Andrew O Finley

List of Publications by Year
in descending order

81 papers	3,901 citations	147801 31 h-index	133252 59 g-index
83 all docs	83 docs citations	83 times ranked	4157 citing authors

#	Article	IF	Citations
1	Gaussian Predictive Process Models for Large Spatial Data Sets. Journal of the Royal Statistical Society Series B: Statistical Methodology, 2008, 70, 825-848.	2.2	673
2	Hierarchical Nearest-Neighbor Gaussian Process Models for Large Geostatistical Datasets. Journal of the American Statistical Association, 2016, 111, 800-812.	3.1	335
3	A Case Study Competition Among Methods for Analyzing Large Spatial Data. Journal of Agricultural, Biological, and Environmental Statistics, 2019, 24, 398-425.	1.4	216
4	Improving the performance of predictive process modeling for large datasets. Computational Statistics and Data Analysis, 2009, 53, 2873-2884.	1.2	168
5	spBayes: An<i>R</i>Package for Univariate and Multivariate Hierarchical Point-referenced Spatial Models. Journal of Statistical Software, 2007, 19, 1-24.	3.7	158
6	Tropical tree growth is correlated with soil phosphorus, potassium, and calcium, though not for legumes. Ecological Monographs, 2012, 82, 189-203.	5.4	128
7	Comparing spatiallyâ€varying coefficients models for analysis of ecological data with nonâ€stationary and anisotropic residual dependence. Methods in Ecology and Evolution, 2011, 2, 143-154.	5.2	125
8	Towards connecting biodiversity and geodiversity across scales with satellite remote sensing. Global Ecology and Biogeography, 2019, 28, 548-556.	5.8	87
9	spBayesfor Large Univariate and Multivariate Point-Referenced Spatio-Temporal Data Models. Journal of Statistical Software, 2015, 63, .	3.7	85
10	rFIA: An R package for estimation of forest attributes with the US Forest Inventory and Analysis database. Environmental Modelling and Software, 2020, 127, 104664.	4.5	81
11	Addressing data integration challenges to link ecological processes across scales. Frontiers in Ecology and the Environment, 2021, 19, 30-38.	4.0	74
12	Nonseparable dynamic nearest neighbor Gaussian process models for large spatio-temporal data with an application to particulate matter analysis. Annals of Applied Statistics, 2016, 10, 1286-1316.	1.1	73
13	Predicting tree biomass growth in the temperateâ€“boreal ecotone: Is tree size, age, competition, or climate response most important?. Global Change Biology, 2016, 22, 2138-2151.	9.5	71
14	Efficient Algorithms for Bayesian Nearest Neighbor Gaussian Processes. Journal of Computational and Graphical Statistics, 2019, 28, 401-414.	1.7	71
15	Working across space and time: nonstationarity in ecological research and application. Frontiers in Ecology and the Environment, 2021, 19, 66-72.	4.0	69
16	Should species distribution models account for spatial autocorrelation? A test of model projections across eight millennia of climate change. Global Ecology and Biogeography, 2013, 22, 760-771.	5.8	67
17	An analysis of asthma hospitalizations, air pollution, and weather conditions in Los Angeles County, California. Science of the Total Environment, 2012, 425, 110-118.	8.0	65
18	Approaches to advance scientific understanding of macrosystems ecology. Frontiers in Ecology and the Environment, 2014, 12, 15-23.	4.0	57

