

# Alain N Rousseau

## List of Publications by Year in descending order

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98  
papers

2,146  
citations

236925

25  
h-index

276875

41  
g-index

106  
all docs

106  
docs citations

106  
times ranked

2532  
citing authors

#	ARTICLE	IF	CITATIONS
1	Determination of the drainage structure of a watershed using a digital elevation model and a digital river and lake network. <i>Journal of Hydrology</i> , 2001, 240, 225-242.	5.4	241
2	Selecting a calculation method to estimate sediment and nutrient loads in streams: Application to the Beaurivage River (Qu�bec, Canada). <i>Journal of Hydrology</i> , 2006, 326, 295-310.	5.4	191
3	Rethinking environment control strategy of confined animal housing systems through precision livestock farming. <i>Biosystems Engineering</i> , 2017, 155, 96-123.	4.3	105
4	Spatio-temporal patterns of soil organic carbon and pH in relation to environmental factors��A case study of the Black Soil Region of Northeastern China. <i>Agriculture, Ecosystems and Environment</i> , 2017, 245, 22-31.	5.3	90
5	Development of a methodology to evaluate probable maximum precipitation (PMP) under changing climate conditions: Application to southern Quebec, Canada. <i>Journal of Hydrology</i> , 2014, 519, 3094-3109.	5.4	58
6	Assessment of the impact of spatio-temporal attributes of wetlands on stream flows using a hydrological modelling framework: a theoretical case study of a watershed under temperate climatic conditions. <i>Hydrological Processes</i> , 2016, 30, 1768-1781.	2.6	43
7	Bayesian Uncertainty Analysis of the Distributed Hydrological Model HYDROTEL. <i>Journal of Hydrologic Engineering - ASCE</i> , 2012, 17, 1021-1032.	1.9	42
8	Modeling the effects of agricultural BMPs on sediments, nutrients, and water quality of the Beaurivage River watershed (Quebec, Canada). <i>Canadian Water Resources Journal</i> , 2013, 38, 99-120.	1.2	39
9	Can isolated and riparian wetlands mitigate the impact of climate change on watershed hydrology? A case study approach. <i>Journal of Environmental Management</i> , 2016, 184, 327-339.	7.8	39
10	Identification of the alteration of riparian wetland on soil properties, enzyme activities and microbial communities following extreme flooding. <i>Geoderma</i> , 2019, 337, 825-833.	5.1	39
11	Summer methane fluxes from a boreal bog in northern Quebec, Canada, using eddy covariance measurements. <i>Atmospheric Environment</i> , 2013, 81, 464-474.	4.1	38
12	Assessing the Effect of Climate Change on River Flow Using General Circulation Models and Hydrological Modelling �� Application to the Chaudi�re River, Qu�bec, Canada. <i>Canadian Water Resources Journal</i> , 2008, 33, 73-94.	1.2	37
13	Assessing the Effects of Historical Land Cover Changes on Runoff and Low Flows Using Remote Sensing and Hydrological Modeling. <i>Journal of Hydrologic Engineering - ASCE</i> , 2009, 14, 575-587.	1.9	36
14	Selecting a Pesticide Fate Model at the Watershed Scale Using a Multi-criteria Analysis. <i>Water Quality Research Journal of Canada</i> , 2006, 41, 283-295.	2.7	33
15	Are Current Phosphorus Risk Indicators Useful to Predict the Quality of Surface Waters in Southern Manitoba, Canada?. <i>Journal of Environmental Quality</i> , 2009, 38, 2096-2105.	2.0	33
16	Defining ecological thresholds to determine class boundaries in a bioassessment tool: The case of the Eastern Canadian Diatom Index (IDEC). <i>Ecological Indicators</i> , 2010, 10, 980-989.	6.3	33
17	A process-oriented, multiple-objective calibration strategy accounting for model structure. <i>Water Science and Application</i> , 2003, , 153-163.	0.3	33
18	Implementation of an automatic calibration procedure for HYDROTEL based on prior OAT sensitivity and complementary identifiability analysis. <i>Hydrological Processes</i> , 2014, 28, 3947-3961.	2.6	31

