

# Denis Marcotte

## List of Publications by Year in descending order

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118  
papers

2,887  
citations

168829

31  
h-index

232693

48  
g-index

119  
all docs

119  
docs citations

119  
times ranked

2226  
citing authors

#	ARTICLE	IF	CITATIONS
1	Quantifying Mineral Resources and Their Uncertainty Using Two Existing Machine Learning Methods. <i>Mathematical Geosciences</i> , 2022, 54, 363-387.	1.4	7
2	Deconvolution of experimental thermal response test data to recover short-term g-function. <i>Geothermics</i> , 2022, 100, 102302.	1.5	5
3	Statistical comparison of variogram-based inversion methods for conditioning to indirect data. <i>Computers and Geosciences</i> , 2022, 160, 105032.	2.0	1
4	Assessment of Recoverable Resource Uncertainty in Multivariate Deposits Through a Simple Machine Learning Technique Trained Using Geostatistical Simulations. <i>Natural Resources Research</i> , 2022, 31, 767-783.	2.2	1
5	Flow rate control in standing column wells: A flexible solution for reducing the energy use and peak power demand of the built environment. <i>Applied Energy</i> , 2022, 313, 118774.	5.1	8
6	Linking Gyâ€™s Formula to QA/QC Duplicates Statistics. <i>Mathematical Geosciences</i> , 2021, 53, 1223-1235.	1.4	1
7	Stochastic correlated hydraulic conductivity tensor calibration using gradual deformation. <i>Journal of Hydrology</i> , 2021, 594, 125880.	2.3	4
8	A fast convolution-based method to simulate time-varying flow rates in closed-loop and standing column well ground heat exchangers. <i>Renewable Energy</i> , 2021, 174, 55-72.	4.3	6
9	Power-law relationship between joint spacing and bed thickness in sedimentary rocks and implications for layered rock mechanics. <i>Journal of Structural Geology</i> , 2021, 150, 104413.	1.0	8
10	Robust identification of volumetric heat capacity and analysis of thermal response tests by Bayesian inference with correlated residuals. <i>Applied Energy</i> , 2020, 261, 114394.	5.1	23
11	Constrained Kriging: An Alternative to Predict Global Recoverable Resources. <i>Natural Resources Research</i> , 2020, 29, 2275-2289.	2.2	5
12	Calibration of random fields by a sequential spectral turning bands method. <i>Computers and Geosciences</i> , 2020, 135, 104390.	2.0	6
13	The sequential spectral turning band simulator as an alternative to Gibbs sampler in large truncated- or pluri- Gaussian simulations. <i>Stochastic Environmental Research and Risk Assessment</i> , 2020, 34, 1939-1951.	1.9	2
14	The impact of rock fracturing and pump intake location on the thermal recovery of a standing column well: model development, experimental validation, and numerical analysis. <i>Science and Technology for the Built Environment</i> , 2019, 25, 1052-1068.	0.8	16
15	Calibration of random fields by FFTMA-SA. <i>Computers and Geosciences</i> , 2019, 127, 99-110.	2.0	8
16	Some observations on a recently proposed cross-correlation model. <i>Spatial Statistics</i> , 2019, 30, 65-70.	0.9	2
17	A multi-objective optimization strategy to reduce correlation and uncertainty for thermal response test analysis. <i>Geothermics</i> , 2019, 79, 176-187.	1.5	26
18	New Tabu Algorithm for Positioning Mining Drillholes with Blocks Uncertainty. <i>Natural Resources Research</i> , 2019, 28, 609-629.	2.2	3

