Volkan Cevher

List of Publications by Year
in descending order

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69	3,709	331259	276539
papers	citations	21 h-index	41 g-index

70	70	70	3460
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Model-Based Compressive Sensing. IEEE Transactions on Information Theory, 2010, 56, 1982-2001.	1.5	1,244
2	Ultrasensitive hyperspectral imaging and biodetection enabled by dielectric metasurfaces. Nature Photonics, 2019, 13, 390-396.	15.6	546
3	Convex Optimization for Big Data: Scalable, randomized, and parallel algorithms for big data analytics. IEEE Signal Processing Magazine, 2014, 31, 32-43.	4.6	221
4	Bilinear Generalized Approximate Message Passingâ€"Part I: Derivation. IEEE Transactions on Signal Processing, 2014, 62, 5839-5853.	3.2	159
5	Low-Dimensional Models for Dimensionality Reduction and Signal Recovery: A Geometric Perspective. Proceedings of the IEEE, 2010, 98, 959-971.	16.4	123
6	Learning-Based Compressive MRI. IEEE Transactions on Medical Imaging, 2018, 37, 1394-1406.	5.4	112
7	Vehicle Speed Estimation Using Acoustic Wave Patterns. IEEE Transactions on Signal Processing, 2009, 57, 30-47.	3.2	103
8	Practical Sketching Algorithms for Low-Rank Matrix Approximation. SIAM Journal on Matrix Analysis and Applications, 2017, 38, 1454-1485.	0.7	95
9	Learning-Based Compressive Subsampling. IEEE Journal on Selected Topics in Signal Processing, 2016, 10, 809-822.	7.3	82
10	Compressible Distributions for High-Dimensional Statistics. IEEE Transactions on Information Theory, 2012, 58, 5016-5034.	1.5	68
11	Bilinear Generalized Approximate Message Passingâ€"Part II: Applications. IEEE Transactions on Signal Processing, 2014, 62, 5854-5867.	3.2	57
12	Limits on Support Recovery With Probabilistic Models: An Information-Theoretic Framework. IEEE Transactions on Information Theory, 2017, 63, 593-620.	1.5	53
13	Matrix Recipes for Hard Thresholding Methods. Journal of Mathematical Imaging and Vision, 2014, 48, 235-265.	0.8	51
14	Phase Transitions in Group Testing. , 2016, , .		51
15	Streaming Low-Rank Matrix Approximation with an Application to Scientific Simulation. SIAM Journal of Scientific Computing, 2019, 41, A2430-A2463.	1.3	43
16	Scalable Semidefinite Programming. SIAM Journal on Mathematics of Data Science, 2021, 3, 171-200.	1.0	43
17	Convexity in Source Separation : Models, geometry, and algorithms. IEEE Signal Processing Magazine, 2014, 31, 87-95.	4.6	38
18	Greedy Dictionary Selection for Sparse Representation. IEEE Journal on Selected Topics in Signal Processing, 2011, 5, 979-988.	7.3	37

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19	Structured Sparsity Models for Reverberant Speech Separation. IEEE/ACM Transactions on Audio Speech and Language Processing, 2014, 22, 620-633.	4.0	37
20	Fixed Points of Generalized Approximate Message Passing With Arbitrary Matrices. IEEE Transactions on Information Theory, 2016, 62, 7464-7474.	1.5	36
21	Recipes on hard thresholding methods. , 2011, , .		31
22	Learning non-parametric basis independent models from point queries via low-rank methods. Applied and Computational Harmonic Analysis, 2014, 37, 389-412.	1.1	31
23	Compressed sensing for multi-view tracking and 3-D voxel reconstruction. , 2008, , .		30
24	A Smooth Primal-Dual Optimization Framework for Nonsmooth Composite Convex Minimization. SIAM Journal on Optimization, 2018, 28, 96-134.	1.2	30
25	Fixed points of generalized approximate message passing with arbitrary matrices. , 2013, , .		29
26	Compressive sensing under matrix uncertainties: An Approximate Message Passing approach. , 2011, , .		27
27	Model-based compressive sensing for signal ensembles. , 2009, , .		26
28	Optimal rates for spectral algorithms with least-squares regression over Hilbert spaces. Applied and Computational Harmonic Analysis, 2020, 48, 868-890.	1.1	21
29	Model-based compressive sensing for multi-party distant speech recognition. , 2011, , .		17
30	Converse bounds for noisy group testing with arbitrary measurement matrices. , 2016, , .		17
31	Binary Sparse Coding of Convolutive Mixtures for Sound Localization and Separation via Spatialization. IEEE Transactions on Signal Processing, 2016, 64, 567-579.	3.2	15
32	An Inexact Proximal Path-Following Algorithm for Constrained Convex Minimization. SIAM Journal on Optimization, 2014, 24, 1718-1745.	1.2	14
33	Combinatorial selection and least absolute shrinkage via the Clash algorithm. , 2012, , .		13
34	Computational methods for underdetermined convolutive speech localization and separation via model-based sparse component analysis. Speech Communication, 2016, 76, 201-217.	1.6	13
35	Near-Optimal Noisy Group Testing via Separate Decoding of Items. IEEE Journal on Selected Topics in Signal Processing, 2018, 12, 902-915.	7.3	13
36	Adaptive Learning-Based Compressive Sampling for Low-power Wireless Implants. IEEE Transactions on Circuits and Systems I: Regular Papers, 2018, 65, 3929-3941.	3.5	12