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19	Integrating isolated and riparian wetland modules in the PHYSITEL/HYDROTEL modelling platform: model performance and diagnosis. <i>Hydrological Processes</i> , 2015, 29, 4683-4702.	2.6	31
20	A dual isotopic framework for identifying nitrate sources in surface runoff in a small agricultural watershed, northeast China. <i>Journal of Cleaner Production</i> , 2020, 246, 119074.	9.3	31
21	Fate and Transport of <i>Toxoplasma gondii</i> Oocysts in Seasonally Snow Covered Watersheds: A Conceptual Framework from a Melting Snowpack to the Canadian Arctic Coasts. <i>International Journal of Environmental Research and Public Health</i> , 2013, 10, 994-1005.	2.6	29
22	Changes in stream water quality due to logging of the boreal forest in the Montmorency Forest, Québec. <i>Hydrological Processes</i> , 2009, 23, 764-776.	2.6	28
23	Floods and water quality in Canada: A review of the interactions with urbanization, agriculture and forestry. <i>Canadian Water Resources Journal</i> , 2016, 41, 273-287.	1.2	28
24	Phosphorus source driving the soil microbial interactions and improving sugarcane development. <i>Scientific Reports</i> , 2019, 9, 4400.	3.3	28
25	Assessing the long-term hydrological services provided by wetlands under changing climate conditions: A case study approach of a Canadian watershed. <i>Journal of Hydrology</i> , 2016, 541, 1287-1302.	5.4	27
26	What would have been the impacts of wetlands on low flow support and high flow attenuation under steady state land cover conditions?. <i>Journal of Environmental Management</i> , 2019, 234, 448-457.	7.8	27
27	On how wetlands can provide flood resilience in a large river basin: A case study in Nenjiang river Basin, China. <i>Journal of Hydrology</i> , 2020, 587, 125012.	5.4	26
28	Information technologies in a wider perspective: integrating management functions across the urban-rural interface. <i>Environmental Modelling and Software</i> , 2005, 20, 443-455.	4.5	25
29	Probable maximum flood in a changing climate: An overview for Canadian basins. <i>Journal of Hydrology: Regional Studies</i> , 2017, 13, 11-25.	2.4	25
30	Machine Learning vs. Physics-Based Modeling for Real-Time Irrigation Management. <i>Frontiers in Water</i> , 2020, 2, .	2.3	24
31	Validation and Use of a Semidistributed Hydrological Modeling System to Predict Short-Term Effects of Clear-Cutting on a Watershed Hydrological Regime. <i>Earth Interactions</i> , 2004, 8, 1-19.	1.5	23
32	Hydrological modelling of <i>Toxoplasma gondii</i> oocysts transport to investigate contaminated snowmelt runoff as a potential source of infection for marine mammals in the Canadian Arctic. <i>Journal of Environmental Management</i> , 2013, 127, 150-161.	7.8	23
33	Impacts of high precipitation on the energy and water budgets of a humid boreal forest. <i>Agricultural and Forest Meteorology</i> , 2020, 280, 107813.	4.8	23
34	SPATIOTEMPORAL DYNAMICS OF TOXOPLASMA GONDII INFECTION IN CANADIAN LYNX ( <i>LYNX CANADENSIS</i> ) IN WESTERN QUÉBEC, CANADA. <i>Journal of Wildlife Diseases</i> , 2013, 49, 39-48.	0.8	22
35	Sensitivity analysis of the Pesticide in Water Calculator model for applications in the Pampa region of Argentina. <i>Science of the Total Environment</i> , 2020, 698, 134232.	8.0	22
36	Assessment of Micro-Basin Tillage as a Soil and Water Conservation Practice in the Black Soil Region of Northeast China. <i>PLoS ONE</i> , 2016, 11, e0152313.	2.5	20