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19	Calibration of categorical simulations by evolutionary gradual deformation method. Computational Geosciences, 2018, 22, 587-605.	1.2	6
20	Gibbs sampling on large lattice with GMRF. Computers and Geosciences, 2018, 111, 190-199.	2.0	21
21	Directional hydrostratigraphic units simulation using MCP algorithm. Stochastic Environmental Research and Risk Assessment, 2018, 32, 1435-1455.	1.9	6
22	A block matrix formulation for efficient g-function construction. Renewable Energy, 2018, 121, 249-260.	4.3	20
23	Half-tapering strategy for conditional simulation with large datasets. Stochastic Environmental Research and Risk Assessment, 2018, 32, 279-294.	1.9	12
24	Borehole thermal energy storage systems under the influence of groundwater flow and time-varying surface temperature. Geothermics, 2017, 66, 110-118.	1.5	39
25	Data analysis of potential field methods using geostatistics. Geophysics, 2017, 82, G35-G44.	1.4	4
26	Integration of multiple soft data sets in MPS thru multinomial logistic regression: a case study of gas hydrates. Stochastic Environmental Research and Risk Assessment, 2017, 31, 1727-1745.	1.9	10
27	Simulation of non-linear coregionalization models by FFTMA. Computers and Geosciences, 2016, 89, 220-231.	2.0	6
28	Standing column wells. , 2016, , 269-294.		6
29	Stope optimization with vertical convexity constraints. Optimization and Engineering, 2016, 17, 813-832.	1.3	11
30	Spatial turning bands simulation of anisotropic non-linear models of coregionalization with symmetric cross-covariances. Computers and Geosciences, 2016, 89, 232-238.	2.0	11
31	Quantification and minimization of uncertainty by geostatistical simulations during the characterization of contaminated sites: 3-D approach to a multi-element contamination. Geoderma, 2016, 264, 214-226.	2.3	9
32	A class of non-stationary covariance functions with compact support. Stochastic Environmental Research and Risk Assessment, 2016, 30, 973-987.	1.9	7
33	Thermal resistance and capacity model for standing column wells operating under a bleed control. Renewable Energy, 2015, 76, 743-756.	4.3	36
34	TASC3D: A program to test the admissibility in 3D of non-linear models of coregionalization. Computers and Geosciences, 2015, 83, 168-175.	2.0	10
35	Exact Conditioning of Gaussian Fields on Wavelet Coefficients. Mathematical Geosciences, 2015, 47, 277-300.	1.4	0
36	Influence of groundwater flow in fractured aquifers on standing column wells performance. Geothermics, 2015, 58, 39-48.	1.5	32

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37	Multiple-point geostatistical simulation using enriched pattern databases. Stochastic Environmental Research and Risk Assessment, 2015, 29, 893-913.	1.9	29
38	POTENTIAL FIELD INVERSION ON NODES FOR STOCHASTIC INVERSION MODELS. , 2014, , .		0
39	3D stochastic inversion of potential field data using structural geologic constraints. Journal of Applied Geophysics, 2014, 111, 173-182.	0.9	6
40	A comparison of approaches to include outcrop information in overburden thickness estimation. Stochastic Environmental Research and Risk Assessment, 2014, 28, 1733-1741.	1.9	2
41	Unit-response function for ground heat exchanger with parallel, series or mixed borehole arrangement. Renewable Energy, 2014, 68, 14-24.	4.3	28
42	Inversion of potential fields on nodes for large grids. Journal of Applied Geophysics, 2014, 110, 90-97.	0.9	5
43	Corrective pattern-matching simulation with controlled local-mean histogram. Stochastic Environmental Research and Risk Assessment, 2014, 28, 2027-2050.	1.9	4
44	Joint use of quasi-3D response model and spectral method to simulate borehole heat exchanger. Geothermics, 2014, 51, 281-299.	1.5	62
45	Antigorite-induced seismic anisotropy and implications for deformation in subduction zones and the Tibetan Plateau. Journal of Geophysical Research: Solid Earth, 2014, 119, 2068-2099.	1.4	31
46	POTENTIAL FIELD INVERSION ON NODES FOR STOCHASTIC INVERSION MODELS. , 2014, , .		1
47	Underground stope optimization with network flow method. Computers and Geosciences, 2013, 52, 361-371.	2.0	26
48	A new patchwork simulation method with control of the local-mean histogram. Stochastic Environmental Research and Risk Assessment, 2013, 27, 253-273.	1.9	12
49	3D stochastic gravity inversion using nonstationary covariances. Geophysics, 2013, 78, G15-G24.	1.4	26
50	Ultimate open pit stochastic optimization. Computers and Geosciences, 2013, 51, 238-246.	2.0	22
51	Efficient computation of heat flux signals to ensure the reproduction of prescribed temperatures at several interacting heat sources. Applied Thermal Engineering, 2013, 59, 515-526.	3.0	36
52	Seismic velocities, anisotropy, and shear-wave splitting of antigorite serpentinites and tectonic implications for subduction zones. Journal of Geophysical Research: Solid Earth, 2013, 118, 1015-1037.	1.4	64
53	Integrating multiscale parameters information into 3D stochastic magnetic anomaly inversion. Geophysics, 2012, 77, D85-D93.	1.4	6
54	Stochastic volume estimation and connectivity analysis at the Mallik gas hydrate field, Northwest Territories, Canada. The Leading Edge, 2012, 31, 1076-1081.	0.4	1

