

Christopher K Wikle

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2708522/publications.pdf>

Version: 2024-02-01

97
papers

4,146
citations

136950

32
h-index

123424

61
g-index

102
all docs

102
docs citations

102
times ranked

3248
citing authors

#	ARTICLE	IF	CITATIONS
1	Hierarchical Bayesian space-time models. <i>Environmental and Ecological Statistics</i> , 1998, 5, 117-154.	3.5	323
2	HIERARCHICAL BAYESIAN MODELS FOR PREDICTING THE SPREAD OF ECOLOGICAL PROCESSES. <i>Ecology</i> , 2003, 84, 1382-1394.	3.2	322
3	A Bayesian tutorial for data assimilation. <i>Physica D: Nonlinear Phenomena</i> , 2007, 230, 1-16.	2.8	296
4	Spatiotemporal Hierarchical Bayesian Modeling Tropical Ocean Surface Winds. <i>Journal of the American Statistical Association</i> , 2001, 96, 382-397.	3.1	283
5	Hierarchical Models in Environmental Science. <i>International Statistical Review</i> , 2003, 71, 181-199.	1.9	199
6	Long-Lead Prediction of Pacific SSTs via Bayesian Dynamic Modeling. <i>Journal of Climate</i> , 2000, 13, 3953-3968.	3.2	161
7	A general science-based framework for dynamical spatio-temporal models. <i>Test</i> , 2010, 19, 417-451.	1.1	147
8	Spatio-Temporal Statistics with R. , 0, , .		132
9	A hierarchical Bayesian non-linear spatio-temporal model for the spread of invasive species with application to the Eurasian Collared-Dove. <i>Environmental and Ecological Statistics</i> , 2008, 15, 59-70.	3.5	125
10	Understanding the Ensemble Kalman Filter. <i>American Statistician</i> , 2016, 70, 350-357.	1.6	117
11	Hierarchical Spatiotemporal Matrix Models for Characterizing Invasions. <i>Biometrics</i> , 2007, 63, 558-567.	1.4	78
12	A Kernel-Based Spatio-Temporal Dynamical Model for Nowcasting Weather Radar Reflectivities. <i>Journal of the American Statistical Association</i> , 2005, 100, 1133-1144.	3.1	77
13	Combining Information Across Spatial Scales. <i>Technometrics</i> , 2005, 47, 80-91.	1.9	76
14	A kernel-based spectral model for non-Gaussian spatio-temporal processes. <i>Statistical Modelling</i> , 2002, 2, 299-314.	1.1	74
15	Population Influences on Tornado Reports in the United States. <i>Weather and Forecasting</i> , 2007, 22, 571-579.	1.4	72
16	Low-Rank Representations for Spatial Processes. <i>Chapman & Hall/CRC Interdisciplinary Statistics Series</i> , 2010, , 107-118.	0.4	69
17	Bayesian hierarchical modeling of air-sea interaction. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	68
18	Efficient statistical mapping of avian count data. <i>Environmental and Ecological Statistics</i> , 2005, 12, 225-243.	3.5	67

