Bhaskar D Rao

List of Publications by Year in Descending Order

135 papers	3,434 citations	25 h-index	56 g-index
166 ext. papers	4,397 ext. citations	5.2 avg, IF	6.02 L-index

#	Paper	IF	Citations
135	Block-Sparse Signal Recovery via General Total Variation Regularized Sparse Bayesian Learning. *IEEE Transactions on Signal Processing*, **2022**, 1-1	4.8	0
134	Modified Vector Quantization for Small-Cell Access Point Placement with Inter-Cell Interference. *IEEE Transactions on Wireless Communications*, **2022**, 1-1	9.6	1
133	Semi-Blind Channel Estimation in MIMO Systems With Discrete Priors on Data Symbols. *IEEE Signal Processing Letters*, **2021**, 1-1	3.2	1
132	Functional connectome fingerprinting using shallow feedforward neural networks. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	3
131	General Total Variation Regularized Sparse Bayesian Learning for Robust Block-Sparse Signal Recovery **2021**,		3
130	Access Point Placement for Hybrid UAV-Terrestrial Small-Cell Networks. *IEEE Open Journal of the Communications Society*, **2021**, 2, 1826-1841	6.7	1
129	Proportionate Adaptive Filtering Algorithms Derived Using an Iterative Reweighting Framework. *IEEE/ACM Transactions on Audio Speech and Language Processing*, **2021**, 29, 171-186	3.6	0
128	. *IEEE Transactions on Signal Processing*, **2021**, 69, 459-473	4.8	3
127	Is Vector Quantization Good Enough for Access Point Placement? **2021**,		1
126	ResNEsts and DenseNEsts: Block-based DNN Models with Improved Representation Guarantees.. *Advances in Neural Information Processing Systems*, **2021**, 34, 3413-3424	2.2	
125	A Sparse Conjugate Gradient Adaptive Filter. *IEEE Signal Processing Letters*, **2020**, 27, 1000-1004	3.2	3
124	Robustness of Sparse Bayesian Learning in Correlated Environments **2020**,		3
123	Highlights From the Machine Learning for Signal Processing Technical Committee [In the Spotlight]. *IEEE Signal Processing Magazine*, **2020**, 37, 202-200	9.4	
122	Jointly Leveraging Decorrelation and Sparsity for Improved Feedback Cancellation in Hearing Aids. **2020**, 2020, 121-125		3
121	Sparse Signal Recovery Using MPDR Estimation **2019**,		2
120	Sparse Bayesian Learning for Robust PCA **2019**,		1
119	A Wearable, Extensible, Open-Source Platform for Hearing Healthcare Research. *IEEE Access*, **2019**, 7, 162083-162101	3.5	7

118	On Mitigating Acoustic Feedback in Hearing Aids with Frequency Warping by All-Pass Networks. *Interspeech*, **2019**, 2019, 4245-4249	1.3	1
117	Throughput and Delay Driven Access Point Placement **2019**,		3
116	Nuisance effects and the limitations of nuisance regression in dynamic functional connectivity fMRI. *NeuroImage*, **2019**, 184, 1005-1031	7.9	16
115	Robust PCA via ℓ_{0}-ℓ_{1} Regularization. *IEEE Transactions on Signal Processing*, **2019**, 67, 535-549	4.8	7
114	Superfast Line Spectral Estimation. *IEEE Transactions on Signal Processing*, **2018**, 66, 2511-2526	4.8	21
113	Robust Linear Regression via ℓ_0 Regularization. *IEEE Transactions on Signal Processing*, **2018**, 66, 698-713	4.8	24
112	A Covariance-Based Superpositional CPHD Filter for Multisource DOA Tracking. *IEEE Transactions on Signal Processing*, **2018**, 66, 309-323	4.8	12
111	Semi-blind Channel Estimation for Multiuser Massive MIMO Systems. *IEEE Transactions on Signal Processing*, **2018**, 66, 540-553	4.8	31
110	Empirical Bayes based relative impulse response estimation. *Journal of the Acoustical Society of America*, **2018**, 143, 3922	2.2	4
109	Rectified Gaussian Scale Mixtures and the Sparse Non-Negative Least Squares Problem. *IEEE Transactions on Signal Processing*, **2018**, 66, 3124-3139	4.8	6
108	A GAMP-Based Low Complexity Sparse Bayesian Learning Algorithm. *IEEE Transactions on Signal Processing*, **2018**, 66, 294-308	4.8	62
107	A Wearable Platform for Research in Augmented Hearing. *Conference Record of the Asilomar Conference on Signals, Systems and Computers*, **2018**, 2018, 223-227	0.3	4
106	Access Point Location Design in Cell-Free Massive MIMO Systems **2018**,		3
105	Addressing the Noise Variance Problem in Sparse Bayesian Learning **2018**,		2
104	Recovery of Independent Sparse Sources From Linear Mixtures Using Sparse Bayesian Learning. *IEEE Transactions on Signal Processing*, **2018**, 66, 6332-6346	4.8	3
103	**2018**,		4
102	Global signal regression acts as a temporal downweighting process in resting-state fMRI. *NeuroImage*, **2017**, 152, 602-618	7.9	35
101	Compressed Sensing for Wireless Communications: Useful Tips and Tricks. *IEEE Communications Surveys and Tutorials*, **2017**, 19, 1527-1550	37.1	163

