# Dionissios Hristopulos

### List of Publications by Citations

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1,298 113 31 21 h-index g-index citations papers 2.8 137 1,530 5.24 L-index avg, IF ext. citations ext. papers

#	Paper	IF	Citations
113	Methods for generating non-separable spatiotemporal covariance models with potential environmental applications. <i>Advances in Water Resources</i> , <b>2004</b> , 27, 815-830	4.7	99
112	Comparison of stochastic and deterministic methods for mapping groundwater level spatial variability in sparsely monitored basins. <i>Environmental Monitoring and Assessment</i> , <b>2013</b> , 185, 1-19	3.1	87
111	Spartan Gibbs Random Field Models for Geostatistical Applications. <i>SIAM Journal of Scientific Computing</i> , <b>2003</b> , 24, 2125-2162	2.6	59
110	Spatiotemporal Environmental Health Modelling: A Tractatus Stochasticus 1998,		59
109	Improvement of groundwater level prediction in sparsely gauged basins using physical laws and local geographic features as auxiliary variables. <i>Advances in Water Resources</i> , <b>2013</b> , 52, 34-49	4.7	45
108	INTAMAP: The design and implementation of an interoperable automated interpolation web service. <i>Computers and Geosciences</i> , <b>2011</b> , 37, 343-352	4.5	45
107	. IEEE Transactions on Information Theory, <b>2007</b> , 53, 4667-4679	2.8	44
106	An application of Spartan spatial random fields in environmental mapping: focus on automatic mapping capabilities. <i>Stochastic Environmental Research and Risk Assessment</i> , <b>2008</b> , 22, 633-646	3.5	36
105	Improving kriging of groundwater level data using nonlinear normalizing transformations field application. <i>Hydrological Sciences Journal</i> , <b>2012</b> , 57, 1404-1419	3.5	32
104	Renormalization group methods in subsurface hydrology: overview and applications in hydraulic conductivity upscaling. <i>Advances in Water Resources</i> , <b>2003</b> , 26, 1279-1308	4.7	32
103	Nonparametric Identification of Anisotropic (Elliptic) Correlations in Spatially Distributed Data Sets. <i>IEEE Transactions on Signal Processing</i> , <b>2008</b> , 56, 4738-4751	4.8	31
102	Fault-slip accumulation in an active rift over thousands to millions of years and the importance of paleoearthquake sampling. <i>Journal of Structural Geology</i> , <b>2012</b> , 36, 71-80	3	30
101	Random Fields for Spatial Data Modeling. Advances in Geographic Information Science, 2020,	0.3	26
100	Computationally Efficient Spatial Interpolators Based on Spartan Spatial Random Fields. <i>IEEE Transactions on Signal Processing</i> , <b>2009</b> , 57, 3475-3487	4.8	25
99	Variational calculation of the effective fluid permeability of heterogeneous media. <i>Physical Review E</i> , <b>1997</b> , 55, 7288-7298	2.4	25
98	Relationships between correlation lengths and integral scales for covariance models with more than two parameters. <i>Stochastic Environmental Research and Risk Assessment</i> , <b>2011</b> , 25, 11-19	3.5	24
97	Stochastic Diagrammatic Analysis of Groundwater Flow in Heterogeneous Porous Media. <i>Water Resources Research</i> , <b>1995</b> , 31, 1687-1703	5.4	24

