Peter S Mikkelsen

List of Publications by Year
in descending order

134 papers	5,727 citations	117453 34 h-index	88477 70 g-index
141 all docs	141 docs citations	141 times ranked	5143 citing authors

#	Article	IF	Citations
1	SUDS, LID, BMPs, WSUD and more â€“ The evolution and application of terminology surrounding urban drainage. Urban Water Journal, 2015, 12, 525-542.	1.0	1,134
2	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
3	Selected stormwater priority pollutants â€” a European perspective. Science of the Total Environment, 2007, 383, 41-51.	3.9	229
4	A critical review of integrated urban water modelling â€“ Urban drainage and beyond. Environmental Modelling and Software, 2014, 54, 88-107.	1.9	229
5	Simultaneous removal of As, Cd, Cr, Cu, Ni and Zn from stormwater: Experimental comparison of 11 different sorbents. Water Research, 2007, 41, 591-602.	5.3	187
6	Update of regional intensityâ€“durationâ€“frequency curves in Denmark: Tendency towards increased storm intensities. Atmospheric Research, 2009, 92, 343-349.	1.8	178
7	Regional estimation of rainfall intensity-duration-frequency curves using generalized least squares regression of partial duration series statistics. Water Resources Research, 2002, 38, 21-1-21-11.	1.7	126
8	Modelling of green roof hydrological performance for urban drainage applications. Journal of Hydrology, 2014, 519, 3237-3248.	2.3	120
9	Model predictive control of urban drainage systems: A review and perspective towards smart real-time water management. Critical Reviews in Environmental Science and Technology, 2018, 48, 279-339.	6.6	111
10	Artificial neural networks for rapid WWTP performance evaluation: Methodology and case study. Environmental Modelling and Software, 2007, 22, 1208-1216.	1.9	105
11	Three Points Approach (3PA) for urban flood risk management: A tool to support climate change adaptation through transdisciplinarity and multifunctionality. Urban Water Journal, 2012, 9, 317-331.	1.0	105
12	Hydrologic impact of urbanization with extensive stormwater infiltration. Journal of Hydrology, 2017, 544, 524-537.	2.3	100
13	Risk assessment of xenobiotics in stormwater discharged to Harrestrup Ã..., Denmark. Desalination, 2007, 215, 187-197.	4.0	89
14	Quality control of rain data used for urban runoff systems. Water Science and Technology, 1998, 37, 113-120.	1.2	78
15	Potential future increase in extreme one-hour precipitation events over Europe due to climate change. Water Science and Technology, 2009, 60, 2205-2216.	1.2	78
16	A new settling velocity model to describe secondary sedimentation. Water Research, 2014, 66, 447-458.	5.3	69
17	Simultaneous removal of As, Cd, Cr, Cu, Ni and Zn from stormwater using high-efficiency industrial sorbents: Effect of pH, contact time and humic acid. Science of the Total Environment, 2016, 566-567, 76-85.	3.9	64
18	Passive Dosing to Determine the Speciation of Hydrophobic Organic Chemicals in Aqueous Samples. Analytical Chemistry, 2010, 82, 1142-1146.	3.2	62