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55	Non-Gaussian gas hydrate grade simulation at the Mallik site, Mackenzie Delta, Canada. <i>Marine and Petroleum Geology</i> , 2012, 35, 20-27.	1.5	31
56	3D stochastic joint inversion of gravity and magnetic data. <i>Journal of Applied Geophysics</i> , 2012, 79, 27-37.	0.9	34
57	Statistical estimation of missing data in life cycle inventory: an application to hydroelectric power plants. <i>Journal of Cleaner Production</i> , 2012, 37, 335-341.	4.6	27
58	Kriging groundwater solute concentrations using flow coordinates and nonstationary covariance functions. <i>Journal of Hydrology</i> , 2012, 472-473, 238-253.	2.3	19
59	Estimating Material and Energy Flows in Life Cycle Inventory with Statistical Models. <i>Journal of Industrial Ecology</i> , 2012, 16, 399-406.	2.8	7
60	Short-term simulation of ground heat exchanger with an improved TRCM. <i>Renewable Energy</i> , 2012, 46, 92-99.	4.3	105
61	Stochastic inversion of a gravity field on multiple scale parameters using surface and borehole data. <i>Geophysical Prospecting</i> , 2011, 59, 998-1012.	1.0	9
62	Modeling of horizontal geoexchange systems for building heating and permafrost stabilization. <i>Geothermics</i> , 2011, 40, 211-211.	1.5	23
63	3D stochastic inversion of magnetic data. <i>Journal of Applied Geophysics</i> , 2011, 73, 336-347.	0.9	46
64	Heterogeneous aquifer characterization from ground-penetrating radar tomography and borehole hydrogeophysical data using nonlinear Bayesian simulations. <i>Geophysics</i> , 2011, 76, J13-J25.	1.4	34
65	The importance of axial effects for borehole design of geothermal heat-pump systems. <i>Renewable Energy</i> , 2010, 35, 763-770.	4.3	86
66	Trace Element Analysis of Rough Diamond by LA-ICP-MS: A Case of Source Discrimination? <i>Journal of Forensic Sciences</i> , 2010, 55, 1443-1456.	0.9	19
67	3D stochastic inversion of gravity data using cokriging and cosimulation. <i>Geophysics</i> , 2010, 75, I1-I10.	1.4	77
68	The effect of borehole inclination on fluid and ground temperature for GLHE systems. <i>Geothermics</i> , 2009, 38, 392-398.	1.5	39
69	Correlations between compressional and shear wave velocities and corresponding Poisson's ratios for some common rocks and sulfide ores. <i>Tectonophysics</i> , 2009, 469, 61-72.	0.9	41
70	On the estimation of thermal resistance in borehole thermal conductivity test. <i>Renewable Energy</i> , 2008, 33, 2407-2415.	4.3	230
71	A patchwork approach to stochastic simulation: A route towards the analysis of morphology in multiphase systems. <i>Chaos, Solitons and Fractals</i> , 2008, 36, 418-436.	2.5	24
72	Fast fluid and ground temperature computation for geothermal ground-loop heat exchanger systems. <i>Geothermics</i> , 2008, 37, 651-665.	1.5	129

