Emilio Porcu

List of Publications by Year
in descending order

93 papers	1,711 citations	304743 22 h-index	361022 35 g-index
94 all docs	94 docs citations	94 times ranked	571 citing authors

#	Article	IF	Citations
1	Spatio-Temporal Covariance and Cross-Covariance Functions of the Great Circle Distance on a Sphere. Journal of the American Statistical Association, 2016, 111, 888-898.	3.1	115
2	Estimating Space and Space-Time Covariance Functions for Large Data Sets: A Weighted Composite Likelihood Approach. Journal of the American Statistical Association, 2012, 107, 268-280.	3.1	113
3	Nonseparable stationary anisotropic spaceâ€"time covariance functions. Stochastic Environmental Research and Risk Assessment, 2006, 21, 113-122.	4.0	78
4	From Schoenberg Coefficients to Schoenberg Functions. Constructive Approximation, 2017, 45, 217-241.	3.0	61
5	Modeling Temporally Evolving and Spatially Globally Dependent Data. International Statistical Review, 2018, 86, 344-377.	1.9	61
6	New classes of covariance and spectral density functions for spatio-temporal modelling. Stochastic Environmental Research and Risk Assessment, 2008, 22, 65-79.	4.0	57
7	Quasi-arithmetic means of covariance functions with potential applications to spaceâ€"time data. Journal of Multivariate Analysis, 2009, 100, 1830-1844.	1.0	52
8	Estimation and prediction using generalized Wendland covariance functions under fixed domain asymptotics. Annals of Statistics, 2019, 47, .	2.6	48
9	30â€‰Years of spaceâ€"time covariance functions. Wiley Interdisciplinary Reviews: Computational Statistics, 2021, 13, e1512.	3.9	47
10	Classes of compactly supported covariance functions for multivariate random fields. Stochastic Environmental Research and Risk Assessment, 2015, 29, 1249-1263.	4.0	45
11	Modelling spatio-temporal data: A new variogram and covariance structure proposal. Statistics and Probability Letters, 2007, 77, 83-89.	0.7	42
12	Characterization theorems for some classes of covariance functions associated to vector valued random fields. Journal of Multivariate Analysis, 2011, 102, 1293-1301.	1.0	38
13	Radial basis functions with compact support for multivariate geostatistics. Stochastic Environmental Research and Risk Assessment, 2013, 27, 909-922.	4.0	37
14	On potentially negative space time covariances obtained as sum of products of marginal ones. Annals of the Institute of Statistical Mathematics, 2008, 60, 865-882.	0.8	35
15	Dimension walks and Schoenberg spectral measures. Proceedings of the American Mathematical Society, 2014, 142, 1813-1824.	0.8	35
16	Characterization theorems for the Gneiting class of spaceâ€"time covariances. Bernoulli, 2011, 17, .	1.3	32
17	From Schoenberg to Pickâ€"Nevanlinna: Toward a complete picture of the variogram class. Bernoulli, 2011, 17, .	1.3	29
18	A flexible class of non-separable cross-covariance functions for multivariate spaceâ€"time data. Spatial Statistics, 2016, 18, 125-146.	1.9	29

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19	A note on decoupling of local and global behaviours for the Dagum Random Field. Probabilistic Engineering Mechanics, 2007, 22, 320-329.	2.7	28
20	Recent advances to model anisotropic spaceâ€"time data. Statistical Methods and Applications, 2008, 17, 209-223.	1.2	27
21	Covariance functions for multivariate Gaussian fields evolving temporally over planet earth. Stochastic Environmental Research and Risk Assessment, 2019, 33, 1593-1608.	4.0	26
22	Covariance functions that are stationary or nonstationary in space and stationary in time. Statistica Neerlandica, 2007, 61, 358-382.	1.6	25
23	Determinantal point process models on the sphere. Bernoulli, 2018, 24, .	1.3	23
24	On the Flexibility of Multivariate Covariance Models: Comment on the Paper by Genton and Kleiber. Statistical Science, 2015, 30, .	2.8	20
25	Simulating isotropic vector-valued Gaussian random fields on the sphere through finite harmonics approximations. Stochastic Environmental Research and Risk Assessment, 2019, 33, 1659-1667.	4.0	20
26	Mixture-based modeling for spaceâ€"time data. Environmetrics, 2007, 18, 285-302.	1.4	19
27	Bernoulliâ€"Euler beams with random field properties under random field loads: fractal and Hurst effects. Archive of Applied Mechanics, 2014, 84, 1595-1626.	2.2	19
28	Nonstationary matrix covariances: compact support, long range dependence and quasi-arithmetic constructions. Stochastic Environmental Research and Risk Assessment, 2015, 29, 193-204.	4.0	19
29	Covariance tapering for multivariate Gaussian random fields estimation. Statistical Methods and Applications, 2016, 25, 21-37.	1.2	19
30	La descente et la montÃ©e Ã©tendues: the spatially d-anisotropic and the spatio-temporal case. Stochastic Environmental Research and Risk Assessment, 2007, 21, 683-693.	4.0	18
31	Regularity properties and simulations of Gaussian random fields on the sphere cross time. Electronic Journal of Statistics, 2018, 12, .	0.7	17
32	Schoenbergâ€™s theorem for real and complex Hilbert spheres revisited. Journal of Approximation Theory, 2018, 228, 58-78.	0.8	16
33	Advancing Spaceâ€Time Simulation of Random Fields: From Storms to Cyclones and Beyond. Water Resources Research, 2021, 57, e2020WR029466.	4.2	16
34	A kernel-based method for nonparametric estimation of variograms. Statistica Neerlandica, 2007, 61, 173-197.	1.6	15
35	Admissible nested covariance models over spheres cross time. Stochastic Environmental Research and Risk Assessment, 2018, 32, 3053-3066.	4.0	14
36	Axially symmetric models for global data: A journey between geostatistics and stochastic generators. Environmetrics, 2019, 30, e2555.	1.4	14

