Stephen R Becker

List of Publications by Year
in descending order

44 papers	3,092 citations	623734 14 h-index	395702 33 g-index
45 all docs	45 docs citations	45 times ranked	3222 citing authors

#	Article	IF	Citations
1	NESTA: A Fast and Accurate First-Order Method for Sparse Recovery. SIAM Journal on Imaging Sciences, 2011, 4, 1-39.	2.2	787
2	Quantum State Tomography via Compressed Sensing. Physical Review Letters, 2010, 105, 150401.	7.8	708
3	Templates for convex cone problems with applications to sparse signal recovery. Mathematical Programming Computation, 2011, 3, 165-218.	4.8	390
4	Convex Optimization for Big Data: Scalable, randomized, and parallel algorithms for big data analytics. IEEE Signal Processing Magazine, 2014, 31, 32-43.	5.6	221
5	Relation between the Widom line and the breakdown of the Stokes-Einstein relation in supercooled water. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 9575-9579.	7.1	164
6	Fractional Stokes-Einstein and Debye-Stokes-Einstein Relations in a Network-Forming Liquid. Physical Review Letters, 2006, 97, 055901.	7.8	158
7	A Nonuniform Sampler for Wideband Spectrally-Sparse Environments. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2012, 2, 516-529.	3.6	108
8	A Compressed Sensing Parameter Extraction Platform for Radar Pulse Signal Acquisition. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2012, 2, 626-638.	3.6	84
9	Dynamical Behavior Near a Liquid–Liquid Phase Transition in Simulations of Supercooled Water. Journal of Physical Chemistry B, 2011, 115, 14176-14183.	2.6	75
10	Design and implementation of a fully integrated compressed-sensing signal acquisition system. , 2012, , .		56
11	A 100MHz–2GHz 12.5x sub-Nyquist rate receiver in 90nm CMOS. , 2012, , .		47
12	Optimization and Learning With Information Streams: Time-varying algorithms and applications. IEEE Signal Processing Magazine, 2020, 37, 71-83.	5.6	43
13	Preconditioned Data Sparsification for Big Data with Applications to PCA and K-means. IEEE Transactions on Information Theory, 2017, , 1-1.	2.4	35
14	On Quasi-Newton Forward-Backward Splitting: Proximal Calculus and Convergence. SIAM Journal on Optimization, 2019, 29, 2445-2481.	2.0	26
15	Efficient Solvers for Sparse Subspace Clustering. Signal Processing, 2020, 172, 107548.	3.7	22
16	Improved fixed-rank Nyström approximation via QR decomposition: Practical and theoretical aspects. Neurocomputing, 2019, 363, 261-272.	5.9	19
17	A study of scalar optically-pumped magnetometers for use in magnetoencephalography without shielding. Physics in Medicine and Biology, 2021, 66, 175030.	3.0	16
18	Designing Statistical Estimators That Balance Sample Size, Risk, and Computational Cost. IEEE Journal on Selected Topics in Signal Processing, 2015, 9, 612-624.	10.8	11

#	Article	IF	Citations
19	Guarantees for the Kronecker fast Johnson–Lindenstrauss transform using a coherence and sampling argument. Linear Algebra and Its Applications, 2020, 602, 120-137.	0.9	10
20	Compressive sensing: Principles and hardware implementations. , 2013, , .		9
21	Achieving superresolution with illumination-enhanced sparsity. Optics Express, 2018, 26, 9850.	3.4	8
22	Efficient dictionary learning via very sparse random projections. , 2015, , .		7
23	A stochastic subspace approach to gradient-free optimization in high dimensions. Computational Optimization and Applications, 2021, 79, 339-368.	1.6	7
24	Improving IMRT delivery efficiency with reweighted L1 minimization for inverse planning. Medical Physics, 2013, 40, 071719.	3.0	6
25	Metric learning with rank and sparsity constraints. , 2014, , .		6
26	Efficient Adjoint Computation for Wavelet and Convolution Operators [Lecture Notes]. IEEE Signal Processing Magazine, 2016, 33, 135-147.	5.6	6
27	Adapting Regularized Low-Rank Models for Parallel Architectures. SIAM Journal of Scientific Computing, 2019, 41, A163-A189.	2.8	6
28	Resolvability of Hamming Graphs. SIAM Journal on Discrete Mathematics, 2020, 34, 2063-2081.	0.8	6
29	Nonstationary Modeling With Sparsity for Spatial Data via the Basis Graphical Lasso. Journal of Computational and Graphical Statistics, 2021, 30, 375-389.	1.7	6
30	A randomized approach to efficient kernel clustering. , 2016, , .		5
31	Stochastic Lanczos estimation of genomic variance components for linear mixed-effects models. BMC Bioinformatics, 2019, 20, 411.	2.6	5
32	Fast randomized matrix and tensor interpolative decomposition using CountSketch. Advances in Computational Mathematics, 2020, 46, 1.	1.6	5
33	Analyzing the super-resolution characteristics of focused-spot illumination approaches. Journal of Biomedical Optics, 2020, 25, 1.	2.6	5
34	Online Sparse Subspace Clustering. , 2019, , .		4
35	Template polyhedra and bilinear optimization. Formal Methods in System Design, 2019, 54, 27-63.	0.8	4
36	Bounds for the Tracking Error of First-Order Online Optimization Methods. Journal of Optimization Theory and Applications, 2021, 189, 437-457.	1.5	4

#	ARTICLE	IF	CITATIONS
37	â„"1-regularized maximum likelihood estimation with focused-spot illumination quadruples the diffraction-limited resolution in fluorescence microscopy. Optics Express, 2020, 28, 39413.	3.4	4
38	Perturbed Proximal Descent to Escape Saddle Points for Non-convex and Non-smooth Objective Functions. Proceedings of the International Neural Networks Society, 2020, , 58-77.	0.6	4
39	Robust least squares for quantized data matrices. Signal Processing, 2020, 176, 107711.	3.7	2
40	Randomization of approximate bilinear computation for matrix multiplication. International Journal of Computer Mathematics: Computer Systems Theory, 2021, 6, 54-93.	1.1	1
41	Sparse simplex projections for portfolio optimization. , 2013, , .		0
42	One-Pass Sparsified Gaussian Mixtures. , 2019, , .		0
43	Safe Feature Elimination for Non-negativity Constrained Convex Optimization. Journal of Optimization Theory and Applications, 2020, 184, 931-952.	1.5	0
44	Stochastic Gradient Langevin Dynamics with Variance Reduction. , 2021, , .		0