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73	Hydraulic head field estimation using kriging with an external drift: A way to consider conceptual model information. <i>Journal of Hydrology</i> , 2008, 361, 349-361.	2.3	52
74	Hydraulic conductivity heterogeneity of a local deltaic aquifer system from the kriged 3D distribution of hydrofacies from borehole logs, Valcartier, Canada. <i>Journal of Hydrology</i> , 2008, 351, 71-86.	2.3	31
75	Pseudo-full-waveform inversion of borehole GPR data using stochastic tomography. <i>Geophysics</i> , 2007, 72, J43-J51.	1.4	33
76	Magnetotelluric static shift: Estimation and removal using the cokriging method. <i>Geophysics</i> , 2007, 72, F25-F34.	1.4	21
77	Reply to "Comments on steady- and transient-state inversion in hydrogeology by successive flux estimation" by G. Ponzini, M. Giudici and C. Vassena. <i>Advances in Water Resources</i> , 2007, 30, 2054-2057.	1.7	1
78	Stochastic borehole radar velocity and attenuation tomographies using cokriging and cosimulation. <i>Journal of Applied Geophysics</i> , 2007, 62, 141-157.	0.9	32
79	Analyse statistique des données spatiales edited by Jean-Jacques Dreesbeke, Michel Lejeune, Gilbert Saporta. <i>International Statistical Review</i> , 2007, 75, 264-264.	1.1	0
80	Discussion of "Network model for hydraulic conductivity of sand-bentonite mixtures". <i>Canadian Geotechnical Journal</i> , 2006, 43, 110-114.	1.4	7
81	Steady- and transient-state inversion in hydrogeology by successive flux estimation. <i>Advances in Water Resources</i> , 2006, 29, 1934-1952.	1.7	19
82	Borehole radar velocity inversion using cokriging and cosimulation. <i>Journal of Applied Geophysics</i> , 2005, 57, 242-259.	0.9	71
83	An Application of Multivariate Simulation in the Cement Industry. <i>Mathematical Geosciences</i> , 2005, 37, 493-512.	0.9	2
84	Time-Domain Electromagnetic Data Interpretation using Moving-Loop Configurations for Sheet-Like Base Metal Ore Deposits in Resistive Hosts. <i>Exploration Geophysics</i> , 2005, 36, 374-380.	0.5	2
85	Unusual drawdown curves for a pumping test in an unconfined aquifer at Lachenaie, Quebec: field data and numerical modeling. <i>Canadian Geotechnical Journal</i> , 2005, 42, 1133-1144.	1.4	17
86	Evaluating the hydraulic conductivity at three different scales within an unconfined sand aquifer at Lachenaie, Quebec. <i>Canadian Geotechnical Journal</i> , 2005, 42, 1212-1220.	1.4	53
87	Valuing a Mine as a Portfolio of European Call Options: The Effect of Geological Uncertainty and Implications for Strategic Planning. <i>Quantitative Geology and Geostatistics</i> , 2005, , 501-510.	0.1	3
88	Mechanical properties of multiphase materials and rocks: a phenomenological approach using generalized means. <i>Journal of Structural Geology</i> , 2004, 26, 1377-1390.	1.0	52
89	Title is missing!. <i>Mathematical Geosciences</i> , 2003, 35, 111-139.	0.9	25
90	Title is missing!. <i>Mathematical Geosciences</i> , 2003, 35, 643-646.	0.9	1

