Piya Pal

List of Publications by Year
in descending order

91	5,215	471509	552781
papers	citations	17	26
		h-index	g-index

92	92	92	1429
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Enhanced detection of paramagnetic fluorine‐19 magnetic resonance imaging agents using zero echo time sequence and compressed sensing. NMR in Biomedicine, 2022, 35, e4725.	2.8	5
2	Ada-JSR: Sample Efficient Adaptive Joint Support Recovery From Extremely Compressed Measurement Vectors. , 2022, , .		1
3	Measurement Matrix Design for Sample-Efficient Binary Compressed Sensing. IEEE Signal Processing Letters, 2022, 29, 1307-1311.	3.6	4
4	Fight the Pandemic: Highlights From the 2020 IEEE 5-Minute Video Clip Contest [SP Competitions]. IEEE Signal Processing Magazine, 2021, 38, 138-143.	5.6	0
5	No Relaxation: Guaranteed Recovery of Finite-Valued Signals from Undersampled Measurements. , 2021, , .		2
6	Fundamental Trade-Offs in Noisy Super-Resolution with Synthetic Apertures. , 2021, , .		4
7	Beyond Coarray MUSIC: Harnessing the Difference Sets of Nested Arrays With Limited Snapshots. IEEE Signal Processing Letters, 2021, 28, 2172-2176.	3.6	3
8	Resource-Efficient Active Compressive Sensing Using Analog Beamforming and Sparse Arrays. , 2021, , .		0
9	KR-LISTA: Re-Thinking Unrolling for Covariance-Driven Sparse Inverse Problems. , 2021, , .		1
10	Reliable DOA Estimation in Spatially Correlated Noise With Nonuniform Arrays. , 2021, , .		0
11	Exploring Fundamental Limits of Spatiotemporal Sensing for Non-Linear Inverse problems. , 2021, , .		0
12	Compressed Arrays and Hybrid Channel Sensing: A Cramér-Rao Bound Based Analysis. IEEE Signal Processing Letters, 2020, 27, 1395-1399.	3.6	5
13	Effect of Undersampling on Non-Negative Blind Deconvolution with Autoregressive Filters. , 2020, , .		2
14	Channel Estimation for Hybrid MIMO Communication with (Non-) Uniform Linear Arrays via Tensor Decomposition. , 2020, , .		1
15	Sample complexity trade-offs for synthetic aperture based high-resolution estimation and detection. , 2020, , .		6
16	Super-Resolution with Noisy Measurements: Reconciling Upper and Lower Bounds. , 2020, , .		3
17	Identifying brain network topology changes in task processes and psychiatric disorders. Network Neuroscience, 2020, 4, 257-273.	2.6	2
18	Robust DOA and Subspace Estimation for Hybrid Channel Sensing. , 2020, , .		3

