Jens Christian Refsgaard

List of Publications by Year
in descending order

153 papers	9,532 citations	50276 46 h-index	43889 91 g-index
165 all docs	165 docs citations	165 times ranked	8691 citing authors

#	Article	IF	Citations
1	Social factors influencing actor agency of nitrate management in local agricultural landscapes of Poland. Landscape Ecology, 2023, 38, 4157-4175.	4.2	1
2	Hydrological process knowledge in catchment modelling â€“ Lessons and perspectives from 60 years development. Hydrological Processes, 2022, 36, .	2.6	14
3	Are maps of nitrate reduction in groundwater altered by climate and land use changes?. Hydrology and Earth System Sciences, 2022, 26, 955-973.	4.9	6
4	Impacts of land use, climate change and hydrological model structure on nitrate fluxes: Magnitudes and uncertainties. Science of the Total Environment, 2022, 830, 154671.	8.0	15
5	Large-scale hydrological modeling in a multi-objective uncertainty framework â€“ Assessing the potential for managed aquifer recharge in the North China Plain. Journal of Hydrology: Regional Studies, 2022, 41, 101097.	2.4	1
6	The effect of weighting hydrological projections based on the robustness of hydrological models under a changing climate. Journal of Hydrology: Regional Studies, 2022, 41, 101113.	2.4	3
7	Quantificando a incerteza estratigrÃ¡fica na modelagem de Ã¡guas subterrÃ¢neas para projeto de infraestrutura. Hydrogeology Journal, 2021, 29, 1075-1089.	2.1	6
8	Downscaling a national hydrological model to subgrid scale. Journal of Hydrology, 2021, 603, 126796.	5.4	5
9	Nitrate Management Discourses in Poland and Denmarkâ€”Laggards or Leaders in Water Quality Protection?. Water (Switzerland), 2020, 12, 2371.	2.7	13
10	Observational and predictive uncertainties for multiple variables in a spatially distributed hydrological model. Hydrological Processes, 2019, 33, 833-848.	2.6	24
11	Future socioeconomic conditions may have a larger impact than climate change on nutrient loads to the Baltic Sea. Ambio, 2019, 48, 1325-1336.	5.5	37
12	Sustainable ecosystem governance under changing climate and land use: An introduction. Ambio, 2019, 48, 1235-1239.	5.5	4
13	Reactive nitrogen in a clay till hill slope field system. Ambio, 2019, 48, 1240-1251.	5.5	5
14	Nitrate leaching losses from two Baltic Sea catchments under scenarios of changes in land use, land management and climate. Ambio, 2019, 48, 1252-1263.	5.5	32
15	Shared socio-economic pathways extended for the Baltic Sea: exploring long-term environmental problems. Regional Environmental Change, 2019, 19, 1073-1086.	2.9	42
16	Spatially differentiated regulation: Can it save the Baltic Sea from excessive N-loads?. Ambio, 2019, 48, 1278-1289.	5.5	27
17	Using a simple post-processor to predict residual uncertainty for multiple hydrological model outputs. Advances in Water Resources, 2019, 129, 16-30.	3.8	11
18	Joint treatment of point measurement, sampling and neighborhood uncertainty in space-time rainfall mapping. Journal of Hydrology, 2019, 574, 148-159.	5.4	2