#	Article	IF	Citations
19	Boreal tree growth exhibits decadalâ€scale ecological memory to drought and insect defoliation, but no negative response to their interaction. Journal of Ecology, 2019, 107, 1288-1301.	4.0	49
20	Over half of western United States' most abundant tree species in decline. Nature Communications, 2021, 12, 451.	12.8	48
21	Approximate Bayesian inference for large spatial datasets using predictive process models. Computational Statistics and Data Analysis, 2012, 56, 1362-1380.	1.2	47
22	Hierarchical Spatial Process Models for Multiple Traits in Large Genetic Trials. Journal of the American Statistical Association, 2010, 105, 506-521.	3.1	44
23	On nearestâ€neighbor Gaussian process models for massive spatial data. Wiley Interdisciplinary Reviews: Computational Statistics, 2016, 8, 162-171.	3.9	44
24	LiDAR based prediction of forest biomass using hierarchical models with spatially varying coefficients. Remote Sensing of Environment, 2015, 169, 113-127.	11.0	40
25	Hierarchical spatial models for predicting tree species assemblages across large domains. Annals of Applied Statistics, 2009, 3, 1052-1079.	1.1	39
26	Bayesian dynamic modeling for large space-time datasets using Gaussian predictive processes. Journal of Geographical Systems, 2012, 14, 29-47.	3.1	39
27	Geostatistical estimation of forest biomass in interior Alaska combining Landsat-derived tree cover, sampled airborne lidar and field observations. Remote Sensing of Environment, 2018, 212, 212-230.	11.0	39
28	Adaptive Gaussian predictive process models for large spatial datasets. Environmetrics, 2011, 22, 997-1007.	1.4	37
29	Strategies for minimizing sample size for use in airborne LiDAR-based forest inventory. Forest Ecology and Management, 2013, 292, 75-85.	3.2	37
30	Modeling forest biomass and growth: Coupling long-term inventory and LiDAR data. Remote Sensing of Environment, 2016, 182, 1-12.	11.0	36
31	Bayesian multivariate process modeling for prediction of forest attributes. Journal of Agricultural, Biological, and Environmental Statistics, 2008, 13, 60-83.	1.4	34
32	Synergistic effects of climate and land cover: grassland birds are more vulnerable to climate change. Landscape Ecology, 2016, 31, 2275-2290.	4.2	33
33	spOccupancy: An R package for singleâ€species, multiâ€species, and integrated spatial occupancy models. Methods in Ecology and Evolution, 2022, 13, 1670-1678.	5.2	32
34	Spatial regression methods capture prediction uncertainty in species distribution model projections through time. Global Ecology and Biogeography, 2013, 22, 242-251.	5.8	29
35	Landscape fragmentation affects responses of avian communities to climate change. Global Change Biology, 2015, 21, 2942-2953.	9.5	29
36	Beyond counts and averages: Relating geodiversity to dimensions of biodiversity. Global Ecology and Biogeography, 2020, 29, 696-710.	5.8	29

#	Article	IF	Citations
37	Ecological forecasting of tree growth: Regional fusion of treeâ€ring and forest inventory data to quantify drivers and characterize uncertainty. Global Change Biology, 2022, 28, 2442-2460.	9.5	29
38	A Bayesian approach to multi-source forest area estimation. Environmental and Ecological Statistics, 2008, 15, 241-258.	3.5	28
39	Nonlinear hierarchical models for predicting cover crop biomass using Normalized Difference Vegetation Index. Remote Sensing of Environment, 2010, 114, 2833-2840.	11.0	28
40	A Hierarchical Model for Quantifying Forest Variables Over Large Heterogeneous Landscapes With Uncertain Forest Areas. Journal of the American Statistical Association, 2011, 106, 31-48.	3.1	28
41	Variable effects of climate on forest growth in relation to climate extremes, disturbance, and forest dynamics. Ecological Applications, 2017, 27, 1082-1095.	3.8	27
42	Integrating forest inventory and analysis data into a LIDAR-based carbon monitoring system. Carbon Balance and Management, 2014, 9, 3.	3.2	26
43	Seedling survival responses to conspecific density, soil nutrients, and irradiance vary with age in a tropical forest. Ecology, 2016, 97, 2406-2415.	3.2	25
44	Multivariate Spatial Regression Models for Predicting Individual Tree Structure Variables Using LiDAR Data. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2013, 6, 6-14.	4.9	23
45	Linear Models for Airborne-Laser-Scanning-Based Operational Forest Inventory With Small Field Sample Size and Highly Correlated LiDAR Data. IEEE Transactions on Geoscience and Remote Sensing, 2015, 53, 5600-5612.	6.3	23
46	Hierarchical Spatial Modeling of Additive and Dominance Genetic Variance for Large Spatial Trial Datasets. Biometrics, 2009, 65, 441-451.	1.4	20
47	Comparing and Blending Regional Climate Model Predictions for the American Southwest. Journal of Agricultural, Biological, and Environmental Statistics, 2011, 16, 586-605.	1.4	19
48	Highly Scalable Bayesian Geostatistical Modeling via Meshed Gaussian Processes on Partitioned Domains. Journal of the American Statistical Association, 2022, 117, 969-982.	3.1	19
49	Variational Bayesian methods for spatial data analysis. Computational Statistics and Data Analysis, 2011, 55, 3197-3217.	1.2	18
50	Hierarchical Bayesian spatial models for predicting multiple forest variables using waveform LiDAR, hyperspectral imagery, and large inventory datasets. International Journal of Applied Earth Observation and Geoinformation, 2013, 22, 147-160.	2.8	18
51	Spatial Variation in Nutrient and Water Color Effects on Lake Chlorophyll at Macroscales. PLoS ONE, 2016, 11, e0164592.	2.5	18
52	Bayesian spatially varying coefficient models in the spBayes R package. Environmental Modelling and Software, 2020, 125, 104608.	4.5	18
53	Bayesian hierarchical models for spatially misaligned data in R. Methods in Ecology and Evolution, 2014, 5, 514-523.	5.2	16
54	Assessing soundscape disturbance through hierarchical models and acoustic indices: A case study on a shelterwood logged northern Michigan forest. Ecological Indicators, 2020, 113, 106244.	6.3	15

