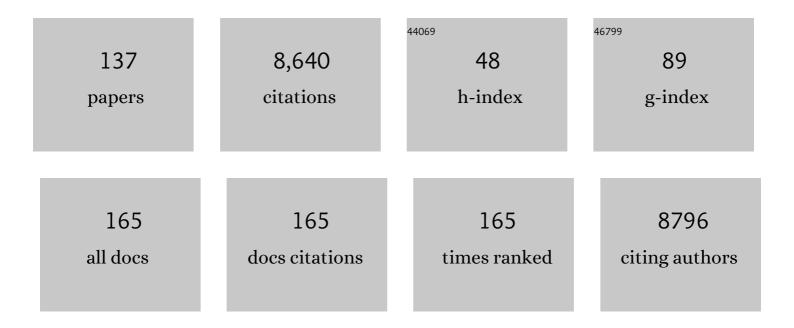
Niko E C Verhoest

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Assessing the Potential of Fully Polarimetric Mono- and Bistatic SAR Acquisitions in L-Band for Crop and Soil Monitoring. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2022, 15, 3168-3178.	4.9	7
2	Soil Moisture Retrieval Using Multistatic L-Band SAR and Effective Roughness Modeling. Remote Sensing, 2022, 14, 1650.	4.0	6
3	Impact of bias nonstationarity on the performance of uni- and multivariate bias-adjusting methods: a case study on data from Uccle, Belgium. Hydrology and Earth System Sciences, 2022, 26, 2319-2344.	4.9	10
4	Green Area Index and Soil Moisture Retrieval in Maize Fields Using Multi-Polarized C- and L-Band SAR Data and the Water Cloud Model. Remote Sensing, 2022, 14, 2496.	4.0	1
5	A roadmap for high-resolution satellite soil moisture applications – confronting product characteristics with user requirements. Remote Sensing of Environment, 2021, 252, 112162.	11.0	138
6	Assessment of irrigation expansion and implications for water resources by using RS and GIS techniques in the Lake Tana Basin of Ethiopia. Environmental Monitoring and Assessment, 2021, 193, 13.	2.7	23
7	Effective Drought Communication: Using the Past to Assess the Present and Anticipate the Future. Water (Switzerland), 2021, 13, 714.	2.7	1
8	Exploring the Effect of Occurrence-Bias-Adjustment Assumptions on Hydrological Impact Modeling. Water (Switzerland), 2021, 13, 1573.	2.7	1
9	Assessing the Potential of Fully-Polarimetric Simultaneous Mono- and Bistatic Airborne SAR Acquisitions in L-Band for Applications in Agriculture and Hydrology. , 2021, , .		2
10	Towards Operational Flood Monitoring in Flanders Using Sentinel-1. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2021, 14, 11004-11018.	4.9	8
11	A mathematical morphology approach for a qualitative exploration of drought events in space and time. International Journal of Climatology, 2020, 40, 530-543.	3.5	14
12	Sun-induced fluorescence closely linked to ecosystem transpiration as evidenced by satellite data and radiative transfer models. Remote Sensing of Environment, 2020, 249, 112030.	11.0	35
13	Flood Mapping in Vegetated Areas Using an Unsupervised Clustering Approach on Sentinel-1 and -2 Imagery. Remote Sensing, 2020, 12, 3611.	4.0	19
14	Evaluating the land-surface energy partitioning in ERA5. Geoscientific Model Development, 2020, 13, 4159-4181.	3.6	64
15	Assimilation of Soil Moisture and Ocean Salinity (SMOS) brightness temperature into a large-scale distributed conceptual hydrological model to improve soil moisture predictions: the Murray–Darling basin in Australia as a test case. Hydrology and Earth System Sciences, 2020, 24, 4793-4812.	4.9	6
16	Flood Mapping Based on Synthetic Aperture Radar: An Assessment of Established Approaches. IEEE Transactions on Geoscience and Remote Sensing, 2019, 57, 722-739.	6.3	78
17	Potential evaporation at eddy-covariance sites across the globe. Hydrology and Earth System Sciences, 2019, 23, 925-948.	4.9	54
18	Improving flood inundation forecasts through the assimilation of in situ floodplain water level measurements based on alternative observation network configurations. Advances in Water Resources, 2019, 130, 229-243.	3.8	14

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19	Performance of small-scale irrigation schemes in Lake Tana Basin of Ethiopia: technical and socio-political attributes. Physical Geography, 2019, 40, 227-251.	1.4	18
20	Irrigation efficiency and shallow groundwater in anisotropic floodplain soils near Lake Tana, Ethiopia. Irrigation and Drainage, 2019, 68, 365-378.	1.7	8