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19	Modelling and monitoring of integrated urban wastewater systems: review on status and perspectives. Water Science and Technology, 2013, 68, 1203-1215.	1.2	62
20	Assessing future climatic changes of rainfall extremes at small spatio-temporal scales. Climatic Change, 2013, 118, 783-797.	1.7	61
21	Pollution from Urban Stormwater Infiltration. Water Science and Technology, 1994, 29, 293-302.	1.2	58
22	Application of global sensitivity analysis and uncertainty quantification inÂdynamic modelling of micropollutants in stormwater runoff. Environmental Modelling and Software, 2012, 27-28, 40-51.	1.9	58
23	A methodology for ranking and hazard identification of xenobiotic organic compounds in urban stormwater. Science of the Total Environment, 2006, 370, 29-38.	3.9	54
24	Quality control of rain data used for urban runoff systems. Water Science and Technology, 1998, 37, 113.	1.2	53
25	Experimental assessment of soil and groundwater contamination from two old infiltration systems for road run-off in Switzerland. Science of the Total Environment, 1996, 189-190, 341-347.	3.9	50
26	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
27	Micropollutants in stormwater runoff and combined sewer overflow in the Copenhagen area, Denmark. Water Science and Technology, 2011, 64, 485-493.	1.2	49
28	DESIGN OF STORMWATER INFILTRATION FOR REDUCTION OF COMBINED SEWER OVERFLOW (CSO). Water Science and Technology, 1994, 30, 53-61.	1.2	48
29	Pollution of soil and groundwater from infiltration of highly contaminated stormwater â€" A case study. Water Science and Technology, 1997, 36, 325.	1.2	48
30	Living and Prototyping Digital Twins for Urban Water Systems: Towards Multi-Purpose Value Creation Using Models and Sensors. Water (Switzerland), 2021, 13, 592.	1.2	47
31	Determining the extent of groundwater interference on the performance of infiltration trenches. Journal of Hydrology, 2015, 529, 1360-1372.	2.3	40
32	Integrated stormwater inflow control for sewers and green structures in urban landscapes. Nature Sustainability, 2019, 2, 1003-1010.	11.5	39
33	Evaluation of two stormwater infiltration trenches in central Copenhagen after 15 years of operation. Water Science and Technology, 2011, 63, 2279-2286.	1.2	38
34	Pollution of soil and groundwater from infiltration of highly contaminated stormwater - a case study. Water Science and Technology, 1997, 36, 325-330.	1.2	37
35	Hydrologic behaviour of stormwater infiltration trenches in a central urban area during 2 3/4 years of operation. Water Science and Technology, 1999, 39, 217.	1.2	35
36	Probabilistic runoff volume forecasting in risk-based optimization for RTC of urban drainage systems. Environmental Modelling and Software, 2016, 80, 143-158.	1.9	35

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37	Modelling the impact of soakaway retrofits on combined sewage overflows in a 3km2 urban catchment in Copenhagen, Denmark. Journal of Hydrology, 2012, 452-453, 64-75.	2.3	34
38	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
39	Infiltration practice for control of urban storm water. Journal of Hydraulic Research/De Recherches Hydrauliques, 1996, 34, 827-840.	0.7	33
40	Water Quality-based Real Time Control of Integrated Urban Drainage Systems: A Preliminary Study from Copenhagen, Denmark. Procedia Engineering, 2014, 70, 1707-1716.	1.2	33
41	A model library for dynamic transport and fate of micropollutants in integrated urban wastewater and stormwater systems. Environmental Modelling and Software, 2014, 53, 98-111.	1.9	33
42	Quantification of uncertainty in modelled partitioning and removal of heavy metals (Cu, Zn) in a stormwater retention pond and a biofilter. Water Research, 2012, 46, 6891-6903.	5.3	31
43	Greenhouse gas emissions from integrated urban drainage systems: Where do we stand?. Journal of Hydrology, 2018, 559, 307-314.	2.3	31
44	Estimation of regional intensity-duration-frequency curves for extreme precipitation. Water Science and Technology, 1998, 37, 29.	1.2	30
45	Dynamic experiments with high bisphenol-A concentrations modelled with an ASM model extended to include a separate XOC degrading microorganism. Water Research, 2009, 43, 3169-3176.	5.3	29
46	Controlling sewer systems â€“ a critical review based on systems in three EU cities. Urban Water Journal, 2017, 14, 435-442.	1.0	29
47	Coordinating Rule-Based and System-Wide Model Predictive Control Strategies to Reduce Storage Expansion of Combined Urban Drainage Systems: The Case Study of Lundtofte, Denmark. Water (Switzerland), 2018, 10, 76.	1.2	29
48	Uncertainty-based calibration and prediction with a stormwater surface accumulation-washoff model based on coverage of sampled Zn, Cu, Pb and Cd field data. Water Research, 2011, 45, 3823-3835.	5.3	28
49	CSO Reduction by Integrated Model Predictive Control of Stormwater Inflows: A Simulated Proof of Concept Using Linear Surrogate Models. Water Resources Research, 2020, 56, e2019WR026272.	1.7	28
50	Comparative uncertainty analysis of copper loads in stormwater systems using GLUE and grey-box modeling. Water Science and Technology, 2007, 56, 11-18.	1.2	27
51	Properties of extreme point rainfall III: Identification of spatial inter-site correlation structure. Atmospheric Research, 1996, 40, 77-98.	1.8	26
52	Modelling the fate of organic micropollutants in stormwater ponds. Science of the Total Environment, 2011, 409, 2597-2606.	3.9	26
53	A simplified model of soakaway infiltration interaction with a shallow groundwater table. Journal of Hydrology, 2013, 497, 165-175.	2.3	25
54	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

