

Philippe Renard

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/9338073/publications.pdf>

Version: 2024-02-01

146
papers

5,671
citations

94433

37
h-index

85541

71
g-index

164
all docs

164
docs citations

164
times ranked

3718
citing authors

#	ARTICLE	IF	CITATIONS
1	The stochastic simulation of karst conduit network structure using anisotropic fast marching, and its application to a geologically complex alpine karst system. <i>Hydrogeology Journal</i> , 2022, 30, 927-946.	2.1	4
2	Automated Hierarchical 3D Modeling of Quaternary Aquifers: The ArchPy Approach. <i>Frontiers in Earth Science</i> , 2022, 10, .	1.8	5
3	Equivalent Permeability Tensor of Heterogeneous Media: Upscaling Methods and Criteria (Review and Tj ETQq1 1 0,784314 1gBT /Over	2.2	1
4	A model ensemble generator to explore structural uncertainty in karst systems with unmapped conduits. <i>Hydrogeology Journal</i> , 2021, 29, 229-248.	2.1	16
5	Analysis and stochastic simulation of geometrical properties of conduits in karstic networks. <i>Geomorphology</i> , 2021, 377, 107480.	2.6	6
6	An Attempt to Boost Posterior Population Expansion Using Fast Machine Learning Algorithms. <i>Frontiers in Artificial Intelligence</i> , 2021, 4, 624629.	3.4	3
7	Conditioning Multiple-Point Statistics Simulation to Inequality Data. <i>Earth and Space Science</i> , 2021, 8, e2020EA001515.	2.6	7
8	tTEM20AAR: a benchmark geophysical data set for unconsolidated fluvioglacial sediments. <i>Earth System Science Data</i> , 2021, 13, 2743-2752.	9.9	5
9	Efficiency of template matching methods for Multiple-Point Statistics simulations. <i>Applied Computing and Geosciences</i> , 2021, 11, 100064.	2.2	1
10	Ice volume and basal topography estimation using geostatistical methods and ground-penetrating radar measurements: application to the Tsanfleuron and Scex Rouge glaciers, Swiss Alps. <i>Cryosphere</i> , 2021, 15, 5169-5186.	3.9	5
11	A Framework for the Cross-Validation of Categorical Geostatistical Simulations. <i>Earth and Space Science</i> , 2020, 7, e2020EA001152.	2.6	11
12	Impact of phases distribution on mixing and reactions in unsaturated porous media. <i>Advances in Water Resources</i> , 2020, 144, 103697.	3.8	8
13	Robust input layer for neural networks for hyperspectral classification of data with missing bands. <i>Applied Computing and Geosciences</i> , 2020, 8, 100034.	2.2	1
14	3D Geological Image Synthesis From 2D Examples Using Generative Adversarial Networks. <i>Frontiers in Water</i> , 2020, 2, .	2.3	13
15	A new perspective to model subsurface stratigraphy in alluvial hydrogeological basins, introducing geological hierarchy and relative chronology. <i>Computers and Geosciences</i> , 2020, 140, 104506.	4.2	7
16	Direct simulation of non-additive properties on unstructured grids. <i>Advances in Water Resources</i> , 2020, 143, 103665.	3.8	7
17	Conditioning Multi-Gaussian Groundwater Flow Parameters to Transient Hydraulic Head and Flowrate Data With Iterative Ensemble Smoothers: A Synthetic Case Study. <i>Frontiers in Earth Science</i> , 2020, 8, .	1.8	4
18	Multiresolution Approach to Condition Categorical Multiple-Point Realizations to Dynamic Data With Iterative Ensemble Smoothing. <i>Water Resources Research</i> , 2020, 56, e2019WR025875.	4.2	6