No.	Title	IF	Cites
100	Precoding and Power Optimization in Cell-Free Massive MIMO Systems. *IEEE Transactions on Wireless Communications*, **2017**, 16, 4445-4459	9.6	258
99	Minimum Description Length Sparse Modeling and Region Merging for Lossless Plenoptic Image Compression. *IEEE Journal on Selected Topics in Signal Processing*, **2017**, 11, 1146-1161	7.5	14
98	Speech quality and stable gain trade-offs in adaptive feedback cancellation for hearing aids. *Journal of the Acoustical Society of America*, **2017**, 142, EL388	2.2	10
97	A Realtime, Open-Source Speech-Processing Platform for Research in Hearing Loss Compensation.. *Conference Record of the Asilomar Conference on Signals, Systems and Computers*, **2017**, 2017, 1900-1904	0.3	6
96	Multimodal sparse Bayesian dictionary learning applied to multimodal data classification **2017**,		4
95	Transmit Beamforming and Power Control for Optimizing the Outage Probability Fairness in MISO Networks. *IEEE Transactions on Communications*, **2017**, 65, 839-850	6.9	11
94	Robust Bayesian method for simultaneous block sparse signal recovery with applications to face recognition **2016**,		4
93	Delay Control for Temporally Fair Scheduling Policies via Opportunistic Mixing. *IEEE Transactions on Signal Processing*, **2016**, 64, 5011-5024	4.8	2
92	Correlation learning on joint support recovery for more sources than measurements **2016**,		3
91	Performance of cell-free massive MIMO systems with MMSE and LSFD receivers **2016**,		56
90	Type I and Type II Bayesian Methods for Sparse Signal Recovery Using Scale Mixtures. *IEEE Transactions on Signal Processing*, **2016**, 64, 3418-3428	4.8	59
89	Sparse modelling and predictive coding of subaperture images for lossless plenoptic image compression **2016**,		24
88	Learning Distributional Parameters for Adaptive Bayesian Sparse Signal Recovery. *IEEE Computational Intelligence Magazine*, **2016**, 11, 14-23	5.6	3
87	Joint Channel Estimation and Data Detection in MIMO-OFDM Systems: A Sparse Bayesian Learning Approach. *IEEE Transactions on Signal Processing*, **2015**, 63, 5369-5382	4.8	77
86	Fair Scheduling Policies Exploiting Multiuser Diversity in Cellular Systems With Device-to-Device Communications. *IEEE Transactions on Wireless Communications*, **2015**, 14, 4757-4771	9.6	4
85	CDF Scheduling Methods for Finite Rate Multiuser Systems With Limited Feedback. *IEEE Transactions on Wireless Communications*, **2015**, 14, 3086-3096	9.6	4
84	Channel estimation using joint dictionary learning in FDD massive MIMO systems **2015**,		14
83	Joint dictionary learning and recovery algorithms in a jointly sparse framework **2015**,		5