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37	Machine Learning From Distributed, Streaming Data [From the Guest Editors]. IEEE Signal Processing Magazine, 2020, 37, 11-13.	4.6	12
38	MATRIX ALPS: Accelerated low rank and sparse matrix reconstruction. , 2012, , .		11
39	Structured Sparsity: Discrete and Convex Approaches. Applied and Numerical Harmonic Analysis, 2015, , 341-387.	0.1	11
40	An AC-Coupled Wideband Neural Recording Front-End With Sub-1 mm²Ã—fJ/conv-step Efficiency and 0.97 NEF. IEEE Solid-State Circuits Letters, 2020, 3, 258-261.	1.3	10
41	Stochastic Spectral Descent for Discrete Graphical Models. IEEE Journal on Selected Topics in Signal Processing, 2016, 10, 296-311.	7.3	9
42	Rethinking Sampling in Parallel MRI: A Data-Driven Approach. , 2019, , .		9
43	Frank-Wolfe works for non-Lipschitz continuous gradient objectives: Scalable poisson phase retrieval. , 2016, , .		8
44	Group-Sparse Model Selection: Hardness and Relaxations. IEEE Transactions on Information Theory, 2016, 62, 6508-6534.	1.5	8
45	An adaptive sublinear-time block sparse fourier transform. , 2017, , .		8
46	An adaptive primal-dual framework for nonsmooth convex minimization. Mathematical Programming Computation, 2020, 12, 451-491.	3.2	8
47	Compressive sensing for sensor calibration. , 2008, , .		7
48	Computational methods for structured sparse component analysis of convolutive speech mixtures. , 2012, , .		7
49	A Non-Euclidean Gradient Descent Framework for Non-Convex Matrix Factorization. IEEE Transactions on Signal Processing, 2018, 66, 5917-5926.	3.2	7
50	Optimal Maneuvering of Seismic Sensors for Localization of Subsurface Targets. IEEE Transactions on Geoscience and Remote Sensing, 2007, 45, 1247-1257.	2.7	6
51	Metric learning with rank and sparsity constraints. , 2014, , .		6
52	Learning-Based Near-Optimal Area-Power Trade-offs in Hardware Design for Neural Signal Acquisition. , 2016, , .		6
53	Convergence of the Exponentiated Gradient Method with Armijo Line Search. Journal of Optimization Theory and Applications, 2019, 181, 588-607.	0.8	5
54	DCT Learning-Based Hardware Design for Neural Signal Acquisition Systems. , 2017, , .		4

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55	Real-Time DCT Learning-based Reconstruction of Neural Signals. , 2018, , .		4
56	Hard thresholding with norm constraints. , 2012, , .		3
57	Tractability of interpretability via selection of group-sparse models. , 2013, , .		3
58	Whatâ€™s the Frequency, Kenneth?: Sublinear Fourier Sampling Off the Grid. Algorithmica, 2015, 73, 261-288.	1.0	3
59	A Single-Phase, Proximal Path-Following Framework. Mathematics of Operations Research, 2018, 43, 1326-1347.	0.8	3
60	On the Convergence of Stochastic Primal-Dual Hybrid Gradient. SIAM Journal on Optimization, 2022, 32, 1288-1318.	1.2	3
61	Approximate distributions for compressible signals. , 2009, , .		2
62	To convexify or not? Regression with clustering penalties on graphs. , 2013, , .		1
63	Active learning of self-concordant like multi-index functions. , 2015, , .		1
64	Chemical machine learning with kernels: The impact of loss functions. International Journal of Quantum Chemistry, 2019, 119, e25872.	1.0	1
65	Convergence Analysis for Sequential Monte Carlo Receivers in Communications Applications. , 2006, , .		0
66	Tractability of interpretability via selection of group-sparse models. , 2013, , .		0
67	An area and power efficient on-the-fly LBCS transformation for implantable neuronal signal acquisition systems. , 2018, , .		0
68	Smoothing Alternating Direction Methods for Fully Nonsmooth Constrained Convex Optimization. Lecture Notes in Mathematics, 2018, , 57-95.	0.1	0
69	Kernel conjugate gradient methods with random projections. Applied and Computational Harmonic Analysis, 2021, 55, 223-269.	1.1	0