#	ARTICLE	IF	CITATIONS
19	Coupling SKS and SWMM to Solve the Inverse Problem Based on Artificial Tracer Tests in Karstic Aquifers. <i>Water (Switzerland)</i> , 2020, 12, 1139.	2.7	11
20	Quasi-Online Groundwater Model Optimization Under Constraints of Geological Consistency Based on Iterative Importance Sampling. <i>Water Resources Research</i> , 2020, 56, e2019WR026777.	4.2	6
21	The Traveling Pilot Point method. A novel approach to parameterize the inverse problem for categorical fields. <i>Advances in Water Resources</i> , 2020, 138, 103556.	3.8	10
22	Using Generative Adversarial Networks as a Fast Forward Operator for Hydrogeological Inverse Problems. <i>Ground Water</i> , 2020, 58, 938-950.	1.3	13
23	Multiple-point statistics using multi-resolution images. <i>Stochastic Environmental Research and Risk Assessment</i> , 2020, 34, 251-273.	4.0	16
24	3D multiple-point statistics simulations of the Roussillon Continental Pliocene aquifer using DeeSse. <i>Hydrology and Earth System Sciences</i> , 2020, 24, 4997-5013.	4.9	8
25	GROUNDWATER MODELING IN ALPINE KARST SYSTEMS: A MODEL ENSEMBLE GENERATOR TO EXPLORE STRUCTURAL UNCERTAINTY. , 2020, , .		0
26	Pilot Point Optimization of Mining Boundaries for Lateritic Metal Deposits: Finding the Trade-off Between Dilution and Ore Loss. <i>Natural Resources Research</i> , 2019, 28, 153-171.	4.7	9
27	Automatic Reservoir Modelling: A Sate of the Art. , 2019, , .		0
28	Contaminant source localization via Bayesian global optimization. <i>Hydrology and Earth System Sciences</i> , 2019, 23, 351-369.	4.9	15
29	Multiple-point statistical simulation of the ore boundaries for a lateritic bauxite deposit. <i>Stochastic Environmental Research and Risk Assessment</i> , 2019, 33, 865-878.	4.0	14
30	A 2D hyperspectral library of mineral reflectance, from 900 to 2500 nm. <i>Scientific Data</i> , 2019, 6, 268.	5.3	6
31	Fast and Interactive Editing Tools for Spatial Models. <i>Mathematical Geosciences</i> , 2019, 51, 109-125.	2.4	8
32	Oil production uncertainty assessment by predicting reservoir production curves and confidence intervals from arbitrary proxy responses. <i>Journal of Petroleum Science and Engineering</i> , 2019, 176, 116-125.	4.2	8
33	K-fold Cross-validation of Multiple-point Statistical Simulations. , 2019, , .		1
34	Simplified Direct Sampling Method for Geostatistical Multiple-point Simulations. , 2019, , .		0
35	Multiple Point Statistics with Pyramids Application on the Multi-scale Multi-structure Training Images. , 2019, , .		0
36	Direct Geostatistical Simulation on Unstructured Grids II: A Proposal for Non-additive Variables. , 2019, , .		0

#	ARTICLE	IF	CITATIONS
37	Multiple-point Statistics Based on Gaussian Pyramids of the Training Image. , 2019, , .		0
38	The Posterior Population Expansion Ensemble Method to Invert Categorical Fields. , 2019, , .		0
39	3D Multiple-points Statistics Simulations of the Roussillon Continental Pliocene Reservoir Using DeeSse. , 2019, , .		0
40	Simulating rainfall time-series: how to account for statistical variability at multiple scales?. Stochastic Environmental Research and Risk Assessment, 2018, 32, 321-340.	4.0	10
41	Random partitioning and adaptive filters for multiple-point stochastic simulation. Stochastic Environmental Research and Risk Assessment, 2018, 32, 1375-1396.	4.0	15
42	Parallelized Adaptive Importance Sampling for Solving Inverse Problems. Frontiers in Earth Science, 2018, 6, .	1.8	8
43	A survey of groundwater quality in Tulum region, Yucatan Peninsula, Mexico. Environmental Earth Sciences, 2018, 77, 1.	2.7	13
44	Automatic Parameter Tuning of Multiple-Point Statistical Simulations for Lateritic Bauxite Deposits. Minerals (Basel, Switzerland), 2018, 8, 220.	2.0	11
45	Above and Below: Understanding River-Groundwater Exchanges. Eos, 2018, 99, .	0.1	0
46	EuroKarst 2016, NeuchÃ¢tel. Advances in Karst Science, 2017, , .	0.3	3
47	Statistical metrics for the characterization of karst network geometry and topology. Geomorphology, 2017, 283, 122-142.	2.6	36
48	Geothermal state of the deep Western Alpine Molasse Basin, France-Switzerland. Geothermics, 2017, 67, 48-65.	3.4	27
49	A geostatistical approach to the simulation of stacked channels. Marine and Petroleum Geology, 2017, 82, 318-335.	3.3	17
50	Posterior population expansion for solving inverse problems. Water Resources Research, 2017, 53, 2902-2916.	4.2	14
51	On the use of multiple-point statistics to improve groundwater flow modeling in karst aquifers: A case study from the Hydrogeological Experimental Site of Poitiers, France. Journal of Hydrology, 2017, 545, 109-119.	5.4	21
52	Simulating Smallâ€Scale Rainfall Fields Conditioned by Weather State and Elevation: A Dataâ€Driven Approach Based on Rainfall Radar Images. Water Resources Research, 2017, 53, 8512-8532.	4.2	14
53	Stochastic simulation of channelized sedimentary bodies using a constrained L-system. Computers and Geosciences, 2017, 105, 158-168.	4.2	15
54	Advances in understanding riverâ€groundwater interactions. Reviews of Geophysics, 2017, 55, 818-854.	23.0	158

