

# Kannan Ramchandran

## List of Publications by Year in descending order

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82  
papers

4,357  
citations

304743

22  
h-index

243625

44  
g-index

82  
all docs

82  
docs citations

82  
times ranked

2701  
citing authors

#	ARTICLE	IF	CITATIONS
1	Network Coding for Distributed Storage Systems. IEEE Transactions on Information Theory, 2010, 56, 4539-4551.	2.4	1,441
2	Multiplexed coded illumination for Fourier Ptychography with an LED array microscope. Biomedical Optics Express, 2014, 5, 2376.	2.9	452
3	PRISM: A Video Coding Paradigm With Motion Estimation at the Decoder. IEEE Transactions on Image Processing, 2007, 16, 2436-2448.	9.8	267
4	Distributed Storage Codes With Repair-by-Transfer and Nonachievability of Interior Points on the Storage-Bandwidth Tradeoff. IEEE Transactions on Information Theory, 2012, 58, 1837-1852.	2.4	184
5	Asymptotic Interference Alignment for Optimal Repair of MDS Codes in Distributed Storage. IEEE Transactions on Information Theory, 2013, 59, 2974-2987.	2.4	146
6	Securing Dynamic Distributed Storage Systems Against Eavesdropping and Adversarial Attacks. IEEE Transactions on Information Theory, 2011, 57, 6734-6753.	2.4	142
7	Exact-Repair MDS Code Construction Using Interference Alignment. IEEE Transactions on Information Theory, 2011, 57, 1425-1442.	2.4	131
8	Fractional repetition codes for repair in distributed storage systems. , 2010, , .		126
9	Information-Theoretic Limits on Sparse Signal Recovery: Dense versus Sparse Measurement Matrices. IEEE Transactions on Information Theory, 2010, 56, 2967-2979.	2.4	111
10	When Do Redundant Requests Reduce Latency?. IEEE Transactions on Communications, 2016, 64, 715-722.	7.8	92
11	Robust Predictive Quantization: Analysis and Design Via Convex Optimization. IEEE Journal on Selected Topics in Signal Processing, 2007, 1, 618-632.	10.8	91
12	Toward Compression of Encrypted Images and Video Sequences. IEEE Transactions on Information Forensics and Security, 2008, 3, 749-762.	6.9	59
13	High-Speed Action Recognition and Localization in Compressed Domain Videos. IEEE Transactions on Circuits and Systems for Video Technology, 2008, 18, 1006-1015.	8.3	51
14	DRESS codes for the storage cloud: Simple randomized constructions. , 2011, , .		50
15	Perturbed Iterate Analysis for Asynchronous Stochastic Optimization. SIAM Journal on Optimization, 2017, 27, 2202-2229.	2.0	50
16	Distributed Sparse Random Projections for Refinable Approximation. , 2007, , .		47
17	Hybrid Digital-Analog Codes for Source-Channel Broadcast of Gaussian Sources Over Gaussian Channels. IEEE Transactions on Information Theory, 2011, 57, 4573-4588.	2.4	47
18	Deterministic algorithm for the cooperative data exchange problem. , 2011, , .		39