#	Article	IF	Citations
19	Real-time simulation of surface water and groundwater with data assimilation. Advances in Water Resources, 2019, 127, 13-25.	3.8	16
20	Modeling Depth of the Redox Interface at High Resolution at National Scale Using Random Forest and Residual Gaussian Simulation. Water Resources Research, 2019, 55, 1451-1469.	4.2	48
21	Analysis of Water Management Scenarios Using Coupled Hydrological and System Dynamics Modeling. Water Resources Management, 2019, 33, 4849-4863.	3.9	23
22	Importance of geological information for assessing drain flow in a Danish till landscape. Hydrological Processes, 2019, 33, 450-462.	2.6	10
23	Effects of changes in land use and climate on aquatic ecosystems: Coupling of models and decomposition of uncertainties. Science of the Total Environment, 2019, 657, 627-633.	8.0	48
24	Groundwater dynamics and effect of tile drainage on water flow across the redox interface in a Danish Weichsel till area. Advances in Water Resources, 2019, 123, 23-39.	3.8	22
25	Bias-aware data assimilation in integrated hydrological modelling. Hydrology Research, 2018, 49, 989-1004.	2.7	11
26	Simulation of nitrate reduction in groundwater â€“ An upscaling approach from small catchments to the Baltic Sea basin. Advances in Water Resources, 2018, 111, 58-69.	3.8	15
27	On the skill of raw and post-processed ensemble seasonal meteorological forecasts in Denmark. Hydrology and Earth System Sciences, 2018, 22, 6591-6609.	4.9	13
28	HOBE: The Danish Hydrological Observatory. Vadose Zone Journal, 2018, 17, 1-24.	2.2	34
29	Seasonal streamflow forecasts in the Ahlergaarde catchment, Denmark: the effect of preprocessing and post-processing on skill and statistical consistency. Hydrology and Earth System Sciences, 2018, 22, 3601-3617.	4.9	22
30	Opportunities and Barriers for Water Co-Governanceâ€”A Critical Analysis of Seven Cases of Diffuse Water Pollution from Agriculture in Europe, Australia and North America. Sustainability, 2018, 10, 1634.	3.2	30
31	The Baltic Sea as a time machine for the future coastal ocean. Science Advances, 2018, 4, eaar8195.	10.3	339
32	Moving beyond runâ€off calibrationâ€”Multivariable optimization of a surfaceâ€“subsurfaceâ€“atmosphere model. Hydrological Processes, 2018, 32, 2654-2668.	2.6	42
33	Simulating seasonal variations of tile drainage discharge in an agricultural catchment. Water Resources Research, 2017, 53, 3896-3920.	4.2	43
34	Review and assessment of nitrate reduction in groundwater in the Baltic Sea Basin. Journal of Hydrology: Regional Studies, 2017, 12, 50-68.	2.4	43
35	Potential benefits of a spatially targeted regulation based on detailed N-reduction maps to decrease N-load from agriculture in a small groundwater dominated catchment. Science of the Total Environment, 2017, 595, 325-336.	8.0	32
36	The integrated hydrologic model intercomparison project, <scp>IHâ€MIP2</scp>: A second set of benchmark results to diagnose integrated hydrology and feedbacks. Water Resources Research, 2017, 53, 867-890.	4.2	113

#	Article	IF	Citations
37	Groundwater management and protection in Denmark: a review of pre-conditions, advances and challenges. International Journal of Water Resources Development, 2017, 33, 868-889.	2.0	20
38	Multivariate hydrological data assimilation of soil moisture and groundwater head. Hydrology and Earth System Sciences, 2016, 20, 4341-4357.	4.9	32
39	Data assimilation in integrated hydrological modelling in the presence of observation bias. Hydrology and Earth System Sciences, 2016, 20, 2103-2118.	4.9	18
40	Local control on precipitation in a fully coupled climate-hydrology model. Scientific Reports, 2016, 6, 22927.	3.3	42
41	Where are the limits of model predictive capabilities?. Hydrological Processes, 2016, 30, 4956-4965.	2.6	13
42	Using expert elicitation to quantify catchment water balances and their uncertainties. Water Resources Research, 2016, 52, 5111-5131.	4.2	17
43	Calibration of a distributed hydrology and land surface model using energy flux measurements. Agricultural and Forest Meteorology, 2016, 217, 74-88.	4.8	30
44	Assessing the influence of groundwater and land surface scheme in the modelling of land surfaceâ€“atmosphere feedbacks over the FIFE area in Kansas, USA. Environmental Earth Sciences, 2016, 75, 1.	2.7	10
45	Combined effects of climate models, hydrological model structures and land use scenarios on hydrological impacts of climate change. Journal of Hydrology, 2016, 535, 301-317.	5.4	156
46	Climate change impacts on groundwater hydrology â€“ where are the main uncertainties and can they be reduced?. Hydrological Sciences Journal, 2016, 61, 2312-2324.	2.6	31
47	Spatial uncertainty in bias corrected climate change projections and hydrogeological impacts. Hydrological Processes, 2015, 29, 4514-4532.	2.6	13
48	Data assimilation in integrated hydrological modeling using ensemble Kalman filtering: evaluating the effect of ensemble size and localization on filter performance. Hydrology and Earth System Sciences, 2015, 19, 2999-3013.	4.9	63
49	Performance evaluation of groundwater model hydrostratigraphy from airborne electromagnetic data and lithological borehole logs. Hydrology and Earth System Sciences, 2015, 19, 3875-3890.	4.9	28
50	Assessing hydrological model predictive uncertainty using stochastically generated geological models. Hydrological Processes, 2015, 29, 4293-4311.	2.6	41
51	Simulating coupled surface and subsurface water flow in a tile-drained agricultural catchment. Journal of Hydrology, 2015, 521, 374-388.	5.4	49
52	Coupling of a distributed hydrological model with an urban storm water model for impact analysis of forced infiltration. Journal of Hydrology, 2015, 525, 506-520.	5.4	37
53	Impact of uncertainty description on assimilating hydraulic head in the MIKE SHE distributed hydrological model. Advances in Water Resources, 2015, 86, 400-413.	3.8	31
54	Effect of a high-end CO2-emission scenario on hydrology. Climate Research, 2015, 64, 39-54.	1.1	19