#	Article	IF	Citations
55	Modeling Complex Spatial Dependencies: Low-Rank Spatially Varying Cross-Covariances With Application to Soil Nutrient Data. Journal of Agricultural, Biological, and Environmental Statistics, 2013, 18, 274-298.	1.4	14
56	Integrating automated acoustic vocalization data and point count surveys for estimation of bird abundance. Methods in Ecology and Evolution, 2021, 12, 1040-1049.	5.2	14
57	Spatial Factor Models for High-Dimensional and Large Spatial Data: An Application in Forest Variable Mapping. Statistica Sinica, 2019, 29, 1155-1180.	0.3	13
58	Bayesian multi-resolution modeling for spatially replicated data sets with application to forest biomass data. Journal of Statistical Planning and Inference, 2007, 137, 3193-3205.	0.6	12
59	Complementary strengths of spatiallyâ€explicit and multiâ€species distribution models. Ecography, 2020, 43, 456-466.	4.5	11
60	Accounting for the spaceâ€varying nature of the relationships between temporal community turnover and the environment. Ecography, 2014, 37, 1073-1083.	4.5	10
61	Spatial Analysis of Anthropogenic Landscape Disturbance and Buruli Ulcer Disease in Benin. PLoS Neglected Tropical Diseases, 2015, 9, e0004123.	3.0	10
62	Spatial scaling of temporal changes in avian communities. Global Ecology and Biogeography, 2015, 24, 1236-1248.	5.8	9
63	A modelâ€based approach to wildland fire reconstruction using sediment charcoal records. Environmetrics, 2017, 28, e2450.	1.4	9
64	Regionalâ€based mitigation to reduce wildlifeâ€"vehicle collisions. Journal of Wildlife Management, 2018, 82, 756-765.	1.8	9
65	Highâ€dimensional multivariate geostatistics: A Bayesian matrixâ€normal approach. Environmetrics, 2021, 32, e2675.	1.4	9
66	Spatial Modelling of Car Ownership Data: A Case Study from the United Kingdom. Applied Spatial Analysis and Policy, 2010, 3, 45-65.	2.0	8
67	Dynamic spatial regression models for spaceâ€varying forest stand tables. Environmetrics, 2014, 25, 596-609.	1.4	8
68	Joint hierarchical models for sparsely sampled high-dimensional LiDAR and forest variables. Remote Sensing of Environment, 2017, 190, 149-161.	11.0	8
69	Characterizing functional relationships between anthropogenic and biological sounds: a western New York state soundscape case study. Landscape Ecology, 2020, 35, 689-707.	4.2	8
70	Improving Crop Model Inference Through Bayesian Melding With Spatially Varying Parameters. Journal of Agricultural, Biological, and Environmental Statistics, 2011, 16, 453-474.	1.4	7
71	Assessing impact of exogenous features on biotic phenomena in the presence of strong spatial dependence: A lake sturgeon case study in natural stream settings. PLoS ONE, 2018, 13, e0204150.	2.5	6
72	Introduction to Bayesian Methods in Ecology and Natural Resources. , 2020, , .		6

#	Article	IF	Citations
73	Trends in bird abundance differ among protected forests but not bird guilds. Ecological Applications, 2021, 31, e02377.	3.8	6
74	Hierarchical multiresolution approaches for dense point-level breast cancer treatment data. Computational Statistics and Data Analysis, 2008, 52, 2650-2668.	1.2	5
75	Observation-based blended projections from ensembles of regional climate models. Climatic Change, 2016, 138, 55-69.	3.6	5
76	Environmental controls on Landsatâ€derived phenoregions across an East African megatransect. Ecosphere, 2020, 11, e03143.	2.2	4
77	Remote Sensing of Geodiversity as a Link to Biodiversity. , 2020, , 225-253.		4
78	Estimating timber volume loss due to storm damage in Carinthia, Austria, using ALS/TLS and spatial regression models. Forest Ecology and Management, 2021, 502, 119714.	3.2	4
79	Simplifying Small Area Estimation With rFIA: A Demonstration of Tools and Techniques. Frontiers in Forests and Global Change, 2022, 5, .	2.3	3
80	Editors Are Editors, Not Oracles. Bulletin of the Ecological Society of America, 2014, 95, 342-346.	0.2	2
81	Spatial Linear Models. , 2020, , 155-174.		0