Karsten Arnbjerg-Nielsen

List of Publications by Year
in descending order

97 papers	4,462 citations	145106 33 h-index	129628 63 g-index
122 all docs	122 docs citations	122 times ranked	5106 citing authors

#	Article	IF	Citations
1	Comparing spatial metrics of extreme precipitation between data from rain gauges, weather radar and high-resolution climate model re-analyses. Journal of Hydrology, 2022, 610, 127915.	2.3	7
2	Sub-daily rainfall extremes in the Nordicâ€“Baltic region. Hydrology Research, 2022, 53, 807-824.	1.1	8
3	To what extent should we ensure the explicit inclusion of water quality within the WEF nexus? Discussion of â€œWater quality: the missing dimension of water in the waterâ€“energyâ€“food nexusâ€. Hydrological Sciences Journal, 2022, 67, 1287-1290.	1.2	2
4	A GIS-Based Hydrological Modeling Approach for Rapid Urban Flood Hazard Assessment. Water (Switzerland), 2021, 13, 1483.	1.2	14
5	Differences in representation of extreme precipitation events in two high resolution models. Climate Dynamics, 2021, 57, 3029-3043.	1.7	7
6	FloodStroem: A fast dynamic GIS-based urban flood and damage model. Journal of Hydrology, 2021, 600, 126521.	2.3	21
7	Observed changes in heavy daily precipitation over the Nordic-Baltic region. Journal of Hydrology: Regional Studies, 2021, 38, 100965.	1.0	6
8	Impacts of urban development on urban water management â€“ Limits of predictability. Computers, Environment and Urban Systems, 2020, 84, 101546.	3.3	10
9	The need to integrate flood and drought disaster risk reduction strategies. Water Security, 2020, 11, 100070.	1.2	83
10	Urban Nutrient Emissions in Denmark in the Year 1900. Water (Switzerland), 2020, 12, 789.	1.2	0
11	Urban pluvial flood risk assessment â€“ data resolution and spatial scale when developing screening approaches on the microscale. Natural Hazards and Earth System Sciences, 2020, 20, 981-997.	1.5	8
12	Urban water management: Can UN SDG 6 be met within the Planetary Boundaries?. Environmental Science and Policy, 2020, 106, 36-39.	2.4	23
13	Discussion of â€œHow to improve attribution of changes in drought and flood impactsâ€. Hydrological Sciences Journal, 2020, 65, 487-488.	1.2	1
14	Incorporating objectives of stakeholders in strategic planning of urban water management. Urban Water Journal, 2020, 17, 87-99.	1.0	14
15	Data-driven approaches to derive parameters for lot-scale urban development models. Cities, 2019, 95, 102374.	2.7	6
16	Life cycle assessment of a typical European single-family residence and its flood related repairs. Journal of Cleaner Production, 2019, 228, 1334-1344.	4.6	2
17	Integrated stormwater inflow control for sewers and green structures in urban landscapes. Nature Sustainability, 2019, 2, 1003-1010.	11.5	39
18	Flexible adaptation planning process for urban adaptation in Melbourne, Australia. Proceedings of the Institution of Civil Engineers: Engineering Sustainability, 2019, 172, 393-403.	0.4	5