## (2019-2015)

96	Stochastic Local Interaction (SLI) model: Bridging machine learning and geostatistics. <i>Computers and Geosciences</i> , <b>2015</b> , 85, 26-37	4.5	23
95	On the physical geometry concept at the basis of space/time geostatistical hydrology. <i>Advances in Water Resources</i> , <b>2000</b> , 23, 799-810	4.7	23
94	Practical Calculation of Non-Gaussian Multivariate Moments in Spatiotemporal Bayesian Maximum Entropy Analysis. <i>Mathematical Geosciences</i> , <b>2001</b> , 33, 543-568		21
93	Comparison of spatiotemporal variogram functions based on a sparse dataset of groundwater level variations. <i>Spatial Statistics</i> , <b>2019</b> , 34, 100245	2.2	21
92	Structural disorder effects on the tensile strength distribution of heterogeneous brittle materials with emphasis on fiber networks. <i>Physical Review B</i> , <b>2004</b> , 70,	3.3	20
91	Normal faulting in the forearc of the Hellenic subduction margin: Paleoearthquake history and kinematics of the Spili Fault, Crete, Greece. <i>Journal of Structural Geology</i> , <b>2014</b> , 66, 298-308	3	18
90	Using GPS for monitoring tall-building response to wind loading: filtering of abrupt changes and low-frequency noise, variography and spectral analysis of displacements. <i>GPS Solutions</i> , <b>2007</b> , 11, 85-95	4.4	18
89	Geostatistical analysis of precipitation in the island of Crete (Greece) based on a sparse monitoring network. <i>Environmental Monitoring and Assessment</i> , <b>2019</b> , 191, 353	3.1	17
88	Covariance functions motivated by spatial random field models with local interactions. <i>Stochastic Environmental Research and Risk Assessment</i> , <b>2015</b> , 29, 739-754	3.5	15
87	Finite-size effects on return interval distributions for weakest-link-scaling systems. <i>Physical Review E</i> , <b>2014</b> , 89, 052142	2.4	15
86	The Estatistics approach to epidemiology. Scientific Reports, 2020, 10, 19949	4.9	15
85	Estimation of the uncertainty of hydrologic predictions in a karstic Mediterranean watershed. <i>Science of the Total Environment</i> , <b>2020</b> , 717, 137131	10.2	13
84	Environmental time series interpolation based on Spartan random processes. <i>Atmospheric Environment</i> , <b>2008</b> , 42, 7669-7678	5.3	13
83	Permissibility of fractal exponents and models of band-limited two-point functions for fGn and fBm random fields. <i>Stochastic Environmental Research and Risk Assessment</i> , <b>2003</b> , 17, 191-216	3.5	13
82	Stochastic indicator analysis of contaminated sites. <i>Journal of Applied Probability</i> , <b>1997</b> , 34, 988-1008	0.8	12
81	Stochastic Indicators for Waste Site Characterization. <i>Water Resources Research</i> , <b>1996</b> , 32, 2563-2578	5.4	12
80	Characterization of atmospheric pollution by means of stochastic indicator parameters. <i>Atmospheric Environment</i> , <b>1996</b> , 30, 3811-3823	5.3	12
79	Operational Soil Moisture from ASCAT in Support of Water Resources Management. <i>Remote Sensing</i> , <b>2019</b> , 11, 579	5	11