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55	How uncertain is model-based prediction of copper loads in stormwater runoff?. Water Science and Technology, 2007, 56, 65-72.	1.2	23
56	Influence of selecting secondary settling tank sub-models on the calibration of WWTP models â€“ A global sensitivity analysis using BSM2. Chemical Engineering Journal, 2014, 241, 28-34.	6.6	23
57	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
58	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
59	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, 7-14.	1.2	22
60	Probabilistic online runoff forecasting for urban catchments using inputs from rain gauges as well as statically and dynamically adjusted weather radar. Journal of Hydrology, 2014, 512, 397-407.	2.3	22
61	Properties of extreme point rainfall I: Results from a rain gauge system in Denmark. Atmospheric Research, 1995, 37, 277-286.	1.8	21
62	Greyâ€box modelling of flow in sewer systems with stateâ€dependent diffusion. Environmetrics, 2011, 22, 946-961.	0.6	21
63	Comparison of two stochastic techniques for reliable urban runoff prediction by modeling systematic errors. Water Resources Research, 2015, 51, 5004-5022.	1.7	21
64	Framing professional climate risk knowledge: Extreme weather events as drivers of adaptation innovation in Copenhagen, Denmark. Environmental Science and Policy, 2019, 98, 30-38.	2.4	21
65	Collected rainfall as a water source in danish households â€” what is the potential and what are the costs?. Water Science and Technology, 1999, 39, 49.	1.2	20
66	Dynamic stormwater treatment unit model for micropollutants (STUMP) based on substance inherent properties. Water Science and Technology, 2010, 62, 622-629.	1.2	20
67	A formal statistical approach to representing uncertainty in rainfallâ€“runoff modelling with focus on residual analysis and probabilistic output evaluation â€“ Distinguishing simulation and prediction. Journal of Hydrology, 2012, 472-473, 36-52.	2.3	20
68	A methodological approach to the design of optimising control strategies for sewer systems. Environmental Modelling and Software, 2016, 83, 103-115.	1.9	20
69	Social construction of stormwater control measures in Melbourne and Copenhagen: A discourse analysis of technological change, embedded meanings and potential mainstreaming. Technological Forecasting and Social Change, 2017, 115, 198-209.	6.2	20
70	Evaluation of probabilistic flow predictions in sewer systems using grey box models and a skill score criterion. Stochastic Environmental Research and Risk Assessment, 2012, 26, 1151-1162.	1.9	19
71	Stochastic rainfall-runoff forecasting: parameter estimation, multi-step prediction, and evaluation of overflow risk. Stochastic Environmental Research and Risk Assessment, 2014, 28, 505-516.	1.9	19
72	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

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73	Hydrologic behaviour of stormwater infiltration trenches in a central urban area during 2Â¾ years of operation. Water Science and Technology, 1999, 39, 217-224.	1.2	19
74	Assessing the sustainability of small wastewater systems A context-oriented planning approach. Environmental Impact Assessment Review, 2000, 20, 347-357.	4.4	18
75	Combining multimedia models with integrated urban water system models for micropollutants. Water Science and Technology, 2010, 62, 1614-1622.	1.2	18
76	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
77	Climate changeâ€induced impacts on urban flood risk influenced by concurrent hazards. Journal of Flood Risk Management, 2012, 5, 203-214.	1.6	17
78	Representing soakaways in a physically distributed urban drainage model â€“ Upscaling individual allotments to an aggregated scale. Journal of Hydrology, 2012, 414-415, 530-538.	2.3	17
79	Flow Forecasting using Deterministic Updating of Water Levels in Distributed Hydrodynamic Urban Drainage Models. Water (Switzerland), 2014, 6, 2195-2211.	1.2	17
80	Dynamic gauge adjustment of high-resolution X-band radar data for convective rain storms: Model-based evaluation against measured combined sewer overflow. Journal of Hydrology, 2016, 539, 687-699.	2.3	17
81	Towards model predictive control: online predictions of ammonium and nitrate removal by using a stochastic ASM. Water Science and Technology, 2019, 79, 51-62.	1.2	17
82	Soft sensing of water depth in combined sewers using LSTM neural networks with missing observations. Journal of Hydro-Environment Research, 2021, 38, 106-116.	1.0	17
83	A conceptual framework for addressing complexity and unfolding transition dynamics when developing sustainable adaption strategies in urban water management. Water Science and Technology, 2012, 66, 2393-2401.	1.2	16
84	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
85	A partial ensemble Kalman filtering approach to enable use of range limited observations. Stochastic Environmental Research and Risk Assessment, 2015, 29, 119-129.	1.9	16
86	Estimation of regional intensity-duration-frequency curves for extreme precipitation. Water Science and Technology, 1998, 37, 29-36.	1.2	16
87	Integrated modelling of two xenobiotic organic compounds. Water Science and Technology, 2006, 54, 213-221.	1.2	15
88	Significance of settling model structures and parameter subsets in modelling WWTPs under wet-weather flow and filamentous bulking conditions. Water Research, 2014, 63, 209-221.	5.3	15
89	Urban drainage models â€“ simplifying uncertainty analysis for practitioners. Water Science and Technology, 2013, 68, 2136-2143.	1.2	14
90	Regulatory control analysis and design for sewer systems. Environmental Modelling and Software, 2015, 66, 153-166.	1.9	14