#	ARTICLE	IF	CITATIONS
19	Statistical Agent-Based Models for Discrete Spatio-Temporal Systems. Journal of the American Statistical Association, 2010, 105, 236-248.	3.1	65
20	Bayesian Recurrent Neural Network Models for Forecasting and Quantifying Uncertainty in Spatial-Temporal Data. Entropy, 2019, 21, 184.	2.2	64
21	Title is missing!. Landscape Ecology, 2003, 18, 487-502.	4.2	62
22	Climatological analysis of tornado report counts using a hierarchical Bayesian spatiotemporal model. Journal of Geophysical Research, 2003, 108, n/a-n/a.	3.3	54
23	Multivariate spatio-temporal models for high-dimensional areal data with application to Longitudinal Employer-Household Dynamics. Annals of Applied Statistics, 2015, 9, .	1.1	54
24	Deep echo state networks with uncertainty quantification for spatio-temporal forecasting. Environmetrics, 2019, 30, e2553.	1.4	48
25	Spatial Fayâ€“Herriot models for small area estimation with functional covariates. Spatial Statistics, 2014, 10, 27-42.	1.9	46
26	Estimation of parameterized spatio-temporal dynamic models. Journal of Statistical Planning and Inference, 2007, 137, 567-588.	0.6	43
27	Assessing First-Order Emulator Inference for Physical Parameters in Nonlinear Mechanistic Models. Journal of Agricultural, Biological, and Environmental Statistics, 2011, 16, 475-494.	1.4	42
28	An ensemble quadratic echo state network for non-linear spatio-temporal forecasting. Stat, 2017, 6, 315-330.	0.4	42
29	A Bayesian Adaptive Ensemble Kalman Filter for Sequential State and Parameter Estimation. Monthly Weather Review, 2018, 146, 373-386.	1.4	42
30	Modern perspectives on statistics for spatio-temporal data. Wiley Interdisciplinary Reviews: Computational Statistics, 2015, 7, 86-98.	3.9	41
31	Bayesian Spatial Change of Support for Count-Valued Survey Data With Application to the American Community Survey. Journal of the American Statistical Association, 2016, 111, 472-487.	3.1	41
32	Dynamic design of ecological monitoring networks for non-Gaussian spatio-temporal data. Environmetrics, 2005, 16, 507-522.	1.4	40
33	Ensemble Kalman Methods for High-Dimensional Hierarchical Dynamic Space-Time Models. Journal of the American Statistical Association, 2020, 115, 866-885.	3.1	37
34	Ocean ensemble forecasting. Part I: Ensemble Mediterranean winds from a Bayesian hierarchical model. Quarterly Journal of the Royal Meteorological Society, 2011, 137, 858-878.	2.7	36
35	A Bayesian Quantitative Precipitation Nowcast Scheme. Weather and Forecasting, 2005, 20, 264-275.	1.4	35
36	Polynomial nonlinear spatio-temporal integro-difference equation models. Journal of Time Series Analysis, 2011, 32, 339-350.	1.2	35

#	ARTICLE	IF	CITATIONS
37	Zero-Inflated Modeling of Fish Catch per Unit Area Resulting from Multiple Gears: Application to Channel Catfish and Shovelnose Sturgeon in the Missouri River. <i>North American Journal of Fisheries Management</i> , 2008, 28, 1044-1058.	1.0	33
38	Hierarchical Bayesian Approach to Boundary Value Problems with Stochastic Boundary Conditions. <i>Monthly Weather Review</i> , 2003, 131, 1051-1062.	1.4	31
39	Small Area Estimation via Multivariate Fay-Herriot Models with Latent Spatial Dependence. <i>Australian and New Zealand Journal of Statistics</i> , 2015, 57, 15-29.	0.9	28
40	Hierarchical Bayesian Spatio-Temporal Conway-Maxwell Poisson Models with Dynamic Dispersion. <i>Journal of Agricultural, Biological, and Environmental Statistics</i> , 2013, 18, 335-356.	1.4	25
41	Deep integro-difference equation models for spatio-temporal forecasting. <i>Spatial Statistics</i> , 2020, 37, 100408.	1.9	24
42	A model-based approach for analog spatio-temporal dynamic forecasting. <i>Environmetrics</i> , 2016, 27, 70-82.	1.4	23
43	Bayesian Hierarchical Models With Conjugate Full-Conditional Distributions for Dependent Data From the Natural Exponential Family. <i>Journal of the American Statistical Association</i> , 2020, 115, 2037-2052.	3.1	23
44	Mapping pre-European settlement vegetation at fine resolutions using a hierarchical Bayesian model and GIS. <i>Plant Ecology</i> , 2007, 191, 85-94.	1.6	21
45	Shifts in the spatio-temporal growth dynamics of shortleaf pine. <i>Environmental and Ecological Statistics</i> , 2007, 14, 207-227.	3.5	20
46	Ocean ensemble forecasting. Part II: Mediterranean Forecast System response. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2011, 137, 879-893.	2.7	20
47	Bayesian Irt Models Incorporating General and Specific Abilities. <i>Behaviormetrika</i> , 2009, 36, 27-48.	1.3	19
48	Modeling Complex Phenotypes: Generalized Linear Models Using Spectrogram Predictors of Animal Communication Signals. <i>Biometrics</i> , 2010, 66, 914-924.	1.4	19
49	Modern Statistical Methods in Oceanography: A Hierarchical Perspective. <i>Statistical Science</i> , 2013, 28, .	2.8	19
50	Ecological Prediction With Nonlinear Multivariate Time-Frequency Functional Data Models. <i>Journal of Agricultural, Biological, and Environmental Statistics</i> , 2013, 18, 450-474.	1.4	16
51	Spatio-temporal change of support with application to American Community Survey multi-year period estimates. <i>Stat</i> , 2015, 4, 255-270.	0.4	16
52	Semiparametric bivariate zero-inflated Poisson models with application to studies of abundance for multiple species. <i>Environmetrics</i> , 2012, 23, 183-196.	1.4	14
53	Spatio-temporal assimilation of modelled catchment loads with monitoring data in the Great Barrier Reef. <i>Annals of Applied Statistics</i> , 2016, 10, .	1.1	14
54	Bayesian Lattice Filters for Time-Varying Autoregression and Time-Frequency Analysis. <i>Bayesian Analysis</i> , 2016, 11, .	3.0	14

