Axel Munk

List of Publications by Year
in descending order

94 papers	2,347 citations	218677 26 h-index	243625 44 g-index
96 all docs	96 docs citations	96 times ranked	2167 citing authors

#	Article	IF	Citations
1	Multiscale Quantile Segmentation. Journal of the American Statistical Association, 2022, 117, 1384-1397.	3.1	8
2	Randomized Wasserstein Barycenter Computation: Resampling with Statistical Guarantees. SIAM Journal on Mathematics of Data Science, 2022, 4, 229-259.	1.8	4
3	A Variational View on Statistical Multiscale Estimation. Annual Review of Statistics and Its Application, 2022, 9, 343-372.	7.0	1
4	Limit laws for empirical optimal solutions in random linear programs. Annals of Operations Research, 2022, 315, 251-278.	4.1	2
5	Statistical Methods for Minimax Estimation in Linear Models with Unknown Design Over Finite Alphabets. SIAM Journal on Mathematics of Data Science, 2022, 4, 490-513.	1.8	1
6	Heterogeneous Idealization of Ion Channel Recordings – Open Channel Noise. IEEE Transactions on Nanobioscience, 2021, 20, 57-78.	3.3	4
7	Analysis of patchclamp recordings: model-free multiscale methods and software. European Biophysics Journal, 2021, 50, 187-209.	2.2	5
8	Colocalization for super-resolution microscopy via optimal transport. Nature Computational Science, 2021, 1, 199-211.	8.0	13
9	Multiple haplotype reconstruction from allele frequency data. Nature Computational Science, 2021, 1, 262-271.	8.0	6
10	An antibiotic-resistance conferring mutation in a neisserial porin: Structure, ion flux, and ampicillin binding. Biochimica Et Biophysica Acta - Biomembranes, 2021, 1863, 183601.	2.6	9
11	Variational Multiscale Nonparametric Regression: Algorithms and Implementation. Algorithms, 2020, 13, 296.	2.1	1
12	Total variation multiscale estimators for linear inverse problems. Information and Inference, 2020, 9, 961-986.	1.6	3
13	Testing for dependence on tree structures. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 9787-9792.	7.1	16
14	Empirical Regularized Optimal Transport: Statistical Theory and Applications. SIAM Journal on Mathematics of Data Science, 2020, 2, 419-443.	1.8	21
15	The essential histogram. Biometrika, 2020, 107, 347-364.	2.4	9
16	Multidimensional multiscale scanning in exponential families: Limit theory and statistical consequences. Annals of Statistics, 2020, 48, .	2.6	8
17	Bump detection in the presence of dependency: Does it ease or does it load?. Bernoulli, 2020, 26, .	1.3	5
18	High-resolution experimental and computational electrophysiology reveals weak β-lactam binding events in the porin PorB. Scientific Reports, 2019, 9, 1264.	3.3	12

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19	Maximum likelihood estimation in hidden Markov models with inhomogeneous noise. ESAIM - Probability and Statistics, 2019, 23, 492-523.	0.5	3
20	Empirical optimal transport on countable metric spaces: Distributional limits and statistical applications. Annals of Applied Probability, 2019, 29, .	1.3	19
21	Molecular contribution function in RESOLFT nanoscopy. Optics Express, 2019, 27, 21956.	3.4	5
22	Multiscale blind source separation. Annals of Statistics, 2018, 46, .	2.6	9
23	Inference for Empirical Wasserstein Distances on Finite Spaces. Journal of the Royal Statistical Society Series B: Statistical Methodology, 2018, 80, 219-238.	2.2	68
24	Fully Automatic Multiresolution Idealization for Filtered Ion Channel Recordings: Flickering Event Detection. IEEE Transactions on Nanobioscience, 2018, 17, 300-320.	3.3	12
25	Persistence Barcodes Versus Kolmogorov Signatures: Detecting Modes of One-Dimensional Signals. Foundations of Computational Mathematics, 2017, 17, 1-33.	2.5	4
26	A studentized permutation test for three‐arm trials in the 'gold standard' design. Statistics in Medicine, 2017, 36, 883-898.	1.6	13
27	Identifiability for Blind Source Separation of Multiple Finite Alphabet Linear Mixtures. IEEE Transactions on Information Theory, 2017, , 1-1.	2.4	6
28	Design and analysis of three‐arm trials with negative binomially distributed endpoints. Statistics in Medicine, 2016, 35, 505-521.	1.6	14
29	Drift Estimation in Sparse Sequential Dynamic Imaging, With Application to Nanoscale Fluorescence Microscopy. Journal of the Royal Statistical Society Series B: Statistical Methodology, 2016, 78, 563-587.	2.2	5
30	Limit laws of the empirical Wasserstein distance: Gaussian distributions. Journal of Multivariate Analysis, 2016, 151, 90-109.	1.0	41
31	Partial least squares for dependent data. Biometrika, 2016, 103, 351-362.	2.4	10
32	Reply to "Polarization modulation adds little additional information to super-resolution fluorescence microscopy". Nature Methods, 2016, 13, 8-9.	19.0	9
33	Security Considerations in Minutiae-Based Fuzzy Vaults. IEEE Transactions on Information Forensics and Security, 2015, 10, 985-998.	6.9	60
34	Modern Statistical Challenges in High-Resolution Fluorescence Microscopy. Annual Review of Statistics and Its Application, 2015, 2, 163-202.	7.0	27
35	Mapping molecules in scanning far-field fluorescence nanoscopy. Nature Communications, 2015, 6, 7977.	12.8	64
36	Adaptive Statistical Inference. Oberwolfach Reports, 2014, 11, 721-779.	0.0	0