82	Optimal Fair Opportunistic Scheduling For Wireless Systems Via Classification Framework. *IEEE Transactions on Cognitive Communications and Networking*, **2015**, 1, 185-199	6.6	2
81	A sparse Bayesian learning algorithm with dictionary parameter estimation **2014**,		11
80	Learning Methods for CDF Scheduling in Multiuser Heterogeneous Systems. *IEEE Transactions on Signal Processing*, **2014**, 62, 3727-3740	4.8	5
79	Joint Approximately Sparse Channel Estimation and Data Detection in OFDM Systems Using Sparse Bayesian Learning. *IEEE Transactions on Signal Processing*, **2014**, 62, 3591-3603	4.8	78
78	Bootstrapped sparse Bayesian learning for sparse signal recovery **2014**,		3
77	Optimal scheduling policies and the performance of the CDF scheduling **2014**,		1
76	Location aided semi-blind interference alignment for clustered small cell networks **2014**,		1
75	Semi-Blind Interference Alignment Techniques for Small Cell Networks. *IEEE Transactions on Signal Processing*, **2014**, 62, 6335-6348	4.8	36
74	Delay control for CDF scheduling using Markov decision process **2014**,		2
73	Performance Analysis of Heterogeneous Feedback Design in an OFDMA Downlink With Partial and Imperfect Feedback. *IEEE Transactions on Signal Processing*, **2013**, 61, 1033-1046	4.8	15
72	An ICA-SCT-PHD Filter Approach for Tracking and Separation of Unknown Time-Varying Number of Sources. *IEEE Transactions on Audio Speech and Language Processing*, **2013**, 21, 828-841		15
71	An Analytical Framework for Heterogeneous Partial Feedback Design in Heterogeneous Multicell OFDMA Networks. *IEEE Transactions on Signal Processing*, **2013**, 61, 753-769	4.8	29
70	. *IEEE Transactions on Signal Processing*, **2013**, 61, 2009-2015	4.8	306
69	Opportunistic Channel-Aware Spectrum Access for Cognitive Radio Networks with Interleaved Transmission and Sensing. *IEEE Transactions on Wireless Communications*, **2013**, 12, 2376-2388	9.6	13
68	Joint Beamforming and Power Control in Coordinated Multicell: Max-Min Duality, Effective Network and Large System Transition. *IEEE Transactions on Wireless Communications*, **2013**, 12, 2730-2742	9.6	69
67	Multiuser Diversity in Interfering Broadcast Channels: Achievable Degrees of Freedom and User Scaling Law. *IEEE Transactions on Wireless Communications*, **2013**, 12, 5837-5849	9.6	7
66	Random Beamforming with Heterogeneous Users and Selective Feedback: Individual Sum Rate and Individual Scaling Laws. *IEEE Transactions on Wireless Communications*, **2013**, 12, 2080-2090	9.6	15
65	Novel partial feedback schemes and their evaluation in an OFDMA system with CDF based scheduling **2013**,		3