#	Article	IF	Citations
55	Projecting the future ecological state of lakes in Denmark in a 6 degree warming scenario. Climate Research, 2015, 64, 55-72.	1.1	52
56	Climate model uncertainty versus conceptual geological uncertainty in hydrological modeling. Hydrology and Earth System Sciences, 2015, 19, 3891-3901.	4.9	12
57	Comparison and Evaluation of Model Structures for the Simulation of Pollution Fluxes in a Tile-Drained River Basin. Journal of Environmental Quality, 2014, 43, 86-99.	2.0	13
58	Results from a full coupling of the HIRHAM regional climate model and the MIKE SHE hydrological model for a Danish catchment. Hydrology and Earth System Sciences, 2014, 18, 4733-4749.	4.9	34
59	Challenges in conditioning a stochastic geological model of a heterogeneous glacial aquifer to a comprehensive soft data set. Hydrology and Earth System Sciences, 2014, 18, 2907-2923.	4.9	37
60	Historical trends in precipitation and stream discharge at the Skjern River catchment, Denmark. Hydrology and Earth System Sciences, 2014, 18, 595-610.	4.9	26
61	Transition probabilityâ€based stochastic geological modeling using airborne geophysical data and borehole data. Water Resources Research, 2014, 50, 3147-3169.	4.2	81
62	Nitrate reduction in geologically heterogeneous catchments â€" A framework for assessing the scale of predictive capability of hydrological models. Science of the Total Environment, 2014, 468-469, 1278-1288.	8.0	79
63	A framework for testing the ability of models to project climate change and its impacts. Climatic Change, 2014, 122, 271-282.	3.6	104
64	Uncertainty assessment of spatially distributed nitrate reduction potential in groundwater using multiple geological realizations. Journal of Hydrology, 2014, 519, 225-237.	5.4	43
65	Embedding complex hydrology in the regional climate system â€" Dynamic coupling across different modelling domains. Advances in Water Resources, 2014, 74, 166-184.	3.8	38
66	A concept for estimating depth of the redox interface for catchment-scale nitrate modelling in a till area in Denmark. Hydrogeology Journal, 2014, 22, 1639-1655.	2.1	30
67	The role of uncertainty in climate change adaptation strategiesâ€"A Danish water management example. Mitigation and Adaptation Strategies for Global Change, 2013, 18, 337-359.	2.1	92
68	Evaluation of the value of radar QPE data and rain gauge data for hydrological modeling. Water Resources Research, 2013, 49, 5989-6005.	4.2	23
69	On the role of domain size and resolution in the simulations with the HIRHAM region climate model. Climate Dynamics, 2013, 40, 2903-2918.	3.8	28
70	Evaluation of a typical hydrological model in relation to environmental flows. Journal of Hydrology, 2013, 507, 52-62.	5.4	27
71	Assessment of robustness and significance of climate change signals for an ensemble of distribution-based scaled climate projections. Journal of Hydrology, 2013, 486, 479-493.	5.4	52
72	Importance of including smallâ€scale tile drain discharge in the calibration of a coupled groundwaterâ€surface water catchment model. Water Resources Research, 2013, 49, 585-603.	4.2	42