#	ARTICLE	IF	CITATIONS
19	Towards a theory for video coding using distributed compression principles. , 0, , .		36
20	Secrecy via Sources and Channels. IEEE Transactions on Information Theory, 2012, 58, 6747-6765.	2.4	33
21	Total System Energy Minimization for Wireless Image Transmission. Journal of Signal Processing Systems, 2001, 27, 99-117.	1.0	31
22	PhaseCode: Fast and Efficient Compressive Phase Retrieval Based on Sparse-Graph Codes. IEEE Transactions on Information Theory, 2017, 63, 3663-3691.	2.4	31
23	Multi-Antenna Interference Cancellation Techniques for Cognitive Radio Applications. , 2009, , .		30
24	Efficient file synchronization: A distributed source coding approach. , 2011, , .		30
25	Efficient Private Information Retrieval Over Unsynchronized Databases. IEEE Journal on Selected Topics in Signal Processing, 2015, 9, 1229-1239.	10.8	29
26	Unequal Growth Codes: Intermediate Performance and Unequal Error Protection for Video Streaming. , 2007, , .		26
27	High-Resolution Distributed Sampling of Bandlimited Fields With Low-Precision Sensors. IEEE Transactions on Information Theory, 2011, 57, 476-492.	2.4	25
28	SAFFRON: A fast, efficient, and robust framework for group testing based on sparse-graph codes. , 2016, , .		25
29	A Graph-Based Framework for Transmission of Correlated Sources Over Multiple-Access Channels. IEEE Transactions on Information Theory, 2007, 53, 4583-4604.	2.4	24
30	Cognitive Radio Through Primary Control Feedback. IEEE Journal on Selected Areas in Communications, 2011, 29, 384-393.	14.0	24
31	Efficient Algorithms for the Data Exchange Problem. IEEE Transactions on Information Theory, 2016, 62, 1878-1896.	2.4	24
32	Hiding the Rumor Source. IEEE Transactions on Information Theory, 2017, 63, 6679-6713.	2.4	23
33	Optimal DNA shotgun sequencing: Noisy reads are as good as noiseless reads. , 2013, , .		22
34	Low-Complexity Interactive Algorithms for Synchronization From Deletions, Insertions, and Substitutions. IEEE Transactions on Information Theory, 2015, 61, 5670-5689.	2.4	22
35	Interactive low-complexity codes for synchronization from deletions and insertions. , 2010, , .		21
36	Achievable Rates for Channels With Deletions and Insertions. IEEE Transactions on Information Theory, 2013, 59, 6990-7013.	2.4	21

#	ARTICLE	IF	CITATIONS
37	Spline-Like Wavelet Filterbanks for Multiresolution Analysis of Graph-Structured Data. IEEE Transactions on Signal and Information Processing Over Networks, 2015, 1, 268-278.	2.8	20
38	Gradient Coding Based on Block Designs for Mitigating Adversarial Stragglers. , 2019, , .		20
39	A distributed and adaptive signal processing approach to exploiting correlation in sensor networks. Ad Hoc Networks, 2004, 2, 387-403.	5.5	19
40	Epistatic Net allows the sparse spectral regularization of deep neural networks for inferring fitness functions. Nature Communications, 2021, 12, 5225.	12.8	18
41	Colored Gaussian Sourceâ€“Channel Broadcast for Heterogeneous (Analog/Digital) Receivers. IEEE Transactions on Information Theory, 2008, 54, 1807-1814.	2.4	17
42	One-Way Private Media Search on Public Databases: The Role of Signal Processing. IEEE Signal Processing Magazine, 2013, 30, 53-61.	5.6	17
43	PhaseCode: Fast and efficient compressive phase retrieval based on sparse-graph codes. , 2014, , .		16
44	Sub-Linear Time Support Recovery for Compressed Sensing Using Sparse-Graph Codes. IEEE Transactions on Information Theory, 2019, 65, 6580-6619.	2.4	14
45	SAFFRON: A Fast, Efficient, and Robust Framework for Group Testing Based on Sparse-Graph Codes. IEEE Transactions on Signal Processing, 2019, 67, 4649-4664.	5.3	14
46	The Role of Signal Processing in Meeting Privacy Challenges: An Overview. IEEE Signal Processing Magazine, 2013, 30, 95-106.	5.6	13
47	View Synthesis for Robust Distributed Video Compression in Wireless Camera Networks. , 2007, , .		12
48	Coding of Image Feature Descriptors for Distributed Rate-efficient Visual Correspondences. International Journal of Computer Vision, 2011, 94, 267-281.	15.6	12
49	A compression algorithm using mis-aligned side-information. , 