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19	Life cycle assessment of point source emissions and infrastructure impacts of four types of urban stormwater systems. Water Research, 2019, 156, 383-394.	5.3	16
20	Pollution levels of stormwater discharges and resulting environmental impacts. Science of the Total Environment, 2019, 663, 754-763.	3.9	41
21	An SDG-based framework for assessing urban stormwater management systems. Blue-Green Systems, 2019, 1, 102-118.	0.6	26
22	Identifying fit-for-purpose lumped surrogate models for large urban drainage systems using GLUE. Journal of Hydrology, 2019, 568, 517-533.	2.3	23
23	Applying Socioeconomic Optimisation on Blue-Green Climate Adaptation Projects in an Urban Catchment. Green Energy and Technology, 2019, , 976-981.	0.4	0
24	Initial conditions of urban permeable surfaces in rainfall-runoff models using Horton's infiltration. Water Science and Technology, 2018, 77, 662-669.	1.2	18
25	Simulating flood risk under non-stationary climate and urban development conditions â€“ Experimental setup for multiple hazards and a variety of scenarios. Environmental Modelling and Software, 2018, 102, 155-171.	1.9	18
26	Uncertainty Assessment of Climate Change Adaptation Options Using an Economic Pluvial Flood Risk Framework. Water (Switzerland), 2018, 10, 1877.	1.2	4
27	Hess Opinions: An interdisciplinary research agenda to explore the unintended consequences of structural flood protection. Hydrology and Earth System Sciences, 2018, 22, 5629-5637.	1.9	67
28	Evaluating catchment response to artificial rainfall from four weather generators for present and future climate. Water Science and Technology, 2018, 77, 2578-2588.	1.2	7
29	A rapid urban flood inundation and damage assessment model. Journal of Hydrology, 2018, 564, 1085-1098.	2.3	124
30	A framework for performing comparative LCA between repairing flooded houses and construction of dikes in non-stationary climate with changing risk of flooding. Science of the Total Environment, 2018, 642, 473-484.	3.9	20
31	Assessing the importance of spatioâ€temporal <scp>RCM</scp> resolution when estimating subâ€daily extreme precipitation under current and future climate conditions. International Journal of Climatology, 2017, 37, 688-705.	1.5	19
32	Regional frequency analysis of short duration rainfall extremes using gridded daily rainfall data as co-variate. Water Science and Technology, 2017, 75, 1971-1981.	1.2	41
33	Assessment of urban pluvial flood risk and efficiency of adaptation options through simulations â€“ A new generation of urban planning tools. Journal of Hydrology, 2017, 550, 355-367.	2.3	138
34	Simplification of one-dimensional hydraulic networks by automated processes evaluated on 1D/2D deterministic flood models. Journal of Hydroinformatics, 2017, 19, 686-700.	1.1	20
35	A regional and nonstationary model for partial duration series of extreme rainfall. Water Resources Research, 2017, 53, 2659-2678.	1.7	11
36	Adaptation to flood risk: Results of international paired flood event studies. Earth's Future, 2017, 5, 953-965.	2.4	156

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37	Hydrologic impact of urbanization with extensive stormwater infiltration. Journal of Hydrology, 2017, 544, 524-537.	2.3	100
38	Formulating and testing a method for perturbing precipitation time series to reflect anticipated climatic changes. Hydrology and Earth System Sciences, 2017, 21, 345-355.	1.9	11
39	Comparison of the impacts of urban development and climate change on exposing European cities to pluvial flooding. Hydrology and Earth System Sciences, 2017, 21, 4131-4147.	1.9	116
40	Weather radar rainfall data in urban hydrology. Hydrology and Earth System Sciences, 2017, 21, 1359-1380.	1.9	128
41	Downscaling future precipitation extremes to urban hydrology scales using a spatio-temporal Neymanâ€"Scott weather generator. Hydrology and Earth System Sciences, 2016, 20, 1387-1403.	1.9	23
42	Effect of climate change on stormwater runoff characteristics and treatment efficiencies of stormwater retention ponds: a case study from Denmark using TSS and Cu as indicator pollutants. SpringerPlus, 2016, 5, 1984.	1.2	23
43	Efficiency of stormwater control measures for combined sewer retrofitting under varying rain conditions: Quantifying the Three Points Approach (3PA). Environmental Science and Policy, 2016, 63, 19-26.	2.4	19
44	Joint optimization of regional water-power systems. Advances in Water Resources, 2016, 92, 200-207.	1.7	37
45	Life cycle assessment of stormwater management in the context of climate change adaptation. Water Research, 2016, 106, 394-404.	5.3	55
46	Comparing Methods of Calculating Expected Annual Damage in Urban Pluvial Flood Risk Assessments. Water (Switzerland), 2015, 7, 255-270.	1.2	95
47	A Mapping of Tools for Informing Water Sensitive Urban Design Planning Decisionsâ€"Questions, Aspects and Context Sensitivity. Water (Switzerland), 2015, 7, 993-1012.	1.2	50
48	Identifying added value in high-resolution climate simulations over Scandinavia. Tellus, Series A: Dynamic Meteorology and Oceanography, 2015, 67, 24941.	0.8	17
49	Determining the extent of groundwater interference on the performance of infiltration trenches. Journal of Hydrology, 2015, 529, 1360-1372.	2.3	40
50	Optimization of Multipurpose Reservoir Systems Using Power Market Models. Journal of Water Resources Planning and Management - ASCE, 2015, 141, .	1.3	16
51	Long term variations of extreme rainfall in Denmark and southern Sweden. Climate Dynamics, 2015, 44, 3155-3169.	1.7	25
52	Identifying climate analogues for precipitation extremes for Denmark based on RCM simulations from the ENSEMBLES database. Water Science and Technology, 2015, 71, 418.	1.2	8
53	Modelling the impact of retentionâ€"detention units on sewer surcharge and peak and annual runoff reduction. Water Science and Technology, 2015, 71, 898-903.	1.2	16
54	Comparison of different statistical downscaling methods to estimate changes in hourly extreme precipitation using RCM projections from ENSEMBLES. International Journal of Climatology, 2015, 35, 2528-2539.	1.5	41