#	Article	IF	Citations
73	Integrated hydrological modeling of the North China Plain and implications for sustainable water management. Hydrology and Earth System Sciences, 2013, 17, 3759-3778.	4.9	44
74	Climate change impact on groundwater levels: ensemble modelling of extreme values. Hydrology and Earth System Sciences, 2013, 17, 1619-1634.	4.9	29
75	Physically-based modelling, good modelling practice including uncertainty â€“ reply to comment by Ewen et al. (2012). Hydrology Research, 2012, 43, 948-950.	2.7	3
76	Spatial-Scale Characteristics of Precipitation Simulated by Regional Climate Models and the Implications for Hydrological Modeling. Journal of Hydrometeorology, 2012, 13, 1817-1835.	1.9	27
77	Review of strategies for handling geological uncertainty in groundwater flow and transport modeling. Advances in Water Resources, 2012, 36, 36-50.	3.8	206
78	Assessment of hydrological model predictive ability given multiple conceptual geological models. Water Resources Research, 2012, 48, .	4.2	65
79	On the importance of appropriate precipitation gauge catch correction for hydrological modelling at mid to high latitudes. Hydrology and Earth System Sciences, 2012, 16, 4157-4176.	4.9	73
80	Parameterisation and scaling of the land surface model for use in a coupled climate-hydrological model. Journal of Hydrology, 2012, 426-427, 63-78.	5.4	8
81	Statistical analysis of the impact of radar rainfall uncertainties on water resources modeling. Water Resources Research, 2011, 47, .	4.2	24
82	Evaluation of Climate Input Biases and Water Balance Issues Using a Coupled Surfaceâ€“Subsurface Model. Vadose Zone Journal, 2011, 10, 37-53.	2.2	60
83	Model parameter analysis using remotely sensed pattern information in a multi-constraint framework. Journal of Hydrology, 2011, 409, 337-349.	5.4	76
84	SystÃ¨me Hydrologique EuropeÃ©n (SHE): review and perspectives after 30 years development in distributed physically-based hydrological modelling. Hydrology Research, 2010, 41, 355-377.	2.7	93
85	Identifying Uncertainty Guidelines for Supporting Policy Making in Water Management Illustrated for Upper Guadiana and Rhine Basins. Water Resources Management, 2010, 24, 3901-3938.	3.9	17
86	An intercomparison of regional climate model data for hydrological impact studies in Denmark. Journal of Hydrology, 2010, 380, 406-419.	5.4	69
87	Groundwater Modeling in Integrated Water Resources Managementâ€”Visions for 2020. Ground Water, 2010, 48, 633-648.	1.3	75
88	A good-looking catchment can turn into a modeller's nightmare. Hydrological Sciences Journal, 2010, 55, 899-912.	2.6	18
89	An integrated and physically based nitrogen cycle catchment model. Hydrology Research, 2009, 40, 347-363.	2.7	30
90	Numerical analysis of water and solute transport in variably-saturated fractured clayey till. Journal of Contaminant Hydrology, 2009, 104, 137-152.	3.3	33

