Jozsef Szilagyi

List of Publications by Year
in descending order

101 papers	3,136 citations	147801 31 h-index	175258 52 g-index
106 all docs	106 docs citations	106 times ranked	2266 citing authors

#	Article	IF	Citations
1	Diurnal fluctuations in shallow groundwater levels and streamflow rates and their interpretation â€“ A review. Journal of Hydrology, 2010, 385, 371-383.	5.4	229
2	Complementaryâ€Relationshipâ€Based Modeling of Terrestrial Evapotranspiration Across China During 1982â€“2012: Validations and Spatiotemporal Analyses. Journal of Geophysical Research D: Atmospheres, 2019, 124, 4326-4351.	3.3	175
3	Riparian zone evapotranspiration estimation from diurnal groundwater level fluctuations. Journal of Hydrology, 2008, 349, 6-17.	5.4	127
4	Evaporation variability of Nam Co Lake in the Tibetan Plateau and its role in recent rapid lake expansion. Journal of Hydrology, 2016, 537, 27-35.	5.4	102
5	Baseflow separation based on analytical solutions of the Boussinesq equation. Journal of Hydrology, 1998, 204, 251-260.	5.4	100
6	Recession flow analysis for aquifer parameter determination. Water Resources Research, 1998, 34, 1851-1857.	4.2	94
7	New findings about the complementary relationship-based evaporation estimation methods. Journal of Hydrology, 2008, 354, 171-186.	5.4	91
8	Calibrationâ€Free Complementary Relationship Estimates Terrestrial Evapotranspiration Globally. Water Resources Research, 2021, 57, e2021WR029691.	4.2	89
9	A calibrationâ€free formulation of the complementary relationship of evaporation for continentalâ€scale hydrology. Journal of Geophysical Research D: Atmospheres, 2017, 122, 264-278.	3.3	88
10	On the inherent asymmetric nature of the complementary relationship of evaporation. Geophysical Research Letters, 2007, 34, .	4.0	82
11	The CR of Evaporation: A Calibrationâ€Free Diagnostic and Benchmarking Tool for Largeâ€Scale Terrestrial Evapotranspiration Modeling. Water Resources Research, 2019, 55, 7246-7274.	4.2	78
12	Evaluating the complementary relationship for estimating evapotranspiration from arid shrublands. Water Resources Research, 2011, 47, .	4.2	73
13	Regional Estimation of Base Recharge to Ground Water Using Water Balance and a Base-Flow Index. Ground Water, 2003, 41, 504-513.	1.3	67
14	Evaluating the complementary relationship of evapotranspiration in the alpine steppe of the <scp>T</scp>ibetan <scp>P</scp>lateau. Water Resources Research, 2015, 51, 1069-1083.	4.2	67
15	Sudden drawdown and drainage of a horizontal aquifer. Water Resources Research, 2001, 37, 2097-2101.	4.2	64
16	Mapping mean annual groundwater recharge in the Nebraska Sand Hills, USA. Hydrogeology Journal, 2011, 19, 1503-1513.	2.1	63
17	Estimation of catchment-scale evapotranspiration from baseflow recession data: Numerical model and practical application results. Journal of Hydrology, 2007, 336, 206-217.	5.4	62
18	Rescaling the complementary relationship for land surface evaporation. Water Resources Research, 2016, 52, 8461-8471.	4.2	61

#	Article	IF	Citations
19	Modeling actual evapotranspiration with routine meteorological variables in the dataâ€scarce region of the Tibetan Plateau: Comparisons and implications. Journal of Geophysical Research G: Biogeosciences, 2015, 120, 1638-1657.	3.0	58
20	Evapotranspiration Intensifies over the Conterminous United States. Journal of Water Resources Planning and Management - ASCE, 2001, 127, 354-362.	2.6	51