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91	Prioritize effluent quality, operational costs or global warming? â€“ Using predictive control of wastewater aeration for flexible management of objectives in WRRFs. Water Research, 2021, 196, 116960.	5.3	14
92	Water management in cities of the future using emission control strategies for priority hazardous substances. Water Science and Technology, 2011, 64, 2109-2118.	1.2	13
93	Integrated modelling of Priority Pollutants in stormwater systems. Physics and Chemistry of the Earth, 2012, 42-44, 42-51.	1.2	13
94	Comparison of short-term rainfall forecasts for model-based flow prediction in urban drainage systems. Water Science and Technology, 2013, 68, 472-478.	1.2	13
95	Integrated model predictive control of water resource recovery facilities and sewer systems in a smart grid: example of full-scale implementation in Kolding. Water Science and Technology, 2020, 81, 1766-1777.	1.2	13
96	A source classification framework supporting pollutant source mapping, pollutant release prediction, transport and load forecasting, and source control planning for urban environments. Environmental Science and Pollution Research, 2012, 19, 1119-1130.	2.7	12
97	Using ensemble weather forecast in a risk based real time optimization of urban drainage systems. Houille Blanche, 2015, 101, 101-107.	0.3	11
98	Evaluation of stormwater micropollutant source control and end-of-pipe control strategies using an uncertainty-calibrated integrated dynamic simulation model. Journal of Environmental Management, 2015, 151, 56-64.	3.8	11
99	From EU Directives to Local Stormwater Discharge Permits: A Study of Regulatory Uncertainty and Practice Gaps in Denmark. Sustainability, 2020, 12, 6317.	1.6	11
100	Consequences for established design practice from geographical variation of historical rainfall data. Water Science and Technology, 1997, 36, 1-6.	1.2	11
101	Aeration tank settling and real time control as a tool to improve the hydraulic capacity and treatment efficiency during wet weather: results from 7 years' full-scale operational data. Water Science and Technology, 2013, 67, 2169-2176.	1.2	10
102	Informal uncertainty analysis (GLUE) of continuous flow simulation in a hybrid sewer system with infiltration inflow â€“ consistency of containment ratios in calibration and validation?. Hydrology and Earth System Sciences, 2013, 17, 4159-4176.	1.9	10
103	Definitions of event magnitudes, spatial scales, and goals for climate change adaptation and their importance for innovation and implementation. Water Research, 2018, 144, 192-203.	5.3	10
104	Velocity Dependent Passive Sampling for Monitoring of Micropollutants in Dynamic Stormwater Discharges. Environmental Science & Technology, 2013, 47, 12958-12965.	4.6	9
105	Distinguishing high and low flow domains in urban drainage systems 2 days ahead using numerical weather prediction ensembles. Journal of Hydrology, 2018, 556, 1013-1025.	2.3	9
106	The Bellinge data set: open data and models for community-wide urban drainage systems research. Earth System Science Data, 2021, 13, 4779-4798.	3.7	9
107	Properties of extreme point rainfall II: Parametric data interpretation and regional uncertainty assessment. Atmospheric Research, 1995, 37, 287-304.	1.8	8
108	Transfer of hydrophobic contaminants in urban runoff particles to benthic organisms estimated by an in vitro bioaccessibility test. Water Science and Technology, 2006, 54, 323-330.	1.2	8