64	Support Recovery of Sparse Signals in the Presence of Multiple Measurement Vectors. *IEEE Transactions on Information Theory*, **2013**, 59, 3139-3157	2.8	24
63	Opportunistic Spectrum Access for Cognitive Radio Networks withMultiple Secondary Users. *IEEE Transactions on Wireless Communications*, **2013**, 12, 6214-6227	9.6	6
62	Opportunistic channel-aware spectrum access for cognitive radio networks with periodic sensing **2013**,		3
61	Throughput improvements for cellular systems with device-to-device communications **2013**,		1
60	Performance of a Multiuser Downlink System Applying Thresholding Feedback with Imperfect Channel Information **2013**,		1
59	Closed Form Sum Rate of Random Beamforming. *IEEE Communications Letters*, **2012**, 16, 630-633	3.8	8
58	Compressed sensing based scalable speech coders **2012**,		4
57	Opportunistic beamforming in a downlink distributed antenna system with linear receivers **2012**,		4
56	Awareness of Channel Statistics for Slow Cyclic Prefix Adaptation in an OFDMA System. *IEEE Wireless Communications Letters*, **2012**, 1, 332-335	5.9	9
55	Multicell network duality with instantaneous and statistical channel information: A nonlinear Perron-Frobenius characterization **2012**,		5
54	Techniques for MIMO Channel Covariance Matrix Quantization. *IEEE Transactions on Signal Processing*, **2012**, 60, 3340-3345	4.8	10
53	Adaptive Opportunistic Routing for Wireless Ad Hoc Networks. *IEEE/ACM Transactions on Networking*, **2012**, 20, 243-256	3.8	55
52	Heterogeneous partial feedback design in heterogeneous OFDMA cellular networks **2012**,		1
51	Sum rate analysis and quantizer design for a quantized heterogeneous feedback MIMO OFDMA downlink **2012**,		1
50	Outage balancing in multiuser MISO networks: Network duality and algorithms **2012**,		9
49	Weighted CDF-based scheduling for an OFDMA relay downlink with partial feedback **2012**,		4
48	On the benefits of the block-sparsity structure in sparse signal recovery **2012**,		8
47	Iterative reweighted algorithms for sparse signal recovery with temporally correlated source vectors **2011**,		15

46	Sparse Signal Recovery With Temporally Correlated Source Vectors Using Sparse Bayesian Learning. *IEEE Journal on Selected Topics in Signal Processing*, **2011**, 5, 912-926	7.5	485
45	Limits on Support Recovery of Sparse Signals via Multiple-Access Communication Techniques. *IEEE Transactions on Information Theory*, **2011**, 57, 7877-7892	2.8	19
44	Distributed Quantization of Order Statistics with Applications to CSI Feedback **2011**,		1
43	Sum rate enhancement by maximizing SGINR in an opportunistic interference alignment scheme **2011**,		7
42	Environmental-aware heterogeneous partial feedback design in a multiuser OFDMA system **2011**,		2
41	Design and analysis of a narrowband filter for optical platform **2011**,		3
40	Separation and tracking of multiple speakers in a reverberant environment using a multiple model particle filter glimpsing method **2011**,		2
39	High-Rate Vector Quantization for Noisy Channels With Applications to Wideband Speech Spectrum Compression. *IEEE Transactions on Signal Processing*, **2011**, 59, 5390-5403	4.8	3
38	Reduced Feedback Schemes Using Random Beamforming in MIMO Broadcast Channels. *IEEE Transactions on Signal Processing*, **2010**, 58, 1821-1832	4.8	22
37	Performance tradeoffs for exact support recovery of sparse signals **2010**,		3
36	Glimpsing independent vector analysis: Separating more sources than sensors using active and inactive states **2010**,		2
35	On the role of the properties of the nonzero entries on sparse signal recovery **2010**,		2
34	Sparse signal recovery in the presence of correlated multiple measurement vectors **2010**,		31
33	Packet Error Probability of a Transmit Beamforming System With Imperfect Feedback. *IEEE Transactions on Signal Processing*, **2010**, 58, 2298-2314	4.8	12
32	Outage-Efficient Strategies for Multiuser MIMO Networks With Channel Distribution Information. *IEEE Transactions on Signal Processing*, **2010**, 58, 6312-6324	4.8	25
31	Reducing out-of-band radiation of OFDM-based cognitive radios **2010**,		8
30	A Two Microphone-Based Approach for Source Localization of Multiple Speech Sources. *IEEE Transactions on Audio Speech and Language Processing*, **2010**, 18, 1913-1928		47
29	Glimpsing IVA: A Framework for Overcomplete/Complete/Undercomplete Convolutive Source Separation. *IEEE Transactions on Audio Speech and Language Processing*, **2010**, 18, 1841-1855		8