21	Temperature corrections in the Priestleyâ€"Taylor equation of evaporation. Journal of Hydrology, 2014, 519, 455-464.	5.4	50
22	Vadose zone lag time and potential 21st century climate change effects on spatially distributed groundwater recharge in the semi-arid Nebraska Sand Hills. Journal of Hydrology, 2014, 519, 656-669.	5.4	45
23	Feasibility analysis of using inverse modeling for estimating natural groundwater recharge from a large-scale soil moisture monitoring network. Journal of Hydrology, 2016, 533, 250-265.	5.4	44
24	On the specific water holding capacity of litter for three forest ecosystems in the eastern foothills of the Alps. Agricultural and Forest Meteorology, 2019, 278, 107656.	4.8	43
25	On Bouchet's complementary hypothesis. Journal of Hydrology, 2001, 246, 155-158.	5.4	42
26	Regional Estimation of Total Recharge to Ground Water in Nebraska. Ground Water, 2005, 43, 63-69.	1.3	39
27	NDVI relationship to monthly evaporation. Geophysical Research Letters, 1998, 25, 1753-1756.	4.0	38
28	Modified Advection-Aridity Model of Evapotranspiration. Journal of Hydrologic Engineering - ASCE, 2009, 14, 569-574.	1.9	38
29	Net Recharge vs. Depth to Groundwater Relationship in the Platte River Valley of Nebraska, United States. Ground Water, 2013, 51, 945-951.	1.3	35
30	Identifying Cause of Declining Flows in the Republican River. Journal of Water Resources Planning and Management - ASCE, 2001, 127, 244-253.	2.6	34
31	On diurnal riparian zone groundwater-level and streamflow fluctuations. Journal of Hydrology, 2008, 349, 1-5.	5.4	31
32	MODISâ€Aided Statewide Net Groundwaterâ€Recharge Estimation in Nebraska. Ground Water, 2013, 51, 735-744.	1.3	31
33	An objective method for determining principal time scales of coherent eddy structures using orthonormal wavelets. Advances in Water Resources, 1999, 22, 561-566.	3.8	29
34	Hybrid, Markov Chain-Based Model for Daily Streamflow Generation at Multiple Catchment Sites. Journal of Hydrologic Engineering - ASCE, 2006, 11, 245-256.	1.9	29
35	A geomorphology-based semi-distributed watershed model. Advances in Water Resources, 1999, 23, 177-187.	3.8	28
36	Modeled Areal Evaporation Trends over the Conterminous United States. Journal of Irrigation and Drainage Engineering - ASCE, 2001, 127, 196-200.	1.0	28

#	Article	IF	Citations
37	Testing the generalized complementary relationship of evaporation with continental-scale long-term water-balance data. Journal of Hydrology, 2016, 540, 914-922.	5.4	28
38	Heuristic Continuous Base Flow Separation. Journal of Hydrologic Engineering - ASCE, 2004, 9, 311-318.	1.9	27
39	Coupled heat and vapor transport: The thermostat effect of a freely evaporating land surface. Geophysical Research Letters, 2014, 41, 435-441.	4.0	27
40	Benchmarking large-scale evapotranspiration estimates: A perspective from a calibration-free complementary relationship approach and FLUXCOM. Journal of Hydrology, 2020, 590, 125221.	5.4	27
41	Streamflow Depletion Investigations in the Republican River Basin: Colorado, Nebraska, and Kansas. Journal of Environmental Systems, 0, 27, 251-263.	1.0	27
42	The local effect of intermittency on the inertial subrange energy spectrum of the atmospheric surface layer. Boundary-Layer Meteorology, 1996, 79, 35-50.	2.3	25
43	Complementaryâ€relationshipâ€based 30 year normals (1981â€“2010) of monthly latent heat fluxes across the contiguous <scp>U</scp>nited <scp>S</scp>tates. Water Resources Research, 2015, 51, 9367-9377.	4.2	25