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37	Rainfall peak flow response to clearcutting 50% of three small watersheds in a boreal forest, Montmorency Forest, QuÃ©bec. <i>Journal of Hydrology</i> , 2008, 352, 67-76.	5.4	19
38	Implementation of a Peatland-Specific Water Budget Algorithm in HYDROTEL. <i>Canadian Water Resources Journal</i> , 2009, 34, 349-364.	1.2	19
39	Distribution and assessment of surface water contamination by application of chemometric and deterministic models. <i>Journal of Hydrology</i> , 2009, 369, 416-426.	5.4	19
40	Development of a methodology to assess future trends in low flows at the watershed scale using solely climate data. <i>Journal of Hydrology</i> , 2018, 557, 774-790.	5.4	19
41	Solar radiation transmittance of a boreal balsam fir canopy: Spatiotemporal variability and impacts on growing season hydrology. <i>Agricultural and Forest Meteorology</i> , 2018, 263, 1-14.	4.8	19
42	Risk of Phosphorus Desorption from Canadian Agricultural Land: 25-Year Temporal Trend. <i>Journal of Environmental Quality</i> , 2012, 41, 1402-1412.	2.0	17
43	Open science in practice: Learning integrated modeling of coupled surfaceâ€subsurface flow processes from scratch. <i>Earth and Space Science</i> , 2016, 3, 190-206.	2.6	17
44	Equifinality and automatic calibration: What is the impact of hypothesizing an optimal parameter set on modelled hydrological processes?. <i>Canadian Water Resources Journal</i> , 2018, 43, 47-67.	1.2	16
45	A Hydrological Modeling Framework for Defining Achievable Performance Standards for Pesticides. <i>Journal of Environmental Quality</i> , 2012, 41, 52-63.	2.0	15
46	Evaluation of probable maximum snow accumulation: Development of a methodology for climate change studies. <i>Journal of Hydrology</i> , 2016, 537, 74-85.	5.4	15
47	Integrated assessment of climate change impact on surface runoff contamination by pesticides. <i>Integrated Environmental Assessment and Management</i> , 2016, 12, 559-571.	2.9	15
48	Quantifying streamflow regulation services of wetlands with an emphasis on quickflow and baseflow responses in the Upper Nenjiang River Basin, Northeast China. <i>Journal of Hydrology</i> , 2020, 583, 124565.	5.4	14
49	Assessment of the Impact of Subsurface Agricultural Drainage on Soil Water Storage and Flows of a Small Watershed. <i>Water (Switzerland)</i> , 2016, 8, 326.	2.7	13
50	Modeling of subsurface agricultural drainage using two hydrological models with different conceptual approaches as well as dimensions and spatial scales. <i>Canadian Water Resources Journal</i> , 2017, 42, 38-53.	1.2	13
51	A watershed-based system for the integrated management of surface water quality: the GIBSI system. <i>Water Science and Technology</i> , 1997, 36, 381-387.	2.5	11
52	Development of a risk-based TMDL assessment approach using the integrated modeling system GIBSI. <i>Water Science and Technology</i> , 2002, 45, 317-324.	2.5	11
53	Usages et approvisionnement en eau dans le sud du Qubec Niveau des connaissances et axes de recherche privilgier dans une perspective de changements climatiques. <i>Canadian Water Resources Journal</i> , 2004, 29, 121-134.	1.2	11
54	Recommendations for riparian buffer widths based on field surveys of erosion processes on steep cultivated slopes. <i>Canadian Water Resources Journal</i> , 2013, 38, 263-279.	1.2	11