21	Estimating the actual evapotranspiration and deep percolation in irrigated soils of a tropical floodplain, northwest Ethiopia. Agricultural Water Management, 2018, 202, 42-56.	5.6	28
22	Global hydro-climatic biomes identified via multitask learning. Geoscientific Model Development, 2018, 11, 4139-4153.	3.6	14
23	Terrestrial evaporation response to modes of climate variability. Npj Climate and Atmospheric Science, 2018, 1, .	6.8	49
24	Towards Estimating Land Evaporation at Field Scales Using GLEAM. Remote Sensing, 2018, 10, 1720.	4.0	30
25	A coupled stochastic rainfall–evapotranspiration model for hydrological impact analysis. Hydrology and Earth System Sciences, 2018, 22, 1263-1283.	4.9	19
26	SMOS and SMAP Brightness Temperature Assimilation Over the Murrumbidgee Basin. IEEE Geoscience and Remote Sensing Letters, 2018, 15, 1652-1656.	3.1	3
27	Spatio-Temporal Drought Identification Through Mathematical Morphology. Communications in Computer and Information Science, 2018, , 287-298.	0.5	0
28	Impact of the timing of a SAR image acquisition on the calibration of a flood inundation model. Advances in Water Resources, 2017, 100, 126-138.	3.8	27
29	Scenario-based decision support for an integrated management of water resources. International Journal of River Basin Management, 2017, 15, 485-502.	2.7	7
30	A review of spatial downscaling of satellite remotely sensed soil moisture. Reviews of Geophysics, 2017, 55, 341-366.	23.0	441
31	Influence of Surface Roughness Sample Size for C-Band SAR Backscatter Applications on Agricultural Soils. IEEE Geoscience and Remote Sensing Letters, 2017, 14, 2300-2304.	3.1	7
32	Influence of Surface Roughness Measurement Scale on Radar Backscattering in Different Agricultural Soils. IEEE Transactions on Geoscience and Remote Sensing, 2017, 55, 5925-5936.	6.3	14
33	Analyzing Granger Causality in Climate Data with Time Series Classification Methods. Lecture Notes in Computer Science, 2017, , 15-26.	1.3	4
34	A non-linear data-driven approach to reveal global vegetation sensitivity to climate. , 2017, , .		2
35	Investigating the control of ocean-atmospheric oscillations over global terrestrial evaporation using a simple supervised learning method. , 2017, , .		0
36	Global climatic drivers of vegetation based on wavelet analysis. , 2017, , .		2

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37	Evaluation of the Oh, Dubois and IEM Backscatter Models Using a Large Dataset of SAR Data and Experimental Soil Measurements. Water (Switzerland), 2017, 9, 38.	2.7	67
38	Scaling, similarity, and the fourth paradigm for hydrology. Hydrology and Earth System Sciences, 2017, 21, 3701-3713.	4.9	63
39	The future of Earth observation in hydrology. Hydrology and Earth System Sciences, 2017, 21, 3879-3914.	4.9	313
40	GLEAMÂv3: satellite-based land evaporation and root-zone soil moisture. Geoscientific Model Development, 2017, 10, 1903-1925.	3.6	1,352
41	A non-linear Granger-causality framework to investigate climate–vegetation dynamics. Geoscientific Model Development, 2017, 10, 1945-1960.	3.6	110
42	Consistency assessment of rating curve data in various locations using Bidirectional Reach (BReach). Hydrology and Earth System Sciences, 2017, 21, 5315-5337.	4.9	1
43	SMOS brightness temperature assimilation into the Community Land Model. Hydrology and Earth System Sciences, 2017, 21, 5929-5951.	4.9	13
44	Scaling, Similarity, and the Fourth Paradigm for Hydrology. , 2017, 21, 3701-3713.		7
45	A New Empirical Model for Radar Scattering from Bare Soil Surfaces. Remote Sensing, 2016, 8, 920.	4.0	82
46	Impact of draining hilly lands on runoff and onâ€ s ite erosion: a case study from humid Ethiopia. Earth Surface Processes and Landforms, 2016, 41, 513-525.	2.5	8