44	A calibration-free, robust estimation of monthly land surface evapotranspiration rates for continental-scale hydrology. Hydrology Research, 2018, 49, 648-657.	2.7	25
45	Complementary relationship of evaporation and the mean annual waterâ€energy balance. Water Resources Research, 2009, 45, .	4.2	24
46	Evapotranspiration Trends (1979â€“2015) in the Central Valley of California, USA: Contrasting Tendencies During 1981â€“2007. Water Resources Research, 2018, 54, 5620-5635.	4.2	24
47	Can a vegetation index derived from remote sensing be indicative of areal transpiration?. Ecological Modelling, 2000, 127, 65-79.	2.5	23
48	Analytical solution of the coupled 2-D turbulent heat and vapor transport equations and the complementary relationship of evaporation. Journal of Hydrology, 2009, 372, 61-67.	5.4	22
49	Remote-Sensing Based Groundwater Recharge Estimates in the Danube-Tisza Sand Plateau Region of Hungary. Journal of Hydrology and Hydromechanics, 2012, 60, 64-72.	2.0	22
50	Does the accuracy of fine-scale water level measurements by vented pressure transducers permit for diurnal evapotranspiration estimation?. Journal of Hydrology, 2013, 488, 166-169.	5.4	21
51	Anthropogenic hydrological cycle disturbance at a regional scale: State-wide evapotranspiration trends (1979â€“2015) across Nebraska, USA. Journal of Hydrology, 2018, 557, 600-612.	5.4	21
52	On the Use of Semi-Logarithmic Plots for Baseflow Separation. Ground Water, 1999, 37, 660-662.	1.3	20
53	Vegetation Indices to Aid Areal Evapotranspiration Estimations. Journal of Hydrologic Engineering - ASCE, 2002, 7, 368-372.	1.9	17
54	Anthropogenic hydrometeorological changes at a regional scale: observed irrigationâ€“precipitation feedback (1979â€“2015) in Nebraska, USA. Sustainable Water Resources Management, 2020, 6, 1.	2.1	16

#	Article	IF	Citations
55	On the thermodynamic foundations of the complementary relationship of evaporation. Journal of Hydrology, 2021, 593, 125916.	5.4	16
56	Sensitivity analysis of aquifer parameter estimations based on the Laplace equation with linearized boundary conditions. Water Resources Research, 2003, 39, .	4.2	15
57	State-Space Discretization of the Kalinin-Milyukov-Nash-Cascade in a Sample-Data System Framework for Streamflow Forecasting. Journal of Hydrologic Engineering - ASCE, 2003, 8, 339-347.	1.9	15
58	Vadose zone influences on aquifer parameter estimates of saturated-zone hydraulic theory. Journal of Hydrology, 2004, 286, 78-86.	5.4	15
59	Complementary-relationship-based evapotranspiration mapping (cremap) technique for Hungary. Periodica Polytechnica: Civil Engineering, 2010, 54, 95.	0.6	14
60	A Calibration-Free Evapotranspiration Mapping (CREMAP) Technique. , 0, , .		14
61	Lithologic influences on groundwater recharge through incised glacial till from profile to regional scales: Evidence from glaciated Eastern Nebraska. Water Resources Research, 2014, 50, 466-481.	4.2	14
62	Complementary Relationship for evaporation performance at different spatial and temporal scales. Journal of Hydrology, 2022, 608, 127575.	5.4	12
63	A calibration-free evapotranspiration mapping technique for spatially-distributed regional-scale hydrologic modeling. Journal of Hydrology and Hydromechanics, 2011, 59, 118-130.	2.0	11
64	Accounting for Backwater Effects in Flow Routing by the Discrete Linear Cascade Model. Journal of Hydrologic Engineering - ASCE, 2014, 19, 69-77.	1.9	11