#	Article	IF	Citations
91	Harmonised Principles for Public Participation in Quality Assurance of Integrated Water Resources Modelling. Water Resources Management, 2009, 23, 2539-2554.	3.9	26
92	Identification of Major Sources of Uncertainty in Current IWRM Practice. Illustrated for the Rhine Basin. Water Resources Management, 2008, 22, 1677-1708.	3.9	58
93	Field scale heterogeneity of redox conditions in till-upscaling to a catchment nitrate model. Hydrogeology Journal, 2008, 16, 1251-1266.	2.1	23
94	Assessment of exploitable groundwater resources of Denmark by use of ensemble resource indicators and a numerical groundwaterâ€“surface water model. Journal of Hydrology, 2008, 348, 224-240.	5.4	115
95	Controlling geological and hydrogeological processes in an arsenic contaminated aquifer on the Red River flood plain, Vietnam. Applied Geochemistry, 2008, 23, 3099-3115.	3.0	60
96	Using Environmental Tracers in Modeling Flow in a Complex Shallow Aquifer System. Journal of Hydrologic Engineering - ASCE, 2008, 13, 1037-1048.	1.9	39
97	Uncertainty in Simulation of Nitrate Leaching at Field and Catchment Scale within the Odense River Basin. Vadose Zone Journal, 2008, 7, 10-21.	2.2	17
98	Fluorescence Imaging Applied to Tracer Distributions in Variably Saturated Fractured Clayey Till. Journal of Environmental Quality, 2008, 37, 448-458.	2.0	33
99	Joint use of monitoring and modelling. Water Science and Technology, 2007, 56, 21-29.	2.5	1
100	The inadequacy of monitoring without modelling support. Journal of Environmental Monitoring, 2007, 9, 931.	2.1	9
101	Problems with heterogeneity in physically based agricultural catchment models. Journal of Hydrology, 2007, 342, 1-16.	5.4	27
102	Review of classification systems and new multi-scale typology of groundwaterâ€“surface water interaction. Journal of Hydrology, 2007, 344, 1-16.	5.4	140
103	Operationalising uncertainty in data and models for integrated water resources management. Water Science and Technology, 2007, 56, 1-12.	2.5	4
104	Uncertainty in geological and hydrogeological data. Hydrology and Earth System Sciences, 2007, 11, 1551-1561.	4.9	39
105	Uncertainty in the environmental modelling process â€“ A framework and guidance. Environmental Modelling and Software, 2007, 22, 1543-1556.	4.5	881
106	A methodology to support multidisciplinary model-based water management. Environmental Modelling and Software, 2007, 22, 743-759.	4.5	69
107	Use of Models to Support the Monitoring Requirements in the Water Framework Directive. Water Resources Management, 2007, 21, 1649-1672.	3.9	39
108	The importance of alternative conceptual models for simulation of concentrations in a multi-aquifer system. Hydrogeology Journal, 2007, 15, 843-860.	2.1	85

#	Article	IF	Citations
109	A framework for dealing with uncertainty due to model structure error. Advances in Water Resources, 2006, 29, 1586-1597.	3.8	389
110	Harmonised techniques and representative river basin data for assessment and use of uncertainty information in integrated water management (HarmoniRiB). Environmental Science and Policy, 2005, 8, 267-277.	4.9	29
111	Quality assurance in model based water management â€“ review of existing practice and outline of new approaches. Environmental Modelling and Software, 2005, 20, 1201-1215.	4.5	138
112	An integrated methodology for recording uncertainties about environmental data. Water Science and Technology, 2005, 52, 153-160.	2.5	29
113	Model uncertainty â€“ parameter uncertainty versus conceptual models. Water Science and Technology, 2005, 52, 177-186.	2.5	101
114	Modelling guidelinesâ€“â€“terminology and guiding principles. Advances in Water Resources, 2004, 27, 71-82.	3.8	300
115	Incorporating remote sensing data in physically based distributed agro-hydrological modelling. Journal of Hydrology, 2004, 287, 279-299.	5.4	142
116	Modelling of macropore flow and transport processes at catchment scale. Journal of Hydrology, 2004, 299, 136-158.	5.4	80
117	Transient modeling of regional groundwater flow using parameter estimates from steady-state automatic calibration. Journal of Hydrology, 2003, 273, 188-204.	5.4	56
118	Methodology for construction, calibration and validation of a national hydrological model for Denmark. Journal of Hydrology, 2003, 280, 52-71.	5.4	301
119	Integration of earth observation data in distributed hydrological models: the Senegal River basin. Canadian Journal of Remote Sensing, 2003, 29, 701-710.	2.4	9
120	Use of remotely sensed precipitation and leaf area index in a distributed hydrological model. Journal of Hydrology, 2002, 264, 34-50.	5.4	103
121	Perspectives in using a remotely sensed dryness index in distributed hydrological models at the river-basin scale. Hydrological Processes, 2002, 16, 2973-2987.	2.6	13
122	Effect of grid size on effective parameters and model performance of the MIKE-SHE code. Hydrological Processes, 2002, 16, 355-372.	2.6	127
123	Assessment of uncertainty in simulation of nitrate leaching to aquifers at catchment scale. Journal of Hydrology, 2001, 242, 210-227.	5.4	77
124	Distributed hydrological modelling of the Senegal River Basin â€” model construction and validation. Journal of Hydrology, 2001, 247, 200-214.	5.4	194
125	Application of Irrigation Optimisation System (IOS) to a Major Irrigation Project in India. Irrigation and Drainage Systems, 1999, 13, 229-248.	0.5	8
126	Use of remote sensing data in distributed hydrological models: applications in the Senegal River basin. Geografisk Tidsskrift, 1999, 99, 47-57.	0.6	11