47	Contribution of water-limited ecoregions to their own supply of rainfall. Environmental Research Letters, 2016, 11, 124007.	5.2	47
48	Identification of temporal consistency in rating curve data: Bidirectional Reach (BReach). Water Resources Research, 2016, 52, 6277-6296.	4.2	4
49	On the significance of cropâ€ŧype information for the simulation of catchment hydrology. Hydrological Processes, 2015, 29, 915-926.	2.6	1
50	Seasonal Surface Drainage of Sloping Farmland: A Review of Its Hydrogeomorphic Impacts. Land Degradation and Development, 2015, 26, 35-44.	3.9	28
51	A continuous rainfall model based on vine copulas. Hydrology and Earth System Sciences, 2015, 19, 2685-2699.	4.9	61
52	Semi-Empirical Calibration of the Integral Equation Model for Co-Polarized L-Band Backscattering. Remote Sensing, 2015, 7, 13626-13640.	4.0	43
53	Sensitivity of C-band backscatter to surface roughness parameters measured at different scales. , 2015, , .		1
54	Effects of drainage ditches and stone bunds on topographical thresholds for gully head development in North Ethiopia. Geomorphology, 2015, 234, 193-203.	2.6	26

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55	Water balance of a lake with floodplain buffering: Lake Tana, Blue Nile Basin, Ethiopia. Journal of Hydrology, 2015, 522, 174-186.	5.4	70
56	Copula-Based Downscaling of Coarse-Scale Soil Moisture Observations With Implicit Bias Correction. IEEE Transactions on Geoscience and Remote Sensing, 2015, 53, 3507-3521.	6.3	60
57	Estimating Effective Roughness Parameters of the L-MEB Model for Soil Moisture Retrieval Using Passive Microwave Observations From SMAPVEX12. IEEE Transactions on Geoscience and Remote Sensing, 2015, 53, 4091-4103.	6.3	19
58	Imperfect scaling in distributions of radar-derived rainfall fields. Hydrology and Earth System Sciences, 2014, 18, 5331-5344.	4.9	0
59	Modelling the Spatial Distribution of Culicoides imicola: Climatic versus Remote Sensing Data. Remote Sensing, 2014, 6, 6604-6619.	4.0	7
60	Analyzing runoff processes through conceptual hydrological modeling in the Upper Blue Nile Basin, Ethiopia. Hydrology and Earth System Sciences, 2014, 18, 5149-5167.	4.9	34
61	Seasonality in the Angular Dependence of ASAR Wide Swath Backscatter. IEEE Geoscience and Remote Sensing Letters, 2014, 11, 1423-1427.	3.1	7
62	Practical computing with interactive fuzzy variables. Applied Soft Computing Journal, 2014, 22, 518-527.	7.2	3
63	El Niño–La Niña cycle and recent trends in continental evaporation. Nature Climate Change, 2014, 4, 122-126.	18.8	254
64	Effects of the floodplain on river discharge into Lake Tana (Ethiopia). Journal of Hydrology, 2014, 519, 699-710.	5.4	49
65	Reconsidering the role of Thorikos within the Laurion silver mining area (Attica, Greece) through hydrological analyses. Journal of Archaeological Science, 2014, 41, 272-284.	2.4	4
66	Assessing hydrologic prediction uncertainty resulting from soft land cover classification. Journal of Hydrology, 2014, 517, 411-424.	5.4	7
67	On the relation between soil moisture dynamics and the geographical distribution of <i>Culicoides imicola</i> . Ecohydrology, 2014, 7, 622-632.	2.4	12
68	Temporal variation of rhizodeposit-C assimilating microbial communities in a natural wetland. Biology and Fertility of Soils, 2013, 49, 333-341.	4.3	22
69	The importance of hydraulic groundwater theory in catchment hydrology: The legacy of Wilfried Brutsaert and Jean-Yves Parlange. Water Resources Research, 2013, 49, 5099-5116.	4.2	114
70	Soil Moisture Retrieval from Synthetic Aperture Radar. , 2013, , 323-344.		0
71	Local sensitivity analysis for compositional data with application to soil texture in hydrologic modelling. Hydrology and Earth System Sciences, 2013, 17, 461-478.	4.9	19