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55	Evaluating adaptation options for urban flooding based on new high-end emission scenario regional climate model simulations. Climate Research, 2015, 64, 73-84.	0.4	34
56	Floods and climate: emerging perspectives for flood risk assessment and management. Natural Hazards and Earth System Sciences, 2014, 14, 1921-1942.	1.5	239
57	An influence diagram for urban flood risk assessment through pluvial flood hazards under non-stationary conditions. Journal of Water and Climate Change, 2014, 5, 276-286.	1.2	8
58	Modelling of green roof hydrological performance for urban drainage applications. Journal of Hydrology, 2014, 519, 3237-3248.	2.3	120
59	A framework for testing the ability of models to project climate change and its impacts. Climatic Change, 2014, 122, 271-282.	1.7	104
60	A Bayesian Approach for Uncertainty Quantification of Extreme Precipitation Projections Including Climate Model Interdependency and Nonstationary Bias. Journal of Climate, 2014, 27, 7113-7132.	1.2	18
61	Assessing climate change impacts on the Iberian power system using a coupled water-power model. Climatic Change, 2014, 126, 351-364.	1.7	44
62	Assessing future climatic changes of rainfall extremes at small spatio-temporal scales. Climatic Change, 2013, 118, 783-797.	1.7	61
63	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.	1.0	92
64	Adaption to Extreme Rainfall with Open Urban Drainage System: An Integrated Hydrological Cost-Benefit Analysis. Environmental Management, 2013, 51, 586-601.	1.2	73
65	A spatial and nonstationary model for the frequency of extreme rainfall events. Water Resources Research, 2013, 49, 127-136.	1.7	31
66	Regional Interdependency of Precipitation Indices across Denmark in Two Ensembles of High-Resolution RCMs. Journal of Climate, 2013, 26, 7912-7928.	1.2	18
67	Verification of flood damage modelling using insurance data. Water Science and Technology, 2013, 68, 425-432.	1.2	34
68	Impacts of climate change on rainfall extremes and urban drainage systems: a review. Water Science and Technology, 2013, 68, 16-28.	1.2	229
69	On the importance of observational data properties when assessing regional climate model performance of extreme precipitation. Hydrology and Earth System Sciences, 2013, 17, 4323-4337.	1.9	34
70	Decision strategies for handling the uncertainty of future extreme rainfall under the influence of climate change. Water Science and Technology, 2012, 66, 284-291.	1.2	9
71	Economic assessment of climate adaptation options for urban drainage design in Odense, Denmark. Water Science and Technology, 2012, 66, 1812-1820.	1.2	18
72	Descriptive and predictive evaluation of high resolution Markov chain precipitation models. Environmetrics, 2012, 23, 623-635.	0.6	2