#	ARTICLE	IF	CITATIONS
55	Hytool: an open source matlab toolbox for the interpretation of hydraulic tests using analytical solutions. <i>Journal of Open Source Software</i> , 2017, 2, 441.	4.6	6
56	Fractal Dimension, Walk Dimension and Conductivity Exponent of Karst Networks around Tulum. <i>Frontiers in Physics</i> , 2016, 4, .	2.1	7
57	Subnetworks of Percolation Backbones to Model Karst Systems Around Tulum, Mexico. <i>Frontiers in Physics</i> , 2016, 4, .	2.1	5
58	Impact of a stochastic sequential initiation of fractures on the spatial correlations and connectivity of discrete fracture networks. <i>Journal of Geophysical Research: Solid Earth</i> , 2016, 121, 5641-5658.	3.4	24
59	Comparing connected structures in ensemble of random fields. <i>Advances in Water Resources</i> , 2016, 96, 145-169.	3.8	9
60	Missing data simulation inside flow rate time-series using multiple-point statistics. <i>Environmental Modelling and Software</i> , 2016, 86, 264-276.	4.5	22
61	Can one identify karst conduit networks geometry and properties from hydraulic and tracer test data?. <i>Advances in Water Resources</i> , 2016, 90, 99-115.	3.8	58
62	Conditioning multiple-point statistics simulations to block data. <i>Spatial Statistics</i> , 2016, 16, 53-71.	1.9	22
63	A Workflow for Correlated Discrete Fracture Network Simulation Constrained by Microseismic Data. , 2016, , .		0
64	A pseudo genetic model of coarse braided river deposits. <i>Water Resources Research</i> , 2015, 51, 9595-9611.	4.2	13
65	Generation of 3D Spatially Variable Anisotropy for Groundwater Flow Simulations. <i>Ground Water</i> , 2015, 53, 955-958.	1.3	16
66	Can shallow open-loop hydrothermal well-doublets help remediate seawater intrusion?. <i>Hydrogeology Journal</i> , 2015, 23, 619-629.	2.1	6
67	Influence of conceptual model uncertainty on contaminant transport forecasting in braided river aquifers. <i>Journal of Hydrology</i> , 2015, 531, 124-141.	5.4	24
68	Stochastic fracture generation accounting for the stratification orientation in a folded environment based on an implicit geological model. <i>Engineering Geology</i> , 2015, 187, 135-142.	6.3	18
69	Integrating aerial geophysical data in multiple-point statistics simulations to assist groundwater flow models. <i>Hydrogeology Journal</i> , 2015, 23, 883-900.	2.1	10
70	Constraining distance-based multipoint simulations to proportions and trends. <i>Environmental Modelling and Software</i> , 2015, 72, 184-197.	4.5	21
71	Geological realism in hydrogeological and geophysical inverse modeling: A review. <i>Advances in Water Resources</i> , 2015, 86, 86-101.	3.8	152
72	Prediction-Focused Subsurface Modeling: Investigating the Need for Accuracy in Flow-Based Inverse Modeling. <i>Mathematical Geosciences</i> , 2015, 47, 173-191.	2.4	41