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37	Aggregated motion estimation for real-time MRI reconstruction. Magnetic Resonance in Medicine, 2014, 72, 1039-1048.	3.0	11
38	Fluorescence nanoscopy by polarization modulation and polarization angle narrowing. Nature Methods, 2014, 11, 579-584.	19.0	107
39	Multiscale Change Point Inference. Journal of the Royal Statistical Society Series B: Statistical Methodology, 2014, 76, 495-580.	2.2	187
40	Extreme value analysis of empirical frame coefficients and implications for denoising by soft-thresholding. Applied and Computational Harmonic Analysis, 2014, 36, 434-460.	2.2	16
41	Statistical Multiresolution Estimation for Variational Imaging: With an Application in Poisson-Biophotonics. Journal of Mathematical Imaging and Vision, 2013, 46, 370-387.	1.3	26
42	The Estimation of Threshold Models in Price Transmission Analysis. American Journal of Agricultural Economics, 2013, 95, 900-916.	4.3	31
43	Design and semiparametric analysis of nonâ€inferiority trials with active and placebo control for censored timeâ€toâ€event data. Statistics in Medicine, 2013, 32, 3055-3066.	1.6	14
44	Idealizing Ion Channel Recordings by a Jump Segmentation Multiresolution Filter. IEEE Transactions on Nanobioscience, 2013, 12, 376-386.	3.3	32
45	Field localization and rescattering in tipâ€enhanced photoemission. Annalen Der Physik, 2013, 525, L12.	2.4	37
46	Drift estimation for single marker switching based imaging schemes. Optics Express, 2012, 20, 7274.	3.4	50
47	Shape-constrained regularization by statistical multiresolution for inverse problems: asymptotic analysis. Inverse Problems, 2012, 28, 065006.	2.0	9
48	Statistical multiresolution Dantzig estimation in imaging: Fundamental concepts and algorithmic framework. Electronic Journal of Statistics, 2012, 6, .	0.7	39
49	Partial Least-Squares Functional Mode Analysis: Application to the Membrane Proteins AQP1, Aqy1, and CLC-ec1. Biophysical Journal, 2012, 103, 786-796.	0.5	57
50	Frontiers in Nonparametric Statistics. Oberwolfach Reports, 2012, 9, 811-883.	0.0	0
51	Modeling the Growth of Fingerprints Improves Matching for Adolescents. IEEE Transactions on Information Forensics and Security, 2011, 6, 1165-1169.	6.9	31
52	Neyman smooth goodness-of-fit tests for the marginal distribution of dependent data. Annals of the Institute of Statistical Mathematics, 2011, 63, 939-959.	0.8	10
53	The likelihood ratio test for non-standard hypotheses near the boundary of the null â€" with application to the assessment of non-inferiority. Statistics & Risk Modeling, 2009, 27, 75-92.	0.3	5
54	Shao's theorem on the maximum of standardized random walk increments for multidimensional arrays. ESAIM - Probability and Statistics, 2009, 13, 409-416.	0.5	6