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91	Three-dimensional acoustic mapping and simulation of krill distribution in the Saguenayâ€”St. Lawrence Marine Park whale feeding ground. <i>Aquatic Living Resources</i> , 2003, 16, 137-144.	0.5	19
92	Classification of Non-oriented Fractures Along Boreholes to Joint Sets and its Success Degree. <i>Rock Mechanics and Rock Engineering</i> , 2001, 34, 257-273.	2.6	2
93	Estimation of hydraulic conductivity of an unconfined aquifer using cokriging of GPR and hydrostratigraphic data. <i>Journal of Applied Geophysics</i> , 2001, 47, 135-152.	0.9	70
94	Authors' Reply to "Comments on The Estimation of Mineralized Veins: A Comparative Study of Direct and Indirect Approaches," by M. Dagbert. <i>Exploration and Mining Geology</i> , 2001, 10, 245-247.	0.6	0
95	The Estimation of Mineralized Veins: A Comparative Study of Direct and Indirect Approaches. <i>Exploration and Mining Geology</i> , 2001, 10, 235-242.	0.6	6
96	Geostatistical analysis of fractures in shear zones in the Chibougamau area: applications to structural geology. <i>Tectonophysics</i> , 1997, 269, 51-63.	0.9	7
97	A Simple and Robust Lognormal Estimator. <i>Mathematical Geosciences</i> , 1997, 29, 993-1008.	0.9	7
98	The border effect of simulated annealing. <i>Mathematical Geosciences</i> , 1997, 29, 585-592.	0.9	3
99	Fast variogram computation with FFT. <i>Computers and Geosciences</i> , 1996, 22, 1175-1186.	2.0	67
100	Conditional simulation with data subject to measurement error: Post-simulation filtering with modified factorial kriging. <i>Mathematical Geosciences</i> , 1995, 27, 749-762.	0.9	12
101	Comparison of approaches to spatial estimation in a bivariate context. <i>Mathematical Geosciences</i> , 1995, 27, 641-658.	0.9	43
102	Generalized cross-validation for covariance model selection. <i>Mathematical Geosciences</i> , 1995, 27, 659-672.	0.9	20
103	Theoretical and Experimental Performance of Spatial Interpolation Methods for Soil Salinity Analysis. <i>Transactions of the American Society of Agricultural Engineers</i> , 1994, 37, 1799-1807.	0.9	42
104	Multi-element relationships and spatial structures of regional geochemical data from stream sediments, southwestern Quebec, Canada. <i>Journal of Geochemical Exploration</i> , 1994, 51, 11-35.	1.5	24
105	Mapping clay content for subsurface drainage in the Nile Delta. <i>Geoderma</i> , 1993, 58, 165-179.	2.3	40
106	Exploration of geostatistical methods for mapping and estimating acoustic biomass of pelagic fish in the Gulf of St. Lawrence: size of echo-integration unit and auxiliary environmental variables. <i>Aquatic Living Resources</i> , 1993, 6, 185-199.	0.5	24
107	Including Uncertainty of Hydraulic Conductivity into Drainage Design. <i>Journal of Irrigation and Drainage Engineering - ASCE</i> , 1992, 118, 744-756.	0.6	10
108	Spatial interpolation of soil salinity and sodicity for a saline soil in Southern Alberta. <i>Canadian Journal of Soil Science</i> , 1992, 72, 503-516.	0.5	19

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109	Optimal sampling density of hydraulic conductivity for subsurface drainage in the Nile delta. <i>Agricultural Water Management</i> , 1992, 20, 299-312.	2.4	8
110	Mapping, Estimating Biomass, and Optimizing Sampling Programs for Spatially Autocorrelated Data: Case Study of the Northern Shrimp ( <i>Pandalus borealis</i> ). <i>Canadian Journal of Fisheries and Aquatic Sciences</i> , 1992, 49, 32-45.	0.7	90
111	The multivariate (co)variogram as a spatial weighting function in classification methods. <i>Mathematical Geosciences</i> , 1992, 24, 463-478.	0.9	46
112	Comment on "Applications of spatial filter theory to kriging" by James R. Carr. <i>Mathematical Geosciences</i> , 1992, 24, 567-571.	0.9	1
113	Robustness of Kriging weights to non-bias conditions. <i>Mathematical Geosciences</i> , 1992, 24, 759-773.	0.9	1
114	Cokriging with matlab. <i>Computers and Geosciences</i> , 1991, 17, 1265-1280.	2.0	61
115	Multivariable variogram and its application to the linear model of coregionalization. <i>Mathematical Geosciences</i> , 1991, 23, 899-928.	0.9	80
116	Kriging of Hydraulic Conductivity for Subsurface Drainage Design. <i>Journal of Irrigation and Drainage Engineering - ASCE</i> , 1991, 117, 667-681.	0.6	23
117	The Schefferville area: multivariate analysis and variography used to enhance interpretation of lake sediment geochemical data. <i>Journal of Geochemical Exploration</i> , 1990, 38, 247-263.	1.5	6
118	Trend surface analysis as a special case of IRF-k kriging. <i>Mathematical Geosciences</i> , 1988, 20, 821-824.	0.9	15