#	ARTICLE	IF	CITATIONS
73	Channel Simulation Using L-system, Potential Fields and NURBS. , 2015, , .		1
74	Multiple-point Statistics Simulations Accounting for Block Data. , 2015, , .		0
75	Quality Analysis of Geostatistical Simulations through their Connected Structures. , 2015, , .		0
76	Simulation of rainfall time series from different climatic regions using the direct sampling technique. Hydrology and Earth System Sciences, 2014, 18, 3015-3031.	4.9	44
77	Binary upscaling on complex heterogeneities: The role of geometry and connectivity. Advances in Water Resources, 2014, 64, 47-61.	3.8	14
78	Special Issue on 20 Years of Multiple-Point Statistics: Part 1. Mathematical Geosciences, 2014, 46, 129-131.	2.4	8
79	Special Issue on 20 Years of Multiple-Point Statistics: Part 2. Mathematical Geosciences, 2014, 46, 517-518.	2.4	4
80	Simulation of braided river elevation model time series with multiple-point statistics. Geomorphology, 2014, 214, 148-156.	2.6	31
81	Assessing the effect of different river water level interpolation schemes on modeled groundwater residence times. Journal of Hydrology, 2014, 510, 393-402.	5.4	12
82	Analog-based meandering channel simulation. Water Resources Research, 2014, 50, 836-854.	4.2	8
83	Hydraulic subsurface measurements and hydrodynamic modelling as indicators for groundwater flow systems in the Rotondo granite, Central Alps (Switzerland). Hydrological Processes, 2014, 28, 255-278.	2.6	12
84	Handling Soft Probabilities in Multiple Point Statistics Simulation. Lecture Notes in Earth System Sciences, 2014, , 69-72.	0.6	0
85	Geophysics for the Determination of Hydrological Parameters of Karst Systems in Yucatan, Mexico. , 2014, , .		0
86	Proxy Comparison for Sorting Models and Assessing Uncertainty on Oil Recovery Profiles. , 2014, , .		0
87	Hybrid Geostatistics: Object-based Simulations Using MPS-generated Meandering Channels. , 2014, , .		1
88	A New Generic Method for Fast and Interactive Geological Models Perturbation. , 2014, , .		0
89	Parallel Multiple-Point Statistics Algorithm Based on List and Tree Structures. Mathematical Geosciences, 2013, 45, 131-147.	2.4	55
90	A practical guide to performing multiple-point statistical simulations with the Direct Sampling algorithm. Computers and Geosciences, 2013, 52, 307-324.	4.2	124