28	Audiovisual Information Fusion in Human⬜Computer Interfaces and Intelligent Environments: A Survey. *Proceedings of the IEEE*, **2010**, 98, 1692-1715	14.3	75
27	Audio-Visual Fusion and Tracking With Multilevel Iterative Decoding: Framework and Experimental Evaluation. *IEEE Journal on Selected Topics in Signal Processing*, **2010**, 4, 882-894	7.5	24
26	Role of head pose estimation in speech acquisition from distant microphones **2009**,		8
25	Combining independent component analysis with geometric information and its application to speech processing **2009**,		4
24	Independent vector analysis incorporating active and inactive states **2009**,		6
23	Two microphone based direction of arrival estimation for multiple speech sources using spectral properties of speech **2009**,		3
22	Performance analysis of transmit beamforming for MISO systems with imperfect feedback. *IEEE Transactions on Communications*, **2009**, 57, 222-231	6.9	14
21	Optimum Codebook Design and Average SEP Loss Analysis of Spatially Independent and Correlated Feedback Based MISO Systems With Rectangular QAM Constellation. *IEEE Transactions on Signal Processing*, **2009**, 57, 2017-2024	4.8	1
20	Performance of Quantized Equal Gain Transmission With Noisy Feedback Channels. *IEEE Transactions on Signal Processing*, **2008**, 56, 2451-2460	4.8	11
19	An Analytically Tractable Approximation for the Gaussian Q-Function. *IEEE Communications Letters*, **2008**, 12, 669-671	3.8	69
18	Capacity Analysis of MIMO Systems Using Limited Feedback Transmit Precoding Schemes. *IEEE Transactions on Signal Processing*, **2008**, 56, 2886-2901	4.8	12
17	Analyzing the Effect of Channel Estimation Errors on the Average Block Error Probability of a MISO Transmit Beamforming System **2008**,		1
16	Insights into the stable recovery of sparse solutions in overcomplete representations using network information theory. *Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing*, **2008**,	1.6	1
15	On the capacity of MIMO broadcast channels with reduced feedback by antenna selection **2008**,		1
14	Multimodal information fusion using the iterative decoding algorithm and its application to audio-visual speech recognition. *Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing*, **2008**,	1.6	10
13	An Empirical Bayesian Strategy for Solving the Simultaneous Sparse Approximation Problem. *IEEE Transactions on Signal Processing*, **2007**, 55, 3704-3716	4.8	461
12	Quantization Methods for Equal Gain Transmission With Finite Rate Feedback. *IEEE Transactions on Signal Processing*, **2007**, 55, 233-245	4.8	36
11	Analysis of Multiple-Antenna Systems With Finite-Rate Feedback Using High-Resolution Quantization Theory. *IEEE Transactions on Signal Processing*, **2007**, 55, 1461-1476	4.8	47

List of Publications

#	Publication		
10	Analysis of Multiple Antenna Systems With Finite-Rate Channel Information Feedback Over Spatially Correlated Fading Channels. *IEEE Transactions on Signal Processing*, **2007**, 55, 4612-4626	4.8	14
9	Robust Feature Extraction for Continuous Speech Recognition Using the MVDR Spectrum Estimation Method. *IEEE Transactions on Audio Speech and Language Processing*, **2007**, 15, 224-234		29
8	High-Rate Optimized Recursive Vector Quantization Structures Using Hidden Markov Models. *IEEE Transactions on Audio Speech and Language Processing*, **2007**, 15, 756-769		4
7	A High-Rate Optimal Transform Coder With Gaussian Mixture Companders. *IEEE Transactions on Audio Speech and Language Processing*, **2007**, 15, 770-783		2
6	Network Duality for Multiuser MIMO Beamforming Networks and Applications. *IEEE Transactions on Communications*, **2007**, 55, 618-630	6.9	79
5	Performance Analysis of Finite Rate Feedback MISO Systems in the Presence of Estimation Errors and Delay. *Conference Record of the Asilomar Conference on Signals, Systems and Computers*, **2007**,	0.3	7
4	Performance Evaluation of Latent Variable Models with Sparse Priors **2007**,		5
3	Efficient feedback methods for MIMO channels based on parameterization. *IEEE Transactions on Wireless Communications*, **2007**, 6, 282-292	9.6	42
2	Average SEP Loss Analysis of Transmit Beamforming for Finite Rate Feedback MISO Systems with QAM Constellation **2007**,		2
1	Ergodicity of Wireless Channels and Temporal Prediction **2006**,		1