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55	Modeling the sediment yield and the impact of vegetated filters using an event-based soil erosion model-a case study of a small Canadian watershed. <i>Hydrological Processes</i> , 2016, 30, 2835-2850.	2.6	11
56	Development and evaluation of a hydrologic data-assimilation scheme for short-range flow and inflow forecasts in a data-sparse high-latitude region using a distributed model and ensemble Kalman filtering. <i>Advances in Water Resources</i> , 2019, 130, 198-220.	3.8	11
57	Automated Mapping of Water Table for Cranberry Subirrigation Management: Comparison of Three Spatial Interpolation Methods. <i>Water (Switzerland)</i> , 2020, 12, 3322.	2.7	11
58	Seasonal and monthly hydrological budgets of a fen-dominated forested watershed, James Bay region, Quebec. <i>Hydrological Processes</i> , 2013, 27, 1365-1378.	2.6	10
59	Development of VFDM: a riparian vegetated filter dimensioning model for agricultural watersheds. <i>Canadian Water Resources Journal</i> , 2013, 38, 169-184.	1.2	10
60	Modelling snow water equivalent and spring runoff in a boreal watershed, James Bay, Canada. <i>Hydrological Processes</i> , 2014, 28, 5991-6005.	2.6	10
61	An Environmental Benefit-Cost Analysis Case Study of Nutrient Management in an Agricultural Watershed. <i>Canadian Water Resources Journal</i> , 2006, 31, 105-122.	1.2	9
62	Analyse de sensibilit� globale du mod�le CATHY aux propri�t�s hydrodynamiques du sol d�un micro-bassin agricole drain�. <i>Hydrological Sciences Journal</i> , 2014, 59, 1606-1623.	2.6	9
63	Application and Evaluation of a Two-Wavelength Scintillometry System for Operation in a Complex Shallow Boreal-Forested Valley. <i>Boundary-Layer Meteorology</i> , 2020, 174, 341-370.	2.3	9
64	Stochastic spatial disaggregation of extreme precipitation to validate a regional climate model and to evaluate climate change impacts over a small watershed. <i>Hydrology and Earth System Sciences</i> , 2014, 18, 1695-1704.	4.9	8
65	Mosaic surface storages of a small boreal catchment. <i>Hydrological Processes</i> , 2015, 29, 845-858.	2.6	8
66	Assessment of the impact of pools on the water isotopic signature of a boreal patterned peatland. <i>Hydrological Processes</i> , 2016, 30, 1292-1307.	2.6	8
67	Hydrological assessment of meteorological network density through data assimilation simulation. <i>Journal of Hydrology</i> , 2019, 569, 844-858.	5.4	8
68	Quantitative assessment on basin-scale hydrological services of wetlands. <i>Science China Earth Sciences</i> , 2020, 63, 279-291.	5.2	8
69	Evaluating the Impact of the Spatial Distribution of Land Management Practices on Water Erosion: Case Study of a Mediterranean Catchment. <i>Journal of Hydrologic Engineering - ASCE</i> , 2015, 20, .	1.9	7
70	Utilisation des technologies g�omatiques pour spatialiser le facteur K d�rodabilit� des sols du bassin versant de la rivi�re Chaudi�re, Qu�bec. <i>Canadian Journal of Soil Science</i> , 2001, 81, 423-437.	1.2	6
71	Algae-based Biomonitoring: Predicting Diatom Reference Communities in Unpolluted Streams using Classification Trees, Random Forests, and Artificial Neural Networks. <i>Water Quality Research Journal of Canada</i> , 2010, 45, 413-425.	2.7	6
72	Water budget, performance of evapotranspiration formulations, and their impact on hydrological modeling of a small boreal peatland-dominated watershed. <i>Canadian Journal of Earth Sciences</i> , 2018, 55, 206-220.	1.3	6