#	ARTICLE	IF	CITATIONS
91	A method for the stochastic modeling of karstic systems accounting for geophysical data: an example of application in the region of Tulum, Yucatan Peninsula (Mexico). <i>Hydrogeology Journal</i> , 2013, 21, 529-544.	2.1	14
92	Modeling Fine-Scale Geological Heterogeneity—Examples of Sand Lenses in Tills. <i>Ground Water</i> , 2013, 51, 692-705.	1.3	38
93	Can electrical conductivity data from a single pumping test provide information about the location of a neighboring mixing zone between two aquifers? An example from Aix-les-Bains/Marlioz (Savoie, France). <i>Journal of Hydrology</i> , 2013, 465, 1-14.	1.0	1
94	Connectivity metrics for subsurface flow and transport. <i>Advances in Water Resources</i> , 2013, 51, 168-196.	3.8	308
95	Distance-based kriging relying on proxy simulations for inverse conditioning. <i>Advances in Water Resources</i> , 2013, 52, 275-291.	3.8	31
96	A methodology for pseudo-genetic stochastic modeling of discrete fracture networks. <i>Computers and Geosciences</i> , 2013, 56, 12-22.	4.2	28
97	Stochastic forecasts of seawater intrusion towards sustainable groundwater management: application to the Korba aquifer (Tunisia). <i>Hydrogeology Journal</i> , 2013, 21, 425-440.	2.1	16
98	New Methods to Estimate 2D Water Level Distributions of Dynamic Rivers. <i>Ground Water</i> , 2013, 51, 847-854.	1.3	4
99	Hybrid Discrete Fracture Network Simulation Driven by Statistics, Tectonic History and Geomechanics. <i>Journal of Hydrology</i> , 2013, 465, 1-14.	1.0	0
100	Spatiotemporal reconstruction of gaps in multivariate fields using the direct sampling approach. <i>Water Resources Research</i> , 2012, 48, .	4.2	51
101	Probability Aggregation Methods in Geoscience. <i>Mathematical Geosciences</i> , 2012, 44, 545-581.	2.4	70
102	3D multiple-point statistics simulation using 2D training images. <i>Computers and Geosciences</i> , 2012, 40, 49-65.	4.2	117
103	A pseudo-genetic stochastic model to generate karstic networks. <i>Journal of Hydrology</i> , 2012, 414-415, 516-529.	5.4	58
104	Comparaison de trois méthodes statistiques pour des simulations hydrofaciès: un test sur des sédiments alluvionnaires. <i>Hydrogeology Journal</i> , 2012, 20, 299-311.	2.1	90
105	Three-dimensional high resolution fluvio-glacial aquifer analog — Part 2: Geostatistical modeling. <i>Journal of Hydrology</i> , 2011, 405, 10-23.	5.4	94
106	Three-dimensional high resolution fluvio-glacial aquifer analog: Part 1: Field study. <i>Journal of Hydrology</i> , 2011, 405, 1-9.	5.4	94
107	An Improved Parallel Multiple-point Algorithm Using a List Approach. <i>Mathematical Geosciences</i> , 2011, 43, 305-328.	2.4	180
108	Extrapolating the Fractal Characteristics of an Image Using Scale-Invariant Multiple-Point Statistics. <i>Mathematical Geosciences</i> , 2011, 43, 783-797.	2.4	19

#	ARTICLE	IF	CITATIONS
109	Conditioning Facies Simulations with Connectivity Data. <i>Mathematical Geosciences</i> , 2011, 43, 879-903.	2.4	37
110	The Direct Sampling method to perform multiple-point geostatistical simulations. <i>Water Resources Research</i> , 2010, 46, .	4.2	425
111	A numerical analysis of dimensionality and heterogeneity effects on advective dispersive seawater intrusion processes. <i>Hydrogeology Journal</i> , 2010, 18, 55-72.	2.1	88
112	Status of the Korba groundwater resources (Tunisia): observations and three-dimensional modelling of seawater intrusion. <i>Hydrogeology Journal</i> , 2010, 18, 1173-1190.	2.1	47
113	A roadmap for a dedicated Earth Science Grid platform. <i>Earth Science Informatics</i> , 2010, 3, 135-148.	3.2	18
114	Reconstruction of Incomplete Data Sets or Images Using Direct Sampling. <i>Mathematical Geosciences</i> , 2010, 42, 245-268.	2.4	109
115	Grid-enabled Monte Carlo analysis of the impacts of uncertain discharge rates on seawater intrusion in the Korba aquifer (Tunisia). <i>Hydrological Sciences Journal</i> , 2010, 55, 1325-1336.	2.6	16
116	Blocking Moving Window algorithm: Conditioning multiple-point simulations to hydrogeological data. <i>Water Resources Research</i> , 2010, 46, .	4.2	48
117	Bayesian inverse problem and optimization with iterative spatial resampling. <i>Water Resources Research</i> , 2010, 46, .	4.2	100
118	How to Model Realistic 3D Karst Reservoirs Using a Pseudo-Genetic Methodology – Example of Two Case Studies. <i>Environmental Earth Sciences</i> , 2010, , 251-255.	0.2	5
119	MP Simulations Without Computing MP Statistics. , 2010, , .		0
120	Reducing the impact of a desalination plant using stochastic modeling and optimization techniques. <i>Journal of Hydrology</i> , 2009, 365, 275-288.	5.4	30
121	A workflow to facilitate three-dimensional geometrical modelling of complex poly-deformed geological units. <i>Computers and Geosciences</i> , 2009, 35, 644-658.	4.2	48
122	Introducing wwwhyhpd: a world-wide collaborative hydrogeological parameters database. <i>Hydrogeology Journal</i> , 2009, 17, 481-489.	2.1	19
123	CompreensÃ£o de grÃ¡ficos diagnÃ³stico para interpretaÃ§Ã£o de ensaios de caudal em furos. <i>Hydrogeology Journal</i> , 2009, 17, 589-600.	2.1	128
124	Truncated Plurigaussian Simulations to Characterize Aquifer Heterogeneity. <i>Ground Water</i> , 2009, 47, 13-24.	1.3	80
125	Hydraulic testing of low-permeability formations. <i>Engineering Geology</i> , 2009, 107, 88-97.	6.3	40
126	Integrating collocated auxiliary parameters in geostatistical simulations using joint probability distributions and probability aggregation. <i>Water Resources Research</i> , 2009, 45, .	4.2	24