#	ARTICLE	IF	CITATIONS
55	A point process model for tornado reportâ€™climatology. Stat, 2013, 2, 1-8.	0.4	13
56	Visualizing uncertainty in areal data with bivariate choropleth maps, map pixelation and glyph rotation. Stat, 2017, 6, 292-302.	0.4	13
57	Comparison of Deep Neural Networks and Deep Hierarchical Models for Spatio-Temporal Data. Journal of Agricultural, Biological, and Environmental Statistics, 2019, 24, 175-203.	1.4	13
58	Statistical Implementations of Agentâ€™Based Demographic Models. International Statistical Review, 2020, 88, 441-461.	1.9	13
59	Interpolating fields of carbon monoxide data using a hybrid statistical-physical model. Annals of Applied Statistics, 2008, 2, .	1.1	12
60	Winds from a Bayesian Hierarchical Model: Computation for Atmosphere-Ocean Research. Journal of Computational and Graphical Statistics, 2003, 12, 781-807.	1.7	11
61	Bayesian Estimation of Stochastic Parameterizations in a Numerical Weather Forecasting Model. Monthly Weather Review, 2007, 135, 4045-4059.	1.4	11
62	An approach for identifying and predicting economic recessions in realâ€™time using timeâ€™frequency functional models. Applied Stochastic Models in Business and Industry, 2012, 28, 485-499.	1.5	11
63	Spatioâ€™temporal models for big multinomial data using the conditional multivariate logitâ€™beta distribution. Journal of Time Series Analysis, 2019, 40, 363-382.	1.2	11
64	SPACE-TIME MODELLING OF SYDNEY HARBOUR WINDS. Australian and New Zealand Journal of Statistics, 2005, 47, 3-17.	0.9	10
65	Hierarchical Nonlinear Spatio-temporal Agent-Based Models for Collective Animal Movement. Journal of Agricultural, Biological, and Environmental Statistics, 2017, 22, 294-312.	1.4	10
66	Random set modelling of three-dimensional objects in a hierarchical Bayesian context. Journal of Statistical Computation and Simulation, 2014, 84, 107-123.	1.2	8
67	Multivariate spatial hierarchical Bayesian empirical likelihood methods for small area estimation. Stat, 2015, 4, 108-116.	0.4	8
68	Zeros and ones: a case for suppressing zeros in sensitive count data with an application to stroke mortality. Stat, 2015, 4, 227-234.	0.4	8
69	A Bayesian Hierarchical Nonoverlapping Random Disc Growth Model. Journal of the American Statistical Association, 2009, 104, 274-283.	3.1	7
70	A Bayesian hierarchical downscaling model for south-west Western Australia rainfall. Journal of the Royal Statistical Society Series C: Applied Statistics, 2014, 63, 715-736.	1.0	7
71	Multivariate spatioâ€™temporal survey fusion with application to the American Community Survey and Local Area Unemployment Statistics. Stat, 2016, 5, 224-233.	0.4	7
72	Ecological Dynamics: Integrating Empirical, Statistical, and Analytical Methods. Trends in Ecology and Evolution, 2020, 35, 1090-1099.	8.7	7