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55	Comments on: Goodness-of-fit tests in mixed models. Test, 2009, 18, 256-259.	1.1	3
56	Robust Orientation Field Estimation and Extrapolation Using Semilocal Line Sensors. IEEE Transactions on Information Forensics and Security, 2009, 4, 802-811.	6.9	46
57	Convergence Analysis of Generalized Iteratively Reweighted Least Squares Algorithms on Convex Function Spaces. SIAM Journal on Optimization, 2009, 19, 1828-1845.	2.0	44
58	Iteratively Regularized Gaussâ€"Newton Method for Nonlinear Inverse Problems with Random Noise. SIAM Journal on Numerical Analysis, 2009, 47, 1827-1846.	2.3	56
59	Self-consistent residual dipolar coupling based model-free analysis for the robust determination of nanosecond to microsecond protein dynamics. Journal of Biomolecular NMR, 2008, 41, 139-155.	2.8	100
60	<i>The authors replied as follows:</i>. Biometrics, 2008, 64, 979-981.	1.4	1
61	Global Models for the Orientation Field of Fingerprints: An Approach Based on Quadratic Differentials. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2008, 30, 1507-1519.	13.9	59
62	Testing noninferiority in threeâ€armed clinical trials based on likelihood ratio statistics. Canadian Journal of Statistics, 2007, 35, 413-431.	0.9	9
63	A nonparametric test for similarity of marginalsâ€"With applications to the assessment of population bioequivalence. Journal of Statistical Planning and Inference, 2007, 137, 697-711.	0.6	20
64	Density testing in a contaminated sample. Journal of Multivariate Analysis, 2007, 98, 57-75.	1.0	19
65	Non-parametric Analysis of Covariance ? The Case of Inhomogeneous and Heteroscedastic Noise. Scandinavian Journal of Statistics, 2007, 34, 511-534.	1.4	5
66	Tests in a Case?control Design Including Relatives. Scandinavian Journal of Statistics, 2006, 33, 621-635.	1.4	2
67	Identifiability of Finite Mixtures of Elliptical Distributions. Scandinavian Journal of Statistics, 2006, 33, 753-763.	1.4	67
68	On Identifiability in Capture-Recapture Models. Biometrics, 2006, 62, 934-936.	1.4	46
69	Hidden Markov models for circular and linear-circular time series. Environmental and Ecological Statistics, 2006, 13, 325-347.	3.5	82
70	On Hadamard differentiability in k -sample semiparametric modelsâ€"with applications to the assessment of structural relationships. Journal of Multivariate Analysis, 2005, 94, 123-158.	1.0	15
71	On difference-based variance estimation in nonparametric regression when the covariate is high dimensional. Journal of the Royal Statistical Society Series B: Statistical Methodology, 2005, 67, 19-41.	2.2	65
72	Therapeutic Equivalence â€" Clinical Issues and Statistical Methodology in Noninferiority Trials. Biometrical Journal, 2005, 47, 7-9.	1.0	12

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73	Some Methodological Aspects of Validation of Models in Nonparametric Regression. Statistica Neerlandica, 2003, 57, 207-244.	1.6	15
74	A graphical selection method for parametric models in noisy inhomogeneous regression. Monthly Notices of the Royal Astronomical Society, 2002, 336, 131-138.	4.4	3
75	Testing the Goodness of Fit of Parametric Regression Models with Random Toeplitz Forms. Scandinavian Journal of Statistics, 2002, 29, 501-533.	1.4	10
76	Minimax Rates for Estimating the Variance and its Derivatives in Nonâ€"Parametric Regression. Australian and New Zealand Journal of Statistics, 2002, 44, 479-488.	0.9	5
77	A Test for Additivity in Nonparametric Regression. Annals of the Institute of Statistical Mathematics, 2002, 54, 60-82.	0.8	12
78	Bootstrap methods for the nonparametric assessment of population bioequivalence and similarity of distributions. Journal of Statistical Computation and Simulation, 2001, 68, 243-280.	1.2	3
79	Testing model assumptions in multivariate linear regression models. Journal of Nonparametric Statistics, 2000, 12, 309-342.	0.9	4
80	Connections between average and individual bioequivalence. Statistics in Medicine, 2000, 19, 2843-2854.	1.6	7
81	An unbiased test for the average equivalence problem â€" the small sample case. Journal of Statistical Planning and Inference, 2000, 87, 69-86.	0.6	7
82	Noncanonical links in generalized linear models â€" when is the effort justified?. Journal of Statistical Planning and Inference, 2000, 87, 317-345.	0.6	17
83	Contributions of empirical and quantile processes to the asymptotic theory of goodness-of-fit tests. Test, 2000, 9, 1-96.	1.1	61
84	A note on unbiased testing for the equivalence problem â€" another christmas tree. Statistics and Probability Letters, 1999, 41, 401-406.	0.7	8
85	1 - Î± Equivariant Confidence Rules for Convex Alternatives are Î±/2-Level Tests-With Applications to the Multivariate Assessment of Bioequivalence. Journal of the American Statistical Association, 1999, 94, 1311.	3.1	18
86	A Simple Goodness-of-fit Test for Linear Models Under a Random Design Assumption. Annals of the Institute of Statistical Mathematics, 1998, 50, 253-275.	0.8	6
87	Nonparametric validation of similar distributions and assessment of goodness of fit. Journal of the Royal Statistical Society Series B: Statistical Methodology, 1998, 60, 223-241.	2.2	55
88	Assessing the similarity of distributions - finite sample performance of the empirical mallows distance. Journal of Statistical Computation and Simulation, 1998, 60, 319-346.	1.2	16
89	Nonparametric comparison of several regression functions: exact and asymptotic theory. Annals of Statistics, 1998, 26, 2339.	2.6	53
90	Box-Type Approximations in Nonparametric Factorial Designs. Journal of the American Statistical Association, 1997, 92, 1494-1502.	3.1	207

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91	Sign regularity of a generalized Cauchy kernel with applications. Journal of Statistical Planning and Inference, 1996, 52, 131-142.	0.6	4
92	Interpersonal dependency of preferences. Theory and Decision, 1996, 41, 257-280.	1.0	2
93	Equivalence and Interval Testing for Lehmann's Alternative. Journal of the American Statistical Association, 1996, 91, 1187-1196.	3.1	8
94	An Extension of Welch's Approximate t-Solution to Comparative Bioequivalence Trials. Biometrika, 1994, 81, 91.	2.4	7