72	Multivariate return periods in hydrology: a critical and practical review focusing on synthetic design hydrograph estimation. Hydrology and Earth System Sciences, 2013, 17, 1281-1296.	4.9	226

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73	An assessment of the ability of Bartlett–Lewis type of rainfall models to reproduce drought statistics. Hydrology and Earth System Sciences, 2013, 17, 5167-5183.	4.9	9
74	Influence of topographic normalization on the vegetation index–surface temperature relationship. Journal of Applied Remote Sensing, 2012, 6, 063518.	1.3	7
75	Random Forests as a tool for estimating uncertainty at pixel-level in SAR image classification. International Journal of Applied Earth Observation and Geoinformation, 2012, 19, 173-184.	2.8	88
76	Multiscale assimilation of Advanced Microwave Scanning Radiometer–EOS snow water equivalent and Moderate Resolution Imaging Spectroradiometer snow cover fraction observations in northern Colorado. Water Resources Research, 2012, 48, .	4.2	147
77	Impact of Reducing Polarimetric SAR Input on the Uncertainty of Crop Classifications Based on the Random Forests Algorithm. IEEE Transactions on Geoscience and Remote Sensing, 2012, 50, 4185-4200.	6.3	84
78	Calibration of the modified Bartlett-Lewis model using global optimization techniques and alternative objective functions. Hydrology and Earth System Sciences, 2012, 16, 873-891.	4.9	19
79	Accounting for seasonality in a soil moisture change detection algorithm for ASAR Wide Swath time series. Hydrology and Earth System Sciences, 2012, 16, 773-786.	4.9	29
80	Spatial and temporal soil moisture estimation from RADARSAT-2 imagery over Flevoland, The Netherlands. Journal of Hydrology, 2012, 456-457, 44-56.	5.4	37
81	Impact of soil hydraulic parameter uncertainty on soil moisture modeling. Water Resources Research, 2011, 47, .	4.2	30
82	The potential of multitemporal Aqua and Terra MODIS apparent thermal inertia as a soil moisture indicator. International Journal of Applied Earth Observation and Geoinformation, 2011, 13, 934-941.	2.8	79
83	Effective roughness modelling as a tool for soil moisture retrieval from C- and L-band SAR. Hydrology and Earth System Sciences, 2011, 15, 151-162.	4.9	72
84	Copula-based downscaling of spatial rainfall: a proof of concept. Hydrology and Earth System Sciences, 2011, 15, 1445-1457.	4.9	94
85	Integrating coarse-scale uncertain soil moisture data into a fine-scale hydrological modelling scenario. Hydrology and Earth System Sciences, 2011, 15, 3101-3114.	4.9	71
86	Crop Classification Using Short-Revisit Multitemporal SAR Data. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2011, 4, 423-431.	4.9	115
87	On the Retrieval of Soil Moisture in Wheat Fields From L-Band SAR Based on Water Cloud Modeling, the IEM, and Effective Roughness Parameters. IEEE Geoscience and Remote Sensing Letters, 2011, 8, 740-744.	3.1	91
88	Possibilistic Soil Roughness Identification for Uncertainty Reduction on SAR-Retrieved Soil Moisture. IEEE Transactions on Geoscience and Remote Sensing, 2011, 49, 628-638.	6.3	12
89	Seasonal and annual throughfall and stemflow in Andean temperate rainforests. Hydrological Processes, 2011, 25, 623-633.	2.6	39
90	Are stochastic point rainfall models able to preserve extreme flood statistics?. Hydrological Processes, 2010, 24, 3439-3445.	2.6	63

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91	A stochastic design rainfall generator based on copulas and mass curves. Hydrology and Earth System Sciences, 2010, 14, 2429-2442.	4.9	50