#	ARTICLE	IF	CITATIONS
73	Science-based parameterizations for dynamical spatiotemporal models. <i>Wiley Interdisciplinary Reviews: Computational Statistics</i> , 2012, 4, 554-560.	3.9	6
74	A hierarchical spatiotemporal analog forecasting model for count data. <i>Ecology and Evolution</i> , 2018, 8, 790-800.	1.9	6
75	Predicting infectious disease outbreak risk via migratory waterfowl vectors. <i>Journal of Applied Statistics</i> , 2013, 40, 656-673.	1.3	5
76	On the spatial and temporal shift in the archetypal seasonal temperature cycle as driven by annual and semi-annual harmonics. <i>Environmetrics</i> , 2021, 32, e2665.	1.4	5
77	Assimilation of oceanographic observations with estimates of vertical background error covariances by a Bayesian hierarchical model. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2015, 141, 182-194.	2.7	4
78	A Bayesian Markov Model with Pólya-Gamma Sampling for Estimating Individual Behavior Transition Probabilities from Accelerometer Classifications. <i>Journal of Agricultural, Biological, and Environmental Statistics</i> , 2020, 25, 365-382.	1.4	4
79	Vizumap: an R package for visualising uncertainty in spatial data. <i>Journal of Open Source Software</i> , 2021, 6, 2409.	4.6	4
80	Weak constraint four-dimensional variational data assimilation in a model of the California Current System. <i>Advances in Statistical Climatology, Meteorology and Oceanography</i> , 2016, 2, 171-192.	0.9	4
81	Hierarchical stochastic modelling of large river ecosystems and fish growth across spatio-temporal scales and climate models: the Missouri River endangered pallid sturgeon example. <i>Geological Society Special Publication</i> , 2017, 408, 119-145.	1.3	3
82	Effects of a Government-Academic Partnership: Has the NSF-CENSUS Bureau Research Network Helped Improve the US Statistical System?. <i>Journal of Survey Statistics and Methodology</i> , 2019, 7, 589-619.	1.2	3
83	A Hierarchical Spatiotemporal Statistical Model Motivated by Glaciology. <i>Journal of Agricultural, Biological, and Environmental Statistics</i> , 2019, 24, 669-692.	1.4	3
84	Spatio-temporal change of support modeling with R. <i>Computational Statistics</i> , 2021, 36, 749-780.	1.5	3
85	Hierarchical Spatial Models. , 2017, , 837-846.		3
86	Rejoinder on: A general science-based framework for dynamical spatio-temporal models. <i>Test</i> , 2010, 19, 466-468.	1.1	2
87	A Higher-Order Singular Value Decomposition Tensor Emulator for Spatiotemporal Simulators. <i>Journal of Agricultural, Biological, and Environmental Statistics</i> , 2022, 27, 22-45.	1.4	2
88	Hierarchical Models for Uncertainty Quantification: An Overview. , 2017, , 193-218.		2
89	Bayesian inverse reinforcement learning for collective animal movement. <i>Annals of Applied Statistics</i> , 2022, 16, .	1.1	2
90	Guest Editor's Introduction to the Special Issue on "Modern Dimension Reduction Methods for Big Data Problems in Ecology". <i>Journal of Agricultural, Biological, and Environmental Statistics</i> , 2013, 18, 271-273.	1.4	1

#	ARTICLE	IF	CITATIONS
91	Providing distributed forecasts of precipitation using a Bayesian nowcast scheme. Atmospheric Science Letters, 2005, 6, 59-65.	1.9	0
92	Rejoinder "An approach for identifying and predicting economic recessions in real-time using time-frequency functional models. Applied Stochastic Models in Business and Industry, 2012, 28, 504-505.	1.5	0
93	Advances in statistical methods for climate analysis. Environmetrics, 2012, 23, 363-363.	1.4	0
94	Hierarchical Spatial Models. , 2015, , 1-10.		0
95	Models for Ecological Models: Ocean Primary Productivity. Chance, 2016, 29, 23-30.	0.2	0
96	Adaptively tuned particle swarm optimization with application to spatial design. Stat, 2017, 6, 145-159.	0.4	0
97	Measuring, mapping, and uncertainty quantification in the space-time cube. Revista Matematica Complutense, 2020, 33, 643-660.	1.2	0