78	Approximate methods for explicit calculations of non-Gaussian moments. <i>Stochastic Environmental Research and Risk Assessment</i> , <b>2006</b> , 20, 278-290	3.5	11
77	Reconstruction of missing data in remote sensing images using conditional stochastic optimization with global geometric constraints. <i>Stochastic Environmental Research and Risk Assessment</i> , <b>2013</b> , 27, 785	5 <i>-</i> 856	10
76	Strength statistics and the distribution of earthquake interevent times. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2013</b> , 392, 485-496	3.3	10
75	Patterns of tectonic fault interactions captured through geostatistical analysis of microearthquakes. <i>Journal of Geophysical Research</i> , <b>2011</b> , 116,		10
74	The Method of Normalized Correlations: A Fast Parameter Estimation Method for Random Processes and Isotropic Random Fields That Focuses on Short-Range Dependence. <i>Technometrics</i> , <b>2009</b> , 51, 173-185	1.4	10
73	Weakest-Link Scaling and Extreme Events in Finite-Sized Systems. <i>Entropy</i> , <b>2015</b> , 17, 1103-1122	2.8	9
72	Multivariate Spartan spatial random field models. <i>Probabilistic Engineering Mechanics</i> , <b>2014</b> , 37, 84-92	2.6	9
71	Introduction to this special issue on geoinformatics for environmental surveillance. <i>Computers and Geosciences</i> , <b>2011</b> , 37, 277-279	4.5	9
70	A multigrid method for the estimation of geometric anisotropy in environmental data from sensor networks. <i>Computers and Geosciences</i> , <b>2011</b> , 37, 320-330	4.5	9
69	Diagrammatic theory of effective hydraulic conductivity. <i>Stochastic Hydrology &amp; Hydraulics</i> , <b>1997</b> , 11, 369-395		9
68	An analysis of hydraulic conductivity upscaling. <i>Nonlinear Analysis: Theory, Methods &amp; Applications</i> , <b>1997</b> , 30, 4979-4984	1.3	9
67	A semi-analytical equation for the Young modulus of isotropic ceramic materials. <i>Journal of the European Ceramic Society</i> , <b>2008</b> , 28, 1111-1120	6	9
66	Disrupted Information Flow in Resting-State in Adolescents With Sports Related Concussion. <i>Frontiers in Human Neuroscience</i> , <b>2019</b> , 13, 419	3.3	9
65	Classification of missing values in spatial data using spin models. <i>Physical Review E</i> , <b>2009</b> , 80, 011116	2.4	8
64	Multiphase flow in heterogeneous porous media from a stochastic differential geometry viewpoint. <i>Water Resources Research</i> , <b>1998</b> , 34, 93-102	5.4	8
63	Exploring the use of Unmanned Aerial Vehicles (UAVs) with the simplified EriangleItechnique for soil water content and evaporative fraction retrievals in a Mediterranean setting. <i>International Journal of Remote Sensing</i> , <b>2021</b> , 42, 1623-1642	3.1	8
62	Stochastic local interaction model with sparse precision matrix for spacelime interpolation. <i>Spatial Statistics</i> , <b>2020</b> , 40, 100403	2.2	7
61	Karhunen∐o∏e expansion of Spartan spatial random fields. <i>Probabilistic Engineering Mechanics</i> , <b>2016</b> , 43, 132-147	2.6	7

## (2016-2013)

60	A Directional Gradient-Curvature method for gap filling of gridded environmental spatial data with potentially anisotropic correlations. <i>Atmospheric Environment</i> , <b>2013</b> , 77, 901-909	5.3	7
59	Evaporative Fluxes and Surface Soil Moisture Retrievals in a Mediterranean Setting from Sentinel-3 and the Bimplified Triangle[]Remote Sensing, <b>2020</b> , 12, 3192	5	7
58	Spacelime covariance functions based on linear response theory and the turning bands method. <i>Spatial Statistics</i> , <b>2017</b> , 22, 321-337	2.2	6
57	Stochastic Radon operators in porous media hydrodynamics. <i>Quarterly of Applied Mathematics</i> , <b>1997</b> , 55, 89-112	0.7	6
56	Spatial random field models inspired from statistical physics with applications in the geosciences. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2006</b> , 365, 211-216	3.3	6
55	Spatial modeling of lignite energy reserves for exploitation planning and quality control. <i>Energy</i> , <b>2015</b> , 93, 1906-1917	7.9	5
54	Estimating tree abundance from remotely sensed imagery in semi-arid and arid environments: bringing small trees to the light. <i>Stochastic Environmental Research and Risk Assessment</i> , <b>2009</b> , 23, 111-1	₹8 <sup>5</sup>	5
53	Spartan random processes in time series modeling. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2008</b> , 387, 3995-4001	3.3	5
52	A discrete nonlinear mass transfer equation with applications in solid-state sintering of ceramic materials. <i>European Physical Journal B</i> , <b>2006</b> , 50, 83-87	1.2	5
51	Non-parametric approximations for anisotropy estimation in two-dimensional differentiable Gaussian random fields. <i>Stochastic Environmental Research and Risk Assessment</i> , <b>2017</b> , 31, 1853-1870	3.5	4
50	Detection of small-scale rockfall incidents using their seismic signature 2015,		4
49	The importance of microearthquakes in crustal extension of an active rift: A case study from New Zealand. <i>Journal of Geophysical Research: Solid Earth</i> , <b>2013</b> , 118, 1556-1568	3.6	4
48	Stochastic space transforms in subsurface hydrology (Part 2: Generalized spectral decompositions and plancherel representations. <i>Stochastic Hydrology &amp; Hydraulics</i> , <b>1994</b> , 8, 117-138		4
47	Spatiotemporal geostatistical analysis of precipitation combining ground and satellite observations <b>2021</b> , 52, 804-820		4
46	Recurrent neural network-based acute concussion classifier using raw resting state EEG data. <i>Scientific Reports</i> , <b>2021</b> , 11, 12353	4.9	4
45	Stochastic Modeling of Aquifer Level Temporal Fluctuations Based on the Conceptual Basis of the Soil-Water Balance Equation. <i>Soil Science</i> , <b>2016</b> , 181, 224-231	0.9	4
44	Gibbs Markov random fields with continuous values based on the modified planar rotator model. <i>Physical Review E</i> , <b>2018</b> , 98,	2.4	4
43	Kinetic model of mass exchange with dynamic Arrhenius transition rates. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2016</b> , 444, 95-109	3.3	3