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73	Climate change impact assessment on urban rainfall extremes and urban drainage: Methods and shortcomings. Atmospheric Research, 2012, 103, 106-118.	1.8	300
74	Rainfall in the urban context: Forecasting, risk and climate change. Atmospheric Research, 2012, 103, 1-3.	1.8	6
75	Quantification of climate change effects on extreme precipitation used for high resolution hydrologic design. Urban Water Journal, 2012, 9, 57-65.	1.0	114
76	Climate changeâ€induced impacts on urban flood risk influenced by concurrent hazards. Journal of Flood Risk Management, 2012, 5, 203-214.	1.6	17
77	Framework for economic pluvial flood risk assessment considering climate change effects and adaptation benefits. Journal of Hydrology, 2012, 414-415, 539-549.	2.3	277
78	Past, present, and future design of urban drainage systems with focus on Danish experiences. Water Science and Technology, 2011, 63, 527-535.	1.2	24
79	Feasible adaptation strategies for increased risk of flooding in cities due to climate change. Water Science and Technology, 2009, 60, 273-281.	1.2	68
80	Update of regional intensityâ€“durationâ€“frequency curves in Denmark: Tendency towards increased storm intensities. Atmospheric Research, 2009, 92, 343-349.	1.8	178
81	Quantification of anticipated future changes in high resolution design rainfall for urban areas. Atmospheric Research, 2009, 92, 350-363.	1.8	84
82	Microbial risk assessment of local handling and use of human faeces. Journal of Water and Health, 2007, 5, 117-128.	1.1	34
83	Significant climate change of extreme rainfall in Denmark. Water Science and Technology, 2006, 54, 1-8.	1.2	41
84	Selection of regional historical rainfall time series as input to urban drainage simulations at ungauged locations. Atmospheric Research, 2005, 77, 4-17.	1.8	24
85	Towards a roadmap for use of radar rainfall data in urban drainage. Journal of Hydrology, 2004, 299, 186-202.	2.3	136
86	Integer valued autoregressive models for tipping bucket rainfall measurements. , 1999, 10, 395-411.		40
87	Integer valued autoregressive models for tipping bucket rainfall measurements. , 1999, 10, 395.		3
88	Use of historical rainfall series for hydrological modelling ? workshop summary. Water Science and Technology, 1998, 37, 1.	1.2	2
89	A rationale for using local and regional point rainfall data for design and analysis of urban storm drainage systems. Water Science and Technology, 1998, 37, 7.	1.2	17
90	Formulating and testing a rain series generator based on tipping bucket gauges. Water Science and Technology, 1998, 37, 47.	1.2	3

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91	Modelling the embedded rainfall process using tipping bucket data. Water Science and Technology, 1998, 37, 57.	1.2	2
92	Calibration of tipping bucket rain gauges. Water Science and Technology, 1998, 37, 139.	1.2	1
93	Modelling the embedded rainfall process using tipping bucket data. Water Science and Technology, 1998, 37, 57-64.	1.2	22
94	Formulating and testing a rain series generator based on tipping bucket gauges. Water Science and Technology, 1998, 37, 47-55.	1.2	1
95	Consequences for established design practice from geographical variation of historical rainfall data. Water Science and Technology, 1997, 36, 1.	1.2	5
96	The importance of inherent uncertainties in state-of-the-art urban storm drainage modelling for ungauged small catchments. Journal of Hydrology, 1996, 179, 305-319.	2.3	17
97	Influence of urban land cover changes and climate change for the exposure of European cities to flooding during high-intensity precipitation. Proceedings of the International Association of Hydrological Sciences, 0, 370, 21-27.	1.0	21