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19	Guaranteed Localization of More Sources Than Sensors With Finite Snapshots in Multiple Measurement Vector Models Using Difference Co-Arrays. IEEE Transactions on Signal Processing, 2019, 67, 5715-5729.	5.3	44
20	On flattening of symmetric tensors and identification of latent factors. , 2019, , .		1
21	Canonical Polyadic (CP) Decomposition of Structured Semi-Symmetric Fourth-Order Tensors. , 2019, , .		0
22	Simplified and Enhanced Multiple Level Nested Arrays Exploiting High-Order Difference Co-Arrays. IEEE Transactions on Signal Processing, 2019, 67, 3502-3515.	5.3	52
23	A Non-convex Approach to Non-negative Super-resolution: Theory and Algorithm. , 2019, , .		4
24	A Sequential Approach for Sparse Support Recovery using Correlation Priors. , 2019, , .		4
25	Non-Asymptotic Guarantees for Correlation-Aware Support Detection. , 2018, , .		3
26	Simplified Algorithms for Canonical Polyadic Decomposition for Over-Complete Even Order Tensors (Ongoing Work). , 2018, , .		0
27	Mixed Factor Structured Tensor Decomposition via Solving Quadratic Equations. , 2018, , .		3
28	Compressive Kriging Using Multi-Dimensional Generalized Nested Sampling. , 2018, , .		1
29	Sparse Bayesian learning for beamforming using sparse linear arrays. Journal of the Acoustical Society of America, 2018, 144, 2719-2729.	1.1	52
30	Robust Sparse Phase Retrieval from Differential Measurements Using Reweighted Minimization. , 2018, , .		1
31	Beam-Pattern Design for Hybrid Beamforming Using Wirtinger Flow. , 2018, , .		3
32	Correlation Awareness in Low-Rank Models: Sampling, Algorithms, and Fundamental Limits. IEEE Signal Processing Magazine, 2018, 35, 56-71.	5.6	8
33	On Fundamental Limits of Joint Sparse Support Recovery Using Certain Correlation Priors. IEEE Transactions on Signal Processing, 2018, 66, 4612-4625.	5.3	28
34	On the Modulus of Continuity for Noisy Positive Super-Resolution. , 2018, , .		1
35	A greedy approach for correlation-aware sparse support recovery. , 2018, , .		4
36	Sparse source localization using perturbed arrays via bi-affine modeling. , 2017, 61, 15-25.		13

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37	Gridless Line Spectrum Estimation and Low-Rank Toeplitz Matrix Compression Using Structured Samplers: A Regularization-Free Approach. IEEE Transactions on Signal Processing, 2017, 65, 2221-2236.	5.3	47
38	Sampling Requirements for Stable Autoregressive Estimation. IEEE Transactions on Signal Processing, 2017, 65, 2333-2347.	5.3	7
39	On Maximum-Likelihood Methods for Localizing More Sources Than Sensors. IEEE Signal Processing Letters, 2017, 24, 703-706.	3.6	30
40	Unified analysis of co-array interpolation for direction-of-arrival estimation. , 2017, , .		34
41	On saturation of the Cramér Rao Bound for Sparse Bayesian Learning. , 2017, , .		1
42	Multiple hypothesis testing for dynamic support recovery. , 2017, , .		0
43	On canonical polyadic decomposition of overcomplete tensors of arbitrary even order. , 2017, , .		6
44	On the role of sampling and sparsity in phase retrieval for optical coherence tomography. , 2017, , .		3
45	Performance limits of covariance-driven super resolution imaging. , 2017, , .		3
46	Understanding the role of positive constraints in sparse bilinear problems. , 2017, , .		2
47	Spike localization in Zero Time of Echo (ZTE) magnetic resonance imaging. , 2017, , .		0
48	Correlation-aware sensing in active and passive modes for source localization. , 2016, , .		0
49	Exact localization of correlated sources using 2D harmonics retrieval. , 2016, , .		3
50	Finite sample analysis of covariance compression using structured samplers. , 2016, , .		1
51	Coprime coarray interpolation for DOA estimation via nuclear norm minimization. , 2016, , .		107
52	Cramér–Rao Bounds for Underdetermined Source Localization. IEEE Signal Processing Letters, 2016, 23, 919-923.	3.6	128
53	Sparse phase retrieval with near minimal measurements: A structured sampling based approach. , 2016, , .		2
54	Compressive spectrum sensing with spectral priors for cognitive radar. , 2016, , .		2