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109	Effect of Disc Filtration with and without Addition of Flocculent on Nano- and Micro-Particles and Their Associated Polycyclic Aromatic Hydrocarbons in Stormwater. Water (Switzerland), 2015, 7, 1306-1323.	1.2	8
110	Partitioning of fluoranthene between free and bound forms in stormwater runoff and other urban discharges using passive dosing. Water Research, 2012, 46, 6002-6012.	5.3	7
111	Evaluation of Maximum a Posteriori Estimation as Data Assimilation Method for Forecasting Infiltration-Inflow Affected Urban Runoff with Radar Rainfall Input. Water (Switzerland), 2016, 8, 381.	1.2	7
112	Integrated Hydrological Model-Based Assessment of Stormwater Management Scenarios in Copenhagenâ€™s First Climate Resilient Neighbourhood Using the Three Point Approach. Water (Switzerland), 2017, 9, 883.	1.2	7
113	Indicators of hazard, vulnerability and risk in urban drainage. Water Science and Technology, 2006, 54, 441-450.	1.2	6
114	Quantifying Releases of Priority Pollutants from Urban Sources. Proceedings of the Water Environment Federation, 2009, 2009, 5873-5891.	0.0	6
115	Validating data quality during wet weather monitoring of wastewater treatment plant influents. Proceedings of the Water Environment Federation, 2013, 2013, 4507-4520.	0.0	6
116	Model Predictive Control of Stochastic Wastewater Treatment Process for Smart Power, Cost-Effective Aeration. IFAC-PapersOnLine, 2019, 52, 622-627.	0.5	6
117	Consequences for established design practice from geographical variation of historical rainfall data. Water Science and Technology, 1997, 36, 1.	1.2	5
118	Effects of rainwater harvesting on centralized urban water supply systems. Water Science and Technology: Water Supply, 2010, 10, 570-576.	1.0	5
119	Comparing the impact of time displaced and biased precipitation estimates for online updated urban runoff models. Water Science and Technology, 2013, 68, 109-116.	1.2	5
120	Robust model for estimating pumping station characteristics and sewer flows from standard pumping station data. Water Science and Technology, 2019, 79, 1739-1745.	1.2	5
121	Evaluating the performance of a simple phenomenological model for online forecasting of ammonium concentrations at WWTP inlets. Water Science and Technology, 2020, 81, 109-120.	1.2	5
122	Feasibility of using smart meter water consumption data and in-sewer flow observations for sewer system analysis: a case study. Journal of Hydroinformatics, 2021, 23, 795-812.	1.1	5
123	Risk Assessment of Stormwater Contaminants Following Discharge to Soil, Groundwater or Surface Water. , 2001, , 69-80.		5
124	Data assimilation in hydrodynamic models for system-wide soft sensing and sensor validation for urban drainage tunnels. Journal of Hydroinformatics, 2021, 23, 438-452.	1.1	5
125	Using multi-event hydrologic and hydraulic signatures from water level sensors to diagnose locations of uncertainty in integrated urban drainage models used in living digital twins. Water Science and Technology, 2022, 85, 1981-1998.	1.2	5
126	Technical Note on the Dynamic Changes in Kalman Gain when Updating Hydrodynamic Urban Drainage Models. Geosciences (Switzerland), 2018, 8, 416.	1.0	4

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127	Classifying pollutant flush signals in stormwater using functional data analysis on TSS MV curves. Water Research, 2022, 217, 118394.	5.3	4
128	BMPs in Urban Stormwater Management in Denmark and Sweden. , 2002, , 354.		3
129	State-space adjustment of radar rainfall and skill score evaluation of stochastic volume forecasts in urban drainage systems. Water Science and Technology, 2013, 68, 584-590.	1.2	3
130	A gainâ€“loss framework based on ensemble flow forecasts to switch the urban drainageâ€“wastewater system management towards energy optimization during dry periods. Hydrology and Earth System Sciences, 2017, 21, 2531-2544.	1.9	3
131	Model-based monitoring of stormwater runoff quality. Water Science and Technology, 2013, 68, 1063-1071.	1.2	2
132	Development of Methodology for Hazard Identification of Rainwater Collected for Reuse. , 2002, , 1.		0
133	Retrofitting Urban Drainage Systems Using Best Stormwater Management Practices â€" Some Scandinavian Experiences. , 2004, , 1-12.		0
134	Approaches for unsupervised identification of data-driven models for flow forecasting in urban drainage systems. Journal of Hydroinformatics, 2021, 23, 1368-1381.	1.1	0