92	Satellite-Scale Snow Water Equivalent Assimilation into a High-Resolution Land Surface Model. Journal of Hydrometeorology, 2010, 11, 352-369.	1.9	160
93	Influence of Surface Roughness Spatial Variability and Temporal Dynamics on the Retrieval of Soil Moisture from SAR Observations. Sensors, 2009, 9, 463-489.	3.8	52
94	Adaptive Soil Moisture Profile Filtering for Horizontal Information Propagation in the Independent Column-Based CLM2.0. Journal of Hydrometeorology, 2009, 10, 766-779.	1.9	32
95	Error in Radar-Derived Soil Moisture due to Roughness Parameterization: An Analysis Based on Synthetical Surface Profiles. Sensors, 2009, 9, 1067-1093.	3.8	70
96	Optimization of Soil Hydraulic Model Parameters Using Synthetic Aperture Radar Data: An Integrated Multidisciplinary Approach. IEEE Transactions on Geoscience and Remote Sensing, 2009, 47, 455-467.	6.3	38
97	Uncertainty propagation in vegetation distribution models based on ensemble classifiers. Ecological Modelling, 2009, 220, 791-804.	2.5	26
98	Rainfall partitioning into throughfall, stemflow, and interception within a single beech (Fagus) Tj ETQq0 0 0 rgBT Processes, 2008, 22, 33-45.	Overlock 2.6	10 Tf 50 467 207
99	On the Soil Roughness Parameterization Problem in Soil Moisture Retrieval of Bare Surfaces from Synthetic Aperture Radar. Sensors, 2008, 8, 4213-4248.	3.8	272
100	Remote Sensing and Wetland Ecology: a South African Case Study. Sensors, 2008, 8, 3542-3556.	3.8	47
101	A Takagi–Sugeno Fuzzy Rule-Based Model for Soil Moisture Retrieval From SAR Under Soil Roughness Uncertainty. IEEE Transactions on Geoscience and Remote Sensing, 2007, 45, 1351-1360.	6.3	27
102	Upscaling of point soil moisture measurements to field averages at the OPE3 test site. Journal of Hydrology, 2007, 343, 1-11.	5.4	52
103	Optimization of a coupled hydrology-crop growth model through the assimilation of observed soil moisture and leaf area index values using an ensemble Kalman filter. Water Resources Research, 2007, 43, .	4.2	104
104	State and bias estimation for soil moisture profiles by an ensemble Kalman filter: Effect of assimilation depth and frequency. Water Resources Research, 2007, 43, .	4.2	89
105	A possibilistic approach to soil moisture retrieval from ERS synthetic aperture radar backscattering under soil roughness uncertainty. Water Resources Research, 2007, 43, .	4.2	45
106	Correcting for forecast bias in soil moisture assimilation with the ensemble Kalman filter. Water Resources Research, 2007, 43, .	4.2	118
107	Integrating Remote Sensing and Wetland Ecology: a Case Study on South African Wetlands. , 2007, , .		3
108	Assessment of adaptive and heuristic time stepping for variably saturated flow. International Journal for Numerical Methods in Fluids, 2007, 53, 1173-1193.	1.6	31

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109	Cluster-based fuzzy models for groundwater flow in the unsaturated zone. Advances in Water Resources, 2007, 30, 701-714.	3.8	10
110	Random forests as a tool for ecohydrological distribution modelling. Ecological Modelling, 2007, 207, 304-318.	2.5	293
111	Assessment of model uncertainty for soil moisture through ensemble verification. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	87
112	Reply to comment by C. Michel on "A base flow separation algorithm based on the linearized Boussinesq equation for complex hillslopes― Water Resources Research, 2006, 42, .	4.2	0
113	Spatial variability and temporal stability of throughfall deposition under beech (Fagus sylvatica L.) in relationship to canopy structure. Environmental Pollution, 2006, 142, 254-263.	7.5	51
114	Spatial variability and temporal stability of throughfall water under a dominant beech (Fagus) Tj ETQq0 0 0 rgBT	/Oyerlock	10 Tf 50 542 129
