2012, 424-425, 16-23.	5.4	89
12	Groundwater inflow to a shallow, poorly-mixed wetland estimated from a mass balance of radon. Journal of Hydrology, 2008, 354, 213-226.	5.4	86
13	Using remote sensing to regionalize local precipitation recharge rates obtained from the Chloride Method. Journal of Hydrology, 2004, 294, 241-250.	5.4	82
14	Beyond Classical Observations in Hydrogeology: The Advantages of Including Exchange Flux, Temperature, Tracer Concentration, Residence Time, and Soil Moisture Observations in Groundwater Model Calibration. Reviews of Geophysics, 2019, 57, 146-182.	23.0	75
15	An Analysis of River Bank Slope and Unsaturated Flow Effects on Bank Storage. Ground Water, 2012, 50, 77-86.	1.3	73
16	Field assessment of surface waterâ€"groundwater connectivity in a semiâ€arid river basin (Murrayâ€"Darling, Australia). Hydrological Processes, 2014, 28, 1561-1572.	2.6	66
17	Sustainable groundwater management â€" problems and scientific tools. Episodes, 2003, 26, 279-284.	1.2	66
18	Uncertainty assessment and implications for data acquisition in support of integrated hydrologic models. Water Resources Research, 2012, 48, .	4.2	63

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19	The influence of model structure on groundwater recharge rates in climate-change impact studies. Hydrogeology Journal, 2016, 24, 1171-1184.	2.1	60
20	Generating soil electrical conductivity maps at regional level by integrating measurements on the ground and remote sensing data. International Journal of Remote Sensing, 2007, 28, 3341-3361.	2.9	59
21	Calibration of a groundwater model using pattern information from remote sensing data. Journal of Hydrology, 2009, 377, 120-130.	5.4	57
22	Interpreting streamflow generation mechanisms from integrated surface-subsurface flow models of a riparian wetland and catchment. Water Resources Research, 2013, 49, 5501-5519.	4.2	56
23	Vegetation controls on variably saturated processes between surface water and groundwater and their impact on the state of connection. Water Resources Research, 2011, 47, .	4.2	53
24	A hydraulic mixing-cell method to quantify the groundwater component of streamflow within spatially distributed fully integrated surface waterâ€“groundwater flow models. Environmental Modelling and Software, 2011, 26, 886-898.	4.5	53
25	Using tree ring data as a proxy for transpiration to reduce predictive uncertainty of a model simulating groundwaterâ€“surface waterâ€“vegetation interactions. Journal of Hydrology, 2014, 519, 2258-2271.	5.4	53
26	Integrating hydrological modelling, data assimilation and cloud computing for real-time management of water resources. Environmental Modelling and Software, 2017, 93, 418-435.	4.5	53
27	Blueprint for a coupled model of sedimentology, hydrology, and hydrogeology in streambeds. Reviews of Geophysics, 2017, 55, 287-309.	23.0	52
28	Geology controls streamflow dynamics. Journal of Hydrology, 2018, 566, 756-769.	5.4	52
29	Extracting phreatic evaporation from remotely sensed maps of evapotranspiration. Water Resources Research, 2008, 44, .	4.2	48
30	A 3D geological model of a structurally complex Alpine region as a basis for interdisciplinary research. Scientific Data, 2018, 5, 180238.	5.3	41
31	Equally likely inverse solutions to a groundwater flow problem including pattern information from remote sensing images. Water Resources Research, 2008, 44, .	4.2	39
32	Tutorials as a flexible alternative to GUIs: An example for advanced model calibration using Pilot Points. Environmental Modelling and Software, 2015, 66, 78-86.	4.5	38
33	Advancing Physicallyâ€Based Flow Simulations of Alluvial Systems Through Atmospheric Noble Gases and the Novel ³⁷Ar Tracer Method. Water Resources Research, 2017, 53, 10465-10490.	4.2	37
34	The influence of riverbed heterogeneity patterns on river-aquifer exchange fluxes under different connection regimes. Journal of Hydrology, 2017, 554, 383-396.	5.4	36