42	Nonlinear Kinetics on Lattices Based on the Kinetic Interaction Principle. <i>Entropy</i> , <b>2018</b> , 20,	2.8	3
41	Multilevel discretized random field models with SpinDorrelations for the simulation of environmental spatial data. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , <b>2009</b> , 2009, P02023	1.9	3
40	Stochastic Flowpath Analysis of Multiphase Flow in Random Porous Media. <i>SIAM Journal on Applied Mathematics</i> , <b>2000</b> , 60, 1520-1542	1.8	3
39	Resting-state directed brain connectivity patterns in adolescents from source-reconstructed EEG signals based on information flow rate		3
38	Space-time models based on random fields with local interactions. <i>International Journal of Modern Physics B</i> , <b>2016</b> , 30, 1541007	1.1	3
37	Numerical Implementation of a Space-Transformation Approach for Solving the Three-Dimensional Flow Equation. <i>SIAM Journal of Scientific Computing</i> , <b>1998</b> , 20, 619-647	2.6	2
36	SIMULATIONS OF SPARTAN RANDOM FIELDS 2003,		2
35	Geometric Properties of Random Fields. Advances in Geographic Information Science, 2020, 173-244	0.3	2
34	GPU-Accelerated Simulation of Massive Spatial Data Based on the Modified Planar Rotator Model. <i>Mathematical Geosciences</i> , <b>2020</b> , 52, 123-143	2.5	2
33	Non-parametric Kernel-Based Estimation and Simulation of Precipitation Amount. <i>Journal of Hydrology</i> , <b>2022</b> , 127988	6	2
32	Effective probability distribution approximation for the reconstruction of missing data. <i>Stochastic Environmental Research and Risk Assessment</i> , <b>2020</b> , 34, 235-249	3.5	1
31	Short-range correlations in modified planar rotator model. <i>Journal of Physics: Conference Series</i> , <b>2015</b> , 633, 012105	0.3	1
30	Gaussian Random Fields. Advances in Geographic Information Science, 2020, 245-307	0.3	1
29	Disrupted information flow in resting-state in adolescents with sports related concussion		1
28	Retrievals of key biophysical parameters at mesoscale from the Ts/VI scatterplot domain. <i>Geocarto International</i> , <b>2020</b> , 1-21	2.7	1
27	Stochastic Local Interaction Model: An Alternative to Kriging for Massive Datasets. <i>Mathematical Geosciences</i> ,1	2.5	1
26	Geo-informatics for optimal design of desalination plants using renewable energy sources: the DES2iRES platform paradigm. <i>Arabian Journal of Geosciences</i> , <b>2020</b> , 13, 1	1.8	O
25	Numerical simulation of a coupled nonlinear model for grain coarsening and coalescence. Simulation Modelling Practice and Theory, <b>2016</b> , 62, 102-116	3.9	O