115	Spatial and temporal characteristics of soil moisture in an intensively monitored agricultural field (OPE3). Journal of Hydrology, 2006, 331, 719-730.	5.4	123
116	Assessment of Temporal and Spatial Variation of Nitrate Removal in Riparian Zones. Environmental Monitoring and Assessment, 2006, 116, 197-215.	2.7	17
117	Analysis Of A 105-year time series of precipitation observed at Uccle, Belgium. International Journal of Climatology, 2006, 26, 2023-2039.	3.5	62
118	Effect of soil roughness uncertainty on the accuracy of soil moisture retrieval from ERS SAR backscattering. , 2005, 5976, 41.		0
119	Radar based surface soil moisture retrieval through the combined use of two backscattering models. , 2005, 5976, 425.		0
120	Vegetation parameter retrieval from SAR data using near-surface soil moisture estimates derived from a hydrological model. , 2005, 5976, 11.		1
121	Assimilation of small scale soil moisture in a land surface model. , 2005, 5976, 143.		0
122	Correlation between Ground Measured Soil Moisture and RADARSAT-1 derived Backscattering Coefficient over an Agricultural Catchment of Navarre (North of Spain). Biosystems Engineering, 2005, 92, 119-133.	4.3	48
123	A comparison of bulk and wet-only deposition at two adjacent sites in Melle (Belgium). Atmospheric Environment, 2005, 39, 7-15.	4.1	71
124	Comparison of data-driven Takagi–Sugeno models of rainfall–discharge dynamics. Journal of Hydrology, 2005, 302, 173-186.	5.4	120
125	Characteristics of rainstorms over a temperate region derived from multiple time series of weather radar images. Journal of Hydrology, 2005, 307, 126-144.	5.4	17
126	A base flow separation algorithm based on the linearized Boussinesq equation for complex hillslopes. Water Resources Research, 2005, 41, .	4.2	53

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127	Water Table Profiles and Discharges for an Inclined Ditch-Drained Aquifer under Temporally Variable Recharge. Journal of Irrigation and Drainage Engineering - ASCE, 2003, 129, 93-99.	1.0	9
128	Fuzzy Models of Rainfall-Discharge Dynamics. Lecture Notes in Computer Science, 2003, , 303-310.	1.3	1
129	A metahillslope model based on an analytical solution to a linearized Boussinesq equation for temporally variable recharge rates. Water Resources Research, 2002, 38, 33-1-33-14.	4.2	33
130	Analytical Solution for Transient Water Table Heights and Outflows from Inclined Ditch-Drained Terrains. Journal of Irrigation and Drainage Engineering - ASCE, 2002, 128, 358-364.	1.0	19
131	Improvement of TOPLATS-based discharge predictions through assimilation of ERS-based remotely sensed soil moisture values. Hydrological Processes, 2002, 16, 995-1013.	2.6	111
132	The importance of the spatial patterns of remotely sensed soil moisture in the improvement of discharge predictions for small-scale basins through data assimilation. Journal of Hydrology, 2001, 251, 88-102.	5.4	227
133	Some analytical solutions of the linearized Boussinesq equation with recharge for a sloping aquifer. Water Resources Research, 2000, 36, 793-800.	4.2	103
134	Mapping basin scale variable source areas from multitemporal remotely sensed observations of soil moisture behavior. Water Resources Research, 1998, 34, 3235-3244.	4.2	56
135	On the applicability of Bartlett–Lewis rectangular pulses models in the modeling of design storms at a point. Journal of Hydrology, 1997, 202, 108-120.	5.4	99
136	Simulation of one-dimensional water movement in the unsaturated zone by means of a first order Takagi-Sugeno model. , 0, , .		1
137	An update on multivariate return periods in hydrology. Proceedings of the International Association of Hydrological Sciences, 0, 373, 175-178.	1.0	5