65	Dynamic Scaling of the Generalized Complementary Relationship Improves Long-term Tendency Estimates in Land Evaporation. Advances in Atmospheric Sciences, 2020, 37, 975-986.	4.3	11
66	Analysis of the nonlinearity in the hillslope runoff response to precipitation through numerical modeling. Journal of Hydrology, 2007, 337, 391-401.	5.4	10
67	An evaporation estimation method based on the coupled 2â€D turbulent heat and vapor transport equations. Journal of Geophysical Research, 2009, 114, .	3.3	10
68	Comment on â€œDerivation of a Sigmoid Generalized Complementary Function for Evaporation With Physical Constraintsâ€•by S. Han and F. Tian. Water Resources Research, 2019, 55, 868-869.	4.2	10
69	Discrete state-space approximation of the continuous Kalininâ€“Milyukovâ€“Nash cascade of noninteger storage elements. Journal of Hydrology, 2006, 328, 132-140.	5.4	9
70	Estimating spatially distributed monthly evapotranspiration rates by linear transformations of MODIS daytime land surface temperature data. Hydrology and Earth System Sciences, 2009, 13, 629-637.	4.9	9
71	Flow routing with unknown rating curves using a state-space reservoir-cascade-type formulation. Journal of Hydrology, 2005, 311, 219-229.	5.4	8
72	DEFINING WATERSHED-SCALE EVAPORATION USING A NORMALIZED DIFFERENCE VEGETATION INDEX. Journal of the American Water Resources Association, 1999, 35, 1245-1255.	2.4	7

#	Article	IF	Citations
73	Accounting for Streamâ€“Aquifer Interactions in the State-Space Discretization of the Kalininâ€“Milyukovâ€“Nash Cascade for Streamflow Forecasting. Journal of Hydrologic Engineering - ASCE, 2004, 9, 135-143.	1.9	7
74	Comment on â€œPower law catchmentâ€scale recessions arising from heterogeneous linear smallâ€scale dynamicsâ€•by C. J. Harman, M. Sivapalan, and P. Kumar. Water Resources Research, 2009, 45, .	4.2	7
75	Comment on the application of the Szilagyiâ€“Jozsa advectionâ€“aridity model for estimating actual terrestrial evapotranspiration in "Estimating actual, potential, reference crop and pan evaporation using standard meteorological data: a pragmatic synthesis" by McMahon et al. (2013). Hydrology and Earth System Sciences, 2013, 17, 4865-4867.	4.9	6
76	Recent Updates of the Calibration-Free Evapotranspiration Mapping (CREMAP) Method. , 0, , .		6
77	Modis-Aided Water-Balance Investigations in the Republican River Basin, USA. Periodica Polytechnica: Civil Engineering, 2014, 58, 33.	0.6	6
78	Why can the weighting parameter of the Muskingum channel routing method be negative?. Journal of Hydrology, 1992, 138, 145-151.	5.4	5
79	Sensitivity of Watershed Runoff under Humid Conditions to Potential Climate Variations. Journal of Environmental Engineering, ASCE, 2002, 128, 635-642.	1.4	5
80	Assessing streamâ€“aquifer interactions through inverse modeling of flow routing. Journal of Hydrology, 2006, 327, 208-218.	5.4	5
81	Reply to comment by Ma and Zhang on â€œRescaling the complementary relationship for land surface evaporationâ€. Water Resources Research, 2017, 53, 6343-6344.	4.2	5
82	Comment on â€œA reappraisal of the Kalman filtering technique, as applied in river flow forecastingâ€•by Ashan, M., O'Connor, K.M., 1994. Journal of Hydrology 161, 197â€“226. Journal of Hydrology, 2004, 285, 286-289.	5.4	4
83	Comment on â€œUsing numerical modelling to evaluate the capillary fringe groundwater ridging hypothesis of streamflow generationâ€•by H. L. Cloke, et al. [J. Hydrol. 316 (2006) 141â€“162]. Journal of Hydrology, 2006, 329, 724-729.	5.4	4