### (2020-2021)

24	Deep Learning Recurrent Neural Network for Concussion Classification in Adolescents Using Raw Electroencephalography Signals: Toward a Minimal Number of Sensors <i>Frontiers in Human Neuroscience</i> , <b>2021</b> , 15, 734501	3.3	O
23	Efficient and Scalable Approach to Equilibrium Conditional Simulation of Gibbs Markov Random Fields. <i>EPJ Web of Conferences</i> , <b>2020</b> , 226, 02023	0.3	О
22	Numerical Investigation of Grain Coarsening and Coalescence Model. <i>Journal of Physics: Conference Series</i> , <b>2015</b> , 574, 012160	0.3	
21	Spartan gaussian random fields for geostatistical applications: Non-constrained simulations on square lattices and irregular grids. <i>Journal of Computational Methods in Sciences and Engineering</i> , <b>2006</b> , 5, 149-164	0.3	
20	Very Fast Simulated Reannealing. Encyclopedia of Earth Sciences Series, 2022, 1-6	О	
19	More on Estimation. Advances in Geographic Information Science, 2020, 551-589	0.3	
18	More on Spatial Prediction. Advances in Geographic Information Science, 2020, 485-515	0.3	
17	Trend Models and Estimation. Advances in Geographic Information Science, 2020, 41-81	0.3	
16	Lattice Representations of Spartan Random Fields. <i>Advances in Geographic Information Science</i> , <b>2020</b> , 365-392	0.3	
15	Random Fields Based on Local Interactions. Advances in Geographic Information Science, 2020, 309-363	0.3	
14	Basic Notions of Random Fields. Advances in Geographic Information Science, 2020, 83-125	0.3	
13	Spartan Random Fields: Smoothness Properties of Gaussian Densities and Definition of Certain Non-Gaussian Models <b>2009</b> , 17-27		
12	Maximum Entropy Method. Encyclopedia of Earth Sciences Series, 2021, 1-4	О	
11	Geo-Informatics for Optimal Design of Desalination Plants Using Renewable Energy Sources: The DESiRES Platform Paradigm. <i>Advances in Science, Technology and Innovation</i> , <b>2019</b> , 53-55	0.3	
10	Mathematical Modelling of Formation and Dissociation of Gas Hydrate in the Sea Floor Sediment <b>2019</b> , 402-405		
9	Beyond the Gaussian Models. Advances in Geographic Information Science, 2020, 591-643	0.3	
8	Basic Concepts and Methods of Estimation. Advances in Geographic Information Science, 2020, 517-550	0.3	
7	Spatial Prediction Fundamentals. Advances in Geographic Information Science, 2020, 433-484	0.3	

6 Binary Random Fields. Advances in Geographic Information Science, 2020, 645-688

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- 5 Additional Topics of Random Field Modeling. *Advances in Geographic Information Science*, **2020**, 127-171 0.3
- Spartan Random Fields and Langevin Equations. Advances in Geographic Information Science, 2020, 393-482,
- 3 Simulations. Advances in Geographic Information Science, **2020**, 689-784

0.3

- 2 Modelling key parameters characterising land surface using the SimSphere SVAT model **2021**, 409-442
- A preliminary evaluation of the limplified triangle with Sentinel-3 images for mapping surface soil moisture and evaporative fluxes: results obtained in a Spanish savannah environment **2021**, 209-223