#	ARTICLE	IF	CITATIONS
127	Grid Computing for Earth Science. <i>Eos</i> , 2009, 90, 117-119.	0.1	15
128	Editors'™ Message: the Hydrogeologist Time Capsule " archival video recordings of influential hydrogeologists. <i>Hydrogeology Journal</i> , 2008, 16, 1-3.	2.1	4
129	Issues in characterizing heterogeneity and connectivity in non-multiGaussian media. <i>Advances in Water Resources</i> , 2008, 31, 147-159.	3.8	68
130	Stochastic Hydrogeology: What Professionals Really Need?. <i>Ground Water</i> , 2007, 45, 531-541.	1.3	95
131	Approximate discharge for constant head test with recharging boundary. <i>Ground Water</i> , 2005, 43, 439-442.	1.3	17
132	The future of hydraulic tests. <i>Hydrogeology Journal</i> , 2005, 13, 259-262.	2.1	43
133	Dealing with spatial heterogeneity. <i>Hydrogeology Journal</i> , 2005, 13, 161-183.	2.1	339
134	Modélisation du bilan hydrologique de la partie sud de la Mer d'Aral entre 1993 et 2001 / Hydrological balance modelling of the southern Aral Sea between 1993 and 2001. <i>Hydrological Sciences Journal</i> , 2005, 50, .	2.6	4
135	Study of stable isotopes in the Kouris catchment (Cyprus) for the description of the regional groundwater flow. <i>Journal of Hydrology</i> , 2005, 308, 214-226.	5.4	54
136	Application of tritium in precipitation and in groundwater of the Kouris catchment (Cyprus) for description of the regional groundwater flow. <i>Applied Geochemistry</i> , 2005, 20, 1292-1308.	3.0	22
137	Forecasting the Number of Soil Samples Required to Reduce Remediation Cost Uncertainty. <i>Journal of Environmental Quality</i> , 2004, 33, 1694-1702.	2.0	18
138	Environmental Isotopes as Indicators for Ground Water Recharge to Fractured Granite. <i>Ground Water</i> , 2004, 42, 868-879.	1.3	33
139	A dynamic model of the Aral Sea water and salt balance. <i>Journal of Marine Systems</i> , 2004, 47, 35-50.	2.1	56
140	The problem of salt recycling and seawater intrusion in coastal irrigated plains: an example from the Kiti aquifer (Southern Cyprus). <i>Journal of Hydrology</i> , 2004, 288, 327-343.	5.4	64
141	Groundwater resources in the Kouris catchment (Cyprus): data analysis and numerical modelling. <i>Journal of Hydrology</i> , 2003, 271, 130-149.	5.4	56
142	Groundwater resources in the Kouris catchment (Cyprus): data analysis and numerical modelling. <i>Journal of Hydrology</i> , 2002, 271, 130-130.	5.4	0
143	Laboratory determination of the full permeability tensor. <i>Journal of Geophysical Research</i> , 2001, 106, 26443-26452.	3.3	52
144	A fast algorithm for the estimation of the equivalent hydraulic conductivity of heterogeneous media. <i>Water Resources Research</i> , 2000, 36, 3567-3580.	4.2	65

#	ARTICLE	IF	CITATIONS
145	Calculating equivalent permeability: a review. <i>Advances in Water Resources</i> , 1997, 20, 253-278.	3.8	750
146	Three-dimensional geometric modeling of a faulted domain: The Soultz Horst example (Alsace, France). <i>Computers and Geosciences</i> , 1994, 20, 1379-1390.	4.2	26