84	Application of a Routing Model for Detecting Channel Flow Changes with Minimal Data. Journal of Hydrologic Engineering - ASCE, 2008, 13, 521-526.	1.9	4
85	Comment on â€œA hybrid approach combining the FAO-56 method and the complementary principle for predicting daily evapotranspiration on a rainfed crop fieldâ€™ by D. Kim et al.. Journal of Hydrology, 2019, 578, 124031.	5.4	4
86	Water Balance Backward: Estimation of Annual Watershed Precipitation and Its Long-Term Trend with the Help of the Calibration-Free Generalized Complementary Relationship of Evaporation. Water (Switzerland), 2020, 12, 1775.	2.7	4
87	Recursive Streamflow Forecasting. , 0, , .		4
88	Application of MODIS-Based Monthly Evapotranspiration Rates in Runoff Modeling: A Case Study in Nebraska,USA. Open Journal of Modern Hydrology, 2013, 03, 172-178.	1.0	4
89	Comment on â€œComparison of 15 evaporation models applied to a small mountain lake in the northeastern USAâ€•by D.O. Rosenberry, T.C. Winter, D.C. Buso, and G.E. Likens [J. Hydrol. 340 (3â€“4) (2007) 149â€“166]. Journal of Hydrology, 2008, 348, 564-565.	5.4	3
90	Reply to â€œComment on â€˜Two Papers About the Generalized Complementary Evaporation Relationships by Crago et al.â€™â€. Water Resources Research, 2020, 56, e2019WR026773.	4.2	3

#	Article	IF	Citations
91	Comment on: â€œA review of the complementary principle of evaporation: from the original linear relationship to generalized nonlinear functionsâ€•by Han and Tian (2020). Hydrology and Earth System Sciences, 2021, 25, 63-68.	4.9	3
92	Discussion of â€œEstimation of the Water Balance Using Observed Soil Water in the Nebraska Sandhillsâ€• by V. Sridhar and K. G. Hubbard. Journal of Hydrologic Engineering - ASCE, 2010, 15, 1075-1075.	1.9	2
93	Comment on â€œThe hydrology and hydrometeorology of extreme floods in the Great Plains of Eastern Nebraskaâ€•by Y. Zhang, J.A. Smith and M.L. Baeck. Advances in Water Resources, 2002, 25, 701-702.	3.8	1
94	Comment on â€œInterference of river level changes on riparian zone evapotranspiration estimates from diurnal groundwater level fluctuationsâ€•by J. Zhu, M. Young, J. Healy, R. Jasoni, J. Osterberg [J. Hydrol. 403(3â€“4) (2011) 381â€“389]. Journal of Hydrology, 2011, 409, 578-579.	5.4	1
95	Comment on â€œAssessing interannual variability of evapotranspiration at the catchment scale using satelliteâ€based evapotranspiration data setsâ€•by Lei Cheng et al.. Water Resources Research, 2012, 48, .	4.2	1
96	Reply to Comment by S. Han and F. Tian on â€œA Calibrationâ€Free Formulation of the Complementary Relationship of Evaporation for Continentalâ€Scale Hydrologyâ€• Journal of Geophysical Research D: Atmospheres, 2021, 126, e2021JD034685.	3.3	1
97	Comment on â€˜Evaluation of the impact of groundwater irrigation on streamflow in Nebraskaâ€™ by Fujian Wen and Xunhong Chen. Journal of Hydrology, 2006, 331, 605.	5.4	0
98	Hungarian national report on IAHS 2003â€“2006. Acta Geodaetica Et Geophysica Hungarica, 2007, 42, 227-233.	0.4	0
99	Testing the Rationale behind an Assumed Linear Relationship between Evapotranspiration and Land Surface Temperature. Journal of Hydrologic Engineering - ASCE, 2015, 20, 04014073.	1.9	0
100	On the Clark Unit Hydrograph Model of HEC-HMS. Periodica Polytechnica: Civil Engineering, 0, , .	0.6	0
101	Comment on: A review of the complementary principle of evaporation: From the original linear relationship to generalized nonlinear functions by S. Han and F. Tian. , 0, , .		0