35	Rapid identification of transience in streambed conductance by inversion of floodwave responses. Water Resources Research, 2016, 52, 2647-2658.	4.2	35
36	Characterisation of riverâ€“aquifer exchange fluxes: The role of spatial patterns of riverbed hydraulic conductivities. Journal of Hydrology, 2015, 531, 111-123.	5.4	30

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37	Estimating the Spatial Extent of Unsaturated Zones in Heterogeneous Riverâ€Aquifer Systems. Water Resources Research, 2017, 53, 10583-10602.	4.2	30
38	Channel Representation in Physically Based Models Coupling Groundwater and Surface Water: Pitfalls and How to Avoid Them. Ground Water, 2014, 52, 827-836.	1.3	29
39	Topography representation methods for improving evaporation simulation in groundwater modeling. Journal of Hydrology, 2008, 356, 199-208.	5.4	28
40	Simulating Floodâ€Induced Riverbed Transience Using Unmanned Aerial Vehicles, Physically Based Hydrological Modeling, and the Ensemble Kalman Filter. Water Resources Research, 2018, 54, 9342-9363.	4.2	27
41	Aquifer response to surface water transience in disconnected streams. Water Resources Research, 2012, 48, .	4.2	26
42	When Can Inverted Water Tables Occur Beneath Streams?. Ground Water, 2014, 52, 769-774.	1.3	26
43	Is high-resolution inverse characterization of heterogeneous river bed hydraulic conductivities needed and possible?. Hydrology and Earth System Sciences, 2013, 17, 3795-3813.	4.9	25
44	Efficient multi-objective calibration and uncertainty analysis of distributed snow simulations in rugged alpine terrain. Journal of Hydrology, 2021, 598, 126241.	5.4	25
45	Conceptualization and Calibration of Anisotropic Alluvial Systems: Pitfalls and Biases. Ground Water, 2019, 57, 409-419.	1.3	21
46	A Framework for Untangling Transient Groundwater Mixing and Travel Times. Water Resources Research, 2021, 57, e2020WR028362.	4.2	21
47	Salix psammophila afforestations can cause a decline of the water table, prevent groundwater recharge and reduce effective infiltration. Science of the Total Environment, 2021, 780, 146336.	8.0	21
48	Low-flow behavior of alpine catchments with varying quaternary cover under current and future climatic conditions. Journal of Hydrology, 2021, 592, 125591.	5.4	20
49	Rock-Eval pyrolysis discriminates soil macro-aggregates formed by plants and earthworms. Soil Biology and Biochemistry, 2018, 117, 117-124.	8.8	19
50	Spatial and temporal dynamics of deep percolation, lag time and recharge in an irrigated semi-arid region. Hydrogeology Journal, 2018, 26, 2507-2520.	2.1	19
51	Physically based hydrogeological and slope stability modeling of the Turaida castle mound. Landslides, 2018, 15, 2267-2278.	5.4	18
52	The Handbook of Groundwater Engineering. , 0, , .		18
53	Groundwater fluxes in a shallow seasonal wetland pond: The effect of bathymetric uncertainty on predicted water and solute balances. Journal of Hydrology, 2014, 517, 901-912.	5.4	17
54	Exploring Geological and Topographical Controls on Low Flows with Hydrogeological Models. Ground Water, 2019, 57, 48-62.	1.3	17

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55	Potential evaporation dynamics over saturated bare soil and an open water surface. Journal of Hydrology, 2020, 590, 125140.	5.4	16
56	Infiltration under snow cover: Modeling approaches and predictive uncertainty. Journal of Hydrology, 2017, 546, 16-27.	5.4	15
57	Coupling X-ray computed tomography and freeze-coring for the analysis of fine-grained low-cohesive soils. Geoderma, 2017, 308, 171-186.	5.1	14
58	Conceptualization of preferential flow for hillslope stability assessment. Hydrogeology Journal, 2018, 26, 439-450.	2.1	14
59	Assessing bare-soil evaporation from different water-table depths using lysimeters and a numerical model in the Ordos Basin, China. Hydrogeology Journal, 2019, 27, 2707-2718.	2.1	14
60	Comparison of field methods for estimating evaporation from bare soil using lysimeters in a semi-arid area. Journal of Hydrology, 2020, 590, 125334.	5.4	14
