

# Alan S Willsky

## List of Publications by Year in descending order

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51  
papers

5,001  
citations

566801

15  
h-index

610482

24  
g-index

51  
all docs

51  
docs citations

51  
times ranked

2660  
citing authors

#	ARTICLE	IF	CITATIONS
1	A survey of design methods for failure detection in dynamic systems. <i>Automatica</i> , 1976, 12, 601-611.	3.0	2,087
2	The Convex Geometry of Linear Inverse Problems. <i>Foundations of Computational Mathematics</i> , 2012, 12, 805-849.	1.5	775
3	Rank-Sparsity Incoherence for Matrix Decomposition. <i>SIAM Journal on Optimization</i> , 2011, 21, 572-596.	1.2	653
4	Optimally robust redundancy relations for failure detection in uncertain systems. <i>Automatica</i> , 1986, 22, 333-344.	3.0	347
5	Latent variable graphical model selection via convex optimization. <i>Annals of Statistics</i> , 2012, 40, .	1.4	192
6	Describing Visual Scenes Using Transformed Objects and Parts. <i>International Journal of Computer Vision</i> , 2008, 77, 291-330.	10.9	122
7	Sequential Compressed Sensing. <i>IEEE Journal on Selected Topics in Signal Processing</i> , 2010, 4, 435-444.	7.3	105
8	A generalized likelihood ratio approach to state estimation in linear systems subjects to abrupt changes. , 1974, , .		85
9	Sparse and low-rank matrix decompositions. , 2009, , .		65
10	Detection of abrupt changes in dynamic systems. , 1985, , 27-49.		58
11	Boundary-value descriptor systems: well-posedness, reachability and observability. <i>International Journal of Control</i> , 1987, 46, 1715-1737.	1.2	56
12	Multiresolution optimal interpolation and statistical analysis of TOPEX/POSEIDON satellite altimetry. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 1995, 33, 280-292.	2.7	56
13	Latent variable graphical model selection via convex optimization. , 2010, , .		44
14	Two self-test methods applied to an inertial system problem. <i>Journal of Spacecraft and Rockets</i> , 1975, 12, 434-437.	1.3	37
15	The Convex algebraic geometry of linear inverse problems. , 2010, , .		36
16	An Efficient Message-Passing Algorithm for Optimizing Decentralized Detection Networks. <i>IEEE Transactions on Automatic Control</i> , 2010, 55, 563-578.	3.6	32
17	Fiber Tract Clustering on Manifolds With Dual Rooted-Graphs. , 2007, , .		28
18	Computationally Efficient Stochastic Realization for Internal Multiscale Autoregressive Models. <i>Multidimensional Systems and Signal Processing</i> , 2001, 12, 109-142.	1.7	26

#	ARTICLE	IF	CITATIONS
19	Estimation in Gaussian Graphical Models Using Tractable Subgraphs: A Walk-Sum Analysis. IEEE Transactions on Signal Processing, 2008, 56, 1916-1930.	3.2	23
20	Low-Rank Variance Approximation in GMRF Models: Single and Multiscale Approaches. IEEE Transactions on Signal Processing, 2008, 56, 4621-4634.	3.2	20
21	Title is missing!. Multidimensional Systems and Signal Processing, 1997, 8, 151-184.	1.7	17
22	Local tests for consistency of support hyperplane data. Journal of Mathematical Imaging and Vision, 1996, 6, 249-267.	0.8	16
23	A sequential method for spline approximation with variable knots. International Journal of Systems Science, 1978, 9, 1055-1067.	3.7	15
24	Gaussian Multiresolution Models: Exploiting Sparse Markov and Covariance Structure. IEEE Transactions on Signal Processing, 2010, 58, 1012-1024.	3.2	14
25	Multiscale Gaussian Graphical Models and Algorithms for Large-Scale Inference. , 2007, , .		12
26	Sample complexity for topology estimation in networks of LTI systems. , 2011, , .		9
27	Failure Detection with Uncertain Models. , 1983, , .		8
28	An Efficient Message-Passing Algorithm for Optimizing Decentralized Detection Networks. , 2006, , .		8
29	Rejoinder: Latent variable graphical model selection via convex optimization. Annals of Statistics, 2012, 40, .	1.4	7
30	Redundancy relations and robust failure detection. , 1985, , 275-293.		6
31	Construction and applications of discrete-time smoothing error models. International Journal of Control, 1989, 50, 203-223.	1.2	6
32	Decentralized Detection in Undirected Network Topologies. , 2007, , .		5
33	Algebraic approach to time scale analysis of singularly perturbed linear systems. International Journal of Control, 1988, 47, 281-308.	1.2	4
34	Decentralized detection with long-distance communication. , 2008, , .		4
35	Sampling From Gaussian Markov Random Fields Using Stationary and Non-Stationary Subgraph Perturbations. IEEE Transactions on Signal Processing, 2015, 63, 576-589.	3.2	4
36	Sampling from Gaussian graphical models using subgraph perturbations. , 2013, , .		3

#	ARTICLE	IF	CITATIONS
37	Estimation and detection of signals in multiplicative noise. , 1974, , .		2
38	Estimation and control for a sensor moving along a one-dimensional track. International Journal of Control, 1980, 31, 1147-1159.	1.2	2
39	Linear estimation of boundary value processes. , 1983, , .		2
40	Maximum Entropy Relaxation for Graphical Model Selection Given Inconsistent Statistics. , 2007, , .		2
41	Maximum entropy relaxation for multiscale graphical model selection. Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing, 2008, , .	1.8	2
42	Tree-structured statistical modeling via convex optimization. , 2011, , .		2
43	Diagonal and low-rank decompositions and fitting ellipsoids to random points. , 2013, , .		2
44	The use of spherical harmonics in suboptimal estimator design. , 1976, , .		1
45	Recursive FMP for distributed inference in Gaussian graphical models. , 2013, , .		1
46	Some modeling and estimation problems involving space-time stochastic processes. , 1976, , .		0
47	The use of group-theoretic concepts in solving problems in estimation and control. , 1976, , .		0
48	Kalman estimation for a class of rational isotropic random fields. , 1985, , .		0
49	Asymptotic orders of reachability in perturbed linear systems. , 1987, , .		0
50	Reachability, observability, minimality, and extendibility for two-point boundary-value descriptor systems. International Journal of Control, 1991, 54, 635-663.	1.2	0
51	Message quantization in belief propagation: Structural results in the low-rate regime. , 2009, , .		0