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55	Sparse phase retrieval using partial nested fourier samplers. , 2015, , .		2
56	Generalized Nested Sampling for Compressing Low Rank Toeplitz Matrices. IEEE Signal Processing Letters, 2015, 22, 1844-1848.	3.6	20
57	On the robustness of co-prime sampling. , 2015, , .		6
58	Sparse source localization in presence of co-array perturbations. , 2015, , .		8
59	Dictionary learning from quadratic measurements in block sparse models. , 2015, , .		0
60	Rank deficiency and sparsity in partially observed multiple measurement vector models. , 2015, , .		0
61	Pushing the Limits of Sparse Support Recovery Using Correlation Information. IEEE Transactions on Signal Processing, 2015, 63, 711-726.	5.3	160
62	The farey-dictionary for sparse representation of periodic signals. , 2014, , .		35
63	Parameter identifiability in Sparse Bayesian Learning. , 2014, , .		10
64	Generalized nested sampling for compression and exact recovery of symmetric Toeplitz matrices. , 2014, , .		12
65	An MDL Algorithm for Detecting More Sources Than Sensors Using Outer-Products of Array Output. IEEE Transactions on Signal Processing, 2014, 62, 6438-6453.	5.3	20
66	A Grid-Less Approach to Underdetermined Direction of Arrival Estimation Via Low Rank Matrix Denoising. IEEE Signal Processing Letters, 2014, 21, 737-741.	3.6	90
67	Why does direct-MUSIC on sparse-arrays work?. , 2013, , .		28
68	Nested Arrays in Two Dimensions, Part II: Application in Two Dimensional Array Processing. IEEE Transactions on Signal Processing, 2012, 60, 4706-4718.	5.3	123
69	Nested Arrays in Two Dimensions, Part I: Geometrical Considerations. IEEE Transactions on Signal Processing, 2012, 60, 4694-4705.	5.3	138
70	On application of LASSO for sparse support recovery with imperfect correlation awareness. , 2012, , .		41
71	Multiple Level Nested Array: An Efficient Geometry for $2q$th Order Cumulant Based Array Processing. IEEE Transactions on Signal Processing, 2012, 60, 1253-1269.	5.3	222
72	Correlation-aware techniques for sparse support recovery. , 2012, , .		41

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73	Direct-MUSIC on sparse arrays. , 2012, , .		42
74	Coprime sampling and the music algorithm. , 2011, , .		566
75	Generating New Commuting Coprime Matrix Pairs From Known Pairs. IEEE Signal Processing Letters, 2011, 18, 303-306.	3.6	0
76	Non uniform linear arrays for improved identifiability in cumulant based DOA Estimation. , 2011, , .		1
77	A General Approach to Coprime Pairs of Matrices, Based on Minors. IEEE Transactions on Signal Processing, 2011, 59, 3536-3548.	5.3	6
78	Sparse Sensing With Co-Prime Samplers and Arrays. IEEE Transactions on Signal Processing, 2011, 59, 573-586.	5.3	1,316
79	Coprimality of Certain Families of Integer Matrices. IEEE Transactions on Signal Processing, 2011, 59, 1481-1490.	5.3	9
80	Coprime sampling for system stabilization with FIR multirate controllers. , 2011, , .		3
81	Two dimensional nested arrays on lattices. , 2011, , .		1
82	Adjugate pairs of sparse arrays for sampling two dimensional signals. , 2011, , .		1
83	Sparse coprime sensing with multidimensional lattice arrays. , 2011, , .		10
84	Beamforming using passive nested arrays of sensors. , 2010, , .		9
85	Efficient frequency invariant beamforming using virtual arrays. , 2010, , .		6
86	Sparse sensing with coprime arrays. , 2010, , .		39
87	A novel array structure for directions-of-arrival estimation with increased degrees of freedom. , 2010, , .		27
88	Nested Arrays: A Novel Approach to Array Processing With Enhanced Degrees of Freedom. IEEE Transactions on Signal Processing, 2010, 58, 4167-4181.	5.3	1,544
89	System Identification With Sparse Coprime Sensing. IEEE Signal Processing Letters, 2010, 17, 823-826.	3.6	18
90	Frequency invariant MVDR beamforming without filters and implementation using MIMO radar. , 2009, , .		12

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91	MIMO radar with broadband waveforms: Smearing filter banks and 2D virtual arrays. , 2008, , .		9