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37	Detecting Features in Spatial Point Processes with Clutter via Local Indicators of Spatial Association. Journal of Computational and Graphical Statistics, 2007, 16, 968-990.	1.7	13
38	Elastic Rods and Shear Beams with Random Field Properties under Random Field Loads: Fractal and Hurst Effects. Journal of Engineering Mechanics - ASCE, 2015, 141, .	2.9	13
39	Harmonic oscillator driven by random processes having fractal and Hurst effects. Acta Mechanica, 2015, 226, 3653-3672.	2.1	13
40	The dimple problem related to spaceâ€"time modeling under the Lagrangian framework. Journal of Multivariate Analysis, 2017, 162, 110-121.	1.0	13
41	Nonseparable covariance models on circles cross time: A study of Mexico City ozone. Environmetrics, 2019, 30, e2558.	1.4	13
42	Unifying compactly supported and MatÃ©rn covariance functions in spatial statistics. Journal of Multivariate Analysis, 2022, 189, 104949.	1.0	13
43	Multivariate Spartan spatial random field models. Probabilistic Engineering Mechanics, 2014, 37, 84-92.	2.7	12
44	Multivariate and multiradial Schoenberg measures with their dimension walks. Journal of Multivariate Analysis, 2015, 133, 251-265.	1.0	12
45	Estimating covariance functions of multivariate skew-Gaussian random fields on the sphere. Spatial Statistics, 2017, 22, 388-402.	1.9	12
46	Strictly positive definite multivariate covariance functions on spheres. Journal of Multivariate Analysis, 2018, 166, 150-159.	1.0	12
47	A semiparametric class of axially symmetric random fields on the sphere. Stochastic Environmental Research and Risk Assessment, 2019, 33, 1863-1874.	4.0	12
48	On streamwise velocity spectra models with fractal and long-memory effects. Physics of Fluids, 2021, 33, 035116.	4.0	12
49	Regularity, continuity and approximation of isotropic Gaussian random fields on compact two-point homogeneous spaces. Stochastic Processes and Their Applications, 2020, 130, 4873-4891.	0.9	12
50	Weighted composite likelihood-based tests for space-time separability of covariance functions. Statistics and Computing, 2010, 20, 283-293.	1.5	11
51	On Some Local, Global and Regularity Behaviour of Some Classes of Covariance Functions. Lecture Notes in Statistics, 2012, , 221-238.	0.2	11
52	Composite Likelihood Inference for Multivariate Gaussian Random Fields. Journal of Agricultural, Biological, and Environmental Statistics, 2016, 21, 448-469.	1.4	11
53	Lamb's problem on random mass density fields with fractal and Hurst effects. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2016, 472, 20160638.	2.1	11
54	Equivalence and orthogonality of Gaussian measures on spheres. Journal of Multivariate Analysis, 2018, 167, 306-318.	1.0	11