#	Article	IF	Citations
127	Hydrological modelling of a small watershed using MIKE SHE for irrigation planning. Agricultural Water Management, 1999, 41, 149-166.	5.6	61
128	Large scale modelling of groundwater contamination from nitrate leaching. Journal of Hydrology, 1999, 221, 117-140.	5.4	152
129	An Integrated Model for the Danubian Lowland â€“ Methodology and Applications. Water Resources Management, 1998, 12, 433-465.	3.9	26
130	Assessing the effect of land use change on catchment runoff by combined use of statistical tests and hydrological modelling: Case studies from Zimbabwe. Journal of Hydrology, 1998, 205, 147-163.	5.4	249
131	Evaluation of a Stepwise Procedure for Comparative Validation of Pesticide Leaching Models. Journal of Environmental Quality, 1998, 27, 1183-1193.	2.0	23
132	Parameterisation, calibration and validation of distributed hydrological models. Journal of Hydrology, 1997, 198, 69-97.	5.4	643
133	Validation and Intercomparison of Different Updating Procedures for Real-Time Forecasting. Hydrology Research, 1997, 28, 65-84.	2.7	156
134	Hydraulic-hydrological simulations of canal-command for irrigation water management. Irrigation and Drainage Systems, 1997, 11, 185-213.	0.5	12
135	Model and Data Requirements for Simulation of Runoff and Land Surface Processes. , 1997, , 423-452.		2
136	Operational Validation and Intercomparison of Different Types of Hydrological Models. Water Resources Research, 1996, 32, 2189-2202.	4.2	464
137	Application of SHE for Irrigationâ€Commandâ€Area Studies in India. Journal of Irrigation and Drainage Engineering - ASCE, 1993, 119, 34-49.	1.0	9
138	Application of the SHE to catchments in India Part 1. General results. Journal of Hydrology, 1992, 140, 1-23.	5.4	68
139	Application of the SHE to catchments in India Part 2. Field experiments and simulation studies with the SHE on the Kolar subcatchment of the Narmada River. Journal of Hydrology, 1992, 140, 25-47.	5.4	61
140	A model for oxygen transport and consumption in the unsaturated zone. Journal of Hydrology, 1991, 129, 349-369.	5.4	23
141	Spatial Variability of Physical Parameters and Processes in Two Field Soils. Hydrology Research, 1991, 22, 303-326.	2.7	17
142	Conceptual Modelling of Water Loss on Flood Plains and its Application to River Yamuna Upstream of Delhi. Hydrology Research, 1991, 22, 265-274.	2.7	5
143	Spatial Variability of Physical Parameters and Processes in Two Field Soils. Hydrology Research, 1991, 22, 275-302.	2.7	7
144	Spatial Variability of Physical Parameters and Processes in Two Field Soils. Hydrology Research, 1991, 22, 327-340.	2.7	8

#	Article	IF	Citations
145	Construction, Calibration And Validation of Hydrological Models. Water Science and Technology Library, 1990, , 41-54.	0.3	50
146	Terminology, Modelling Protocol And Classification of Hydrological Model Codes. Water Science and Technology Library, 1990, , 17-39.	0.3	31
147	The Role of Distributed Hydrological Modelling in Water Resources Management. Water Science and Technology Library, 1990, , 1-16.	0.3	25
148	Comment on â€™A Discussion of Distributed Hydrological Modellingâ€™ by K. Beven. Water Science and Technology Library, 1990, , 279-287.	0.3	5
149	Application of hydrological models for flood forecasting and flood control in India and Bangladesh. Advances in Water Resources, 1988, 11, 101-105.	3.8	17
150	Estimation of Catchment Rainfall Uncertainty and its Influence on Runoff Prediction. Hydrology Research, 1988, 19, 77-88.	2.7	30
151	Joint Modelling and Monitoring of Aquatic Ecosystems. Water Quality Measurements Series, 0, , 163-180.	0.1	0
152	Climate change: Sources of uncertainty in precipitation and temperature projections for Denmark. Geological Survey of Denmark and Greenland Bulletin, 0, 43, .	2.0	9
153	Towards a More Robust Evaluation of Climate Model and Hydrological Impact Uncertainties. Water Resources Management, 0, , .	3.9	2