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73	Mapping Wetlands and Land Cover Change with Landsat Archives: The Added Value of Geomorphologic Data. <i>Canadian Journal of Remote Sensing</i> , 2018, 44, 337-356.	2.4	6
74	Development of a steady-state model to predict daily water table depth and root zone soil matric potential of a cranberry field with a subirrigation system. <i>Agricultural Water Management</i> , 2019, 213, 1016-1027.	5.6	6
75	River Damming Reduces Wetland Function in Regulating Flow. <i>Journal of Water Resources Planning and Management - ASCE</i> , 2021, 147, .	2.6	6
76	Caractérisation des propriétés de rétention hydrique et de conductivité hydraulique dans les sols boréaux de la baie de James : présentation d'une démarche expérimentale et de résultats préliminaires / Characterization of Water Retention and Hydraulic Conductivity in Boreal Soils of the James Bay Region: Presentation of an Experimental Protocol and Preliminary Results. <i>Canadian Water Resources Journal</i> , 2009, 34, 329-348.	1.2	5
77	An extended riparian buffer strip concept for soil conservation and stream protection in an agricultural riverine area of the La Chevrotière River watershed, Québec, Canada, using remote sensing and GIS techniques. <i>Canadian Water Resources Journal</i> , 2014, 39, 285-301.	1.2	5
78	Applicability of the Bulk-Transfer Approach to Estimate Evapotranspiration from Boreal Peatlands. <i>Journal of Hydrometeorology</i> , 2015, 16, 1521-1539.	1.9	5
79	Assessing environmental control strategies in cage-free aviary housing systems: Egg production analysis and Random Forest modeling. <i>Computers and Electronics in Agriculture</i> , 2022, 196, 106854.	7.7	5
80	Are spatial distribution and aggregation of wetlands reliable indicators of stream flow mitigation?. <i>Journal of Hydrology</i> , 2022, 608, 127646.	5.4	5
81	Implementation of a Root Water Extraction Module in CATHY: Comparison of Four Empirical Root-density Distribution Models. <i>Procedia Environmental Sciences</i> , 2013, 19, 57-66.	1.4	4
82	The added value of stochastic spatial disaggregation for short-term rainfall forecasts currently available in Canada. <i>Journal of Hydrology</i> , 2017, 554, 507-516.	5.4	4
83	Seasonal contributions of water and pollutants to Lake St. Charles, a drinking water reservoir. <i>Canadian Water Resources Journal</i> , 2020, 45, 125-143.	1.2	4
84	Grass barriers for mitigating diffuse pollution within a source water area - A case study of Northeast China. <i>Agricultural Water Management</i> , 2021, 243, 106461.	5.6	4
85	Automated Soil Lysimeter for Determination of Actual Evapotranspiration of a Bog in Quebec, Canada. <i>Journal of Hydrologic Engineering - ASCE</i> , 2014, 19, 60-68.	1.9	3
86	Load Estimation Method Using Distributions with Covariates: A Comparison with Commonly Used Estimation Methods. <i>Journal of the American Water Resources Association</i> , 2014, 50, 791-804.	2.4	3
87	Evaluating the effects of BMPs on agricultural contaminants using a novel method accounting for uncertainty in water flow and contaminant loads. <i>Canadian Water Resources Journal</i> , 2019, 44, 263-279.	1.2	3
88	What is the Trade-Off between Snowpack Stratification and Simulated Snow Water Equivalent in a Physically-Based Snow Model?. <i>Water (Switzerland)</i> , 2020, 12, 3449.	2.7	3
89	Mid-21st century anthropogenic changes in extreme precipitation and snowpack projections over Newfoundland. <i>Canadian Water Resources Journal</i> , 2020, 45, 216-236.	1.2	3
90	A Benefit-Cost Framework to Evaluate the Impact of Legislation Supporting Reduction of Agricultural Pollution at the Watershed Level. , 2004, , 123-142.		3

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91	Assessing Environmental Control Strategies in Cage-Free Egg Production Systems: Effect on Spatial Occupancy and Natural Behaviors. <i>Animals</i> , 2021, 11, 17.	2.3	3
92	Validation of the Meteorological Outputs of the Canadian Regional Climate Model Using a Kriging Method: Application to Southern Quebec. <i>Canadian Water Resources Journal</i> , 2010, 35, 259-280.	1.2	2
93	Surface Water Quantity for Drinking Water during Low Flows - Sensitivity Assessment Solely from Climate Data. <i>Water Resources Management</i> , 2019, 33, 369-385.	3.9	2
94	Agricultural Hydroinformatics: A Blueprint for an Emerging Framework to Foster Water Management-Centric Sustainability Transitions in Farming Systems. <i>Frontiers in Water</i> , 2020, 2, .	2.3	2
95	Temporal and Local Heterogeneities of Water Table Depth under Different Agricultural Water Management Conditions. <i>Water (Switzerland)</i> , 2021, 13, 2148.	2.7	2
96	The challenges of integration and related research issues to support sustainable water resources management in QuÃ©bec, Canada. <i>International Journal of Water</i> , 2013, 7, 267.	0.1	1
97	Synchronized generation of high-resolution gridded precipitation and temperature fields. <i>Journal of Hydrology</i> , 2019, 573, 631-647.	5.4	1
98	Performance of Various Filtering Media for the Treatment of Cow Manure from Exercise PensÃ©A Laboratory Study. <i>Water (Switzerland)</i> , 2022, 14, 1912.	2.7	1