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55	Fitting negative spatial covariances to geothermal field temperatures in Nea Kessani (Greece). Environmetrics, 2007, 18, 759-773.	1.4	10
56	Fast and Exact Simulation of Complex-Valued Stationary Gaussian Processes Through Embedding Circulant Matrix. Journal of Computational and Graphical Statistics, 2018, 27, 278-290.	1.7	10
57	A turning bands method for simulating isotropic Gaussian random fields on the sphere. Statistics and Probability Letters, 2019, 144, 9-15.	0.7	10
58	Features detection in spatial point processes via multivariate techniques. Environmetrics, 2010, 21, 400-414.	1.4	9
59	Fast and exact simulation of Gaussian random fields defined on the sphere cross time. Statistics and Computing, 2020, 30, 187-194.	1.5	9
60	Mortality risk assessment through stationary spaceâ€“time covariance functions. Stochastic Environmental Research and Risk Assessment, 2010, 24, 519-526.	4.0	8
61	Responses of first-order dynamical systems to MatÃ©rn, Cauchy, and Dagum excitations. Mathematics and Mechanics of Complex Systems, 2015, 3, 27-41.	0.9	8
62	Contours and dimple for the Gneiting class of space-time correlation functions. Biometrika, 2017, 104, 995-1001.	2.4	8
63	Families of covariance functions for bivariate random fields on spheres. Spatial Statistics, 2020, 40, 100448.	1.9	8
64	On the non-reducibility of non-stationary correlation functions to stationary ones under a class of mean-operator transformations. Stochastic Environmental Research and Risk Assessment, 2010, 24, 599-610.	4.0	7
65	Asymmetric matrix-valued covariances for multivariate random fields on spheres. Journal of Statistical Computation and Simulation, 2018, 88, 1850-1862.	1.2	7
66	Covariance functions on spheres cross time: Beyond spatial isotropy and temporal stationarity. Statistics and Probability Letters, 2019, 151, 1-7.	0.7	7
67	Regularity and approximation of Gaussian random fields evolving temporally over compact two-point homogeneous spaces. Test, 2021, 30, 836-860.	1.1	7
68	Gneiting Class, Semi-Metric Spaces and Isometric Embeddings. Constructive Mathematical Analysis, 2020, 3, 85-95.	0.7	7
69	Zastavnyi operators and positive definite radial functions. Statistics and Probability Letters, 2020, 157, 108620.	0.7	6
70	Likelihood-based inference for multivariate space-time wrapped-Gaussian fields. Journal of Statistical Computation and Simulation, 2016, 86, 2583-2597.	1.2	5
71	Schoenberg coefficients and curvature at the origin of continuous isotropic positive definite kernels on spheres. Statistics and Probability Letters, 2020, 156, 108618.	0.7	5
72	Strict positive definiteness under axial symmetry on the sphere. Stochastic Environmental Research and Risk Assessment, 2020, 34, 723-732.	4.0	5

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73	The F-family of covariance functions: A MatÃ©rn analogue for modeling random fields on spheres. Spatial Statistics, 2021, 43, 100512.	1.9	5
74	Elastodynamic problem on tensor random fields with fractal and Hurst effects. Meccanica, 2022, 57, 957-970.	2.0	5
75	Spaceâ€time autoregressive estimation and prediction with missing data based on Kalman filtering. Environmetrics, 2020, 31, e2627.	1.4	5
76	Reduction problems and deformation approaches to nonstationary covariance functions over spheres. Electronic Journal of Statistics, 2020, 14, .	0.7	5
77	The Shkarofskyâ€Gneiting class of covariance models for bivariate Gaussian random fields. Stat, 2018, 7, e207.	0.4	4
78	Geostatistical Analysis Through Spectral Techniques: Some Words of Caution. Communications in Statistics Part B: Simulation and Computation, 2007, 36, 1035-1051.	1.2	3
79	Random fields on the hypertorus: Covariance modeling and applications. Environmetrics, 0, , e2701.	1.4	3
80	Parametric nonstationary covariance functions on spheres. Stat, 2022, 11, .	0.4	3
81	Z-estimators and auxiliary information for strong mixing processes. Stochastic Environmental Research and Risk Assessment, 2019, 33, 1-11.	4.0	2
82	Nonstationary spaceâ€“time covariance functions induced by dynamical systems. Scandinavian Journal of Statistics, 0, , .	1.4	2
83	Nonparametric Bayesian Modeling and Estimation of Spatial Correlation Functions for Global Data. Bayesian Analysis, 2021, 16, .	3.0	2
84	Stein hypothesis and screening effect for covariances with compact support. Electronic Journal of Statistics, 2020, 14, .	0.7	2
85	Criteria and characterizations for spatially isotropic and temporally symmetric matrix-valued covariance functions. Computational and Applied Mathematics, 2022, 41, .	2.2	2
86	Series expansions among weighted Lebesgue function spaces and applications to positive definite functions on compact two-point homogeneous spaces. Journal of Mathematical Analysis and Applications, 2022, 516, 126487.	1.0	2
87	Spatio-temporal stochastic modelling: environmental and health processes. Environmetrics, 2010, 21, 221-223.	1.4	1
88	Discussion on A highâ€resolution bilevel skewâ€t stochastic generator for assessing Saudi Arabia's wind energy resources. Environmetrics, 2020, 31, e2651.	1.4	1
89	Multivariate isotropic random fields on spheres: Nonparametric Bayesian modeling and Lp fast approximations. Electronic Journal of Statistics, 2021, 15, .	0.7	1
90	Random Fields with Fractal and Hurst Effects in Mechanics. , 2018, , 1-9.		1

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91	A Note on Continuous Spatial-Temporal Dynamics of Stochastic Processes. Communications in Statistics - Theory and Methods, 2010, 39, 3472-3484.	1.0	0
92	A stochastic fractional Laplace equation driven by colored noise on bounded domain, and its covariance functional. Stochastic Models, 0, , 1-25.	0.5	0
93	Nonparametric Bayesian modelling of longitudinally integrated covariance functions on spheres. Computational Statistics and Data Analysis, 2022, , 107555.	1.2	0