61	Lithological and Tectonic Control on Groundwater Contribution to Stream Discharge During Low-Flow Conditions. Water (Switzerland), 2020, 12, 821.	2.7	14
62	Topsoil structure stability in a restored floodplain: Impacts of fluctuating water levels, soil parameters and ecosystem engineers. Science of the Total Environment, 2018, 639, 1610-1622.	8.0	13
63	Commemorating the 50th anniversary of the Freeze and Harlan (1969) Blueprint for a physically-based, digitally-simulated hydrologic response model. Journal of Hydrology, 2020, 584, 124309.	5.4	13
64	Simulating Fullyâ€Integrated Hydrological Dynamics in Complex Alpine Headwaters: Potential and Challenges. Water Resources Research, 2022, 58, .	4.2	12
65	Cross-sphere modelling to evaluate impacts of climate and land management changes on groundwater resources. Science of the Total Environment, 2021, 798, 148759.	8.0	10
66	Transitâ€Time and Temperature Control the Spatial Patterns of Aerobic Respiration and Denitrification in the Riparian Zone. Water Resources Research, 2021, 57, e2021WR030117.	4.2	10
67	Composition and superposition of alluvial deposits drive macro-biological soil engineering and organic matter dynamics in floodplains. Geoderma, 2019, 355, 113899.	5.1	9
68	Variable 222Rn emanation rates in an alluvial aquifer: Limits on using 222Rn as a tracer of surface water â€" Groundwater interactions. Chemical Geology, 2022, 599, 120829.	3.3	9
69	Real-Time Environmental Monitoring for Cloud-Based Hydrogeological Modeling with HydroGeoSphere. , 2014, , .		8
70	COMPEST, a PEST-COMSOL interface for inverse multiphysics modelling: Development and application to isotopic fractionation of groundwater contaminants. Computers and Geosciences, 2019, 126, 107-119.	4.2	8
71	Buried Paleoâ€Channel Detection With a Groundwater Model, Tracerâ€Based Observations, and Spatially Varying, Preferred Anisotropy Pilot Point Calibration. Geophysical Research Letters, 2022, 49, .	4.0	8
72	Wireless Mesh Networks and Cloud Computing for Real Time Environmental Simulations. Advances in Intelligent Systems and Computing, 2014, , 1-11.	0.6	6

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73	A 2D hyperspectral library of mineral reflectance, from 900 to 2500 nm. Scientific Data, 2019, 6, 268.	5.3	6
74	New Experimental Tools to Use Noble Gases as Artificial Tracers for Groundwater Flow. Frontiers in Water, 0, 4, .	2.3	6
75	Sustainable water management in arid and semi-arid regions. , 2010, , 119-130.		5
76	Simulation of nitrogen dynamics in lowland polders using a new coupled modelling approach: Insights into management. Journal of Cleaner Production, 2021, 313, 127753.	9.3	4
77	Sources of Surface Water in Space and Time: Identification of Delivery Processes and Geographical Sources With Hydraulic Mixingâ€Cell Modeling. Water Resources Research, 2021, 57, .	4.2	4
78	Pioneer plant Phalaris arundinacea and earthworms promote initial soil structure formation despite strong alluvial dynamics in a semi-controlled field experiment. Catena, 2019, 180, 41-54.	5.0	3
79	Spatiotemporal variations in water sources and mixing spots in a riparian zone. Hydrology and Earth System Sciences, 2022, 26, 1883-1905.	4.9	3
80	A systematic methodology to calibrate wellbore failure models, estimate the in-situ stress tensor and evaluate wellbore cross-sectional geometry. International Journal of Rock Mechanics and Minings Sciences, 2022, 149, 104935.	5.8	2
81	Chernobyl Fall-Out on Glaciers in the Austrian Alps. Journal of Glaciology, 1988, 34, 255-256.	2.2	1
82	Robust input layer for neural networks for hyperspectral classification of data with missing bands. Applied Computing and Geosciences, 2020, 8, 100034.	2.2	1
83	Assessing the perturbations of the hydrogeological regime in sloping fens due to roads. Hydrology and Earth System Sciences, 2020, 24, 213-226.	4.9	1
84	Sustainable irrigation in the Yanqi basin, China. WIT Transactions on Ecology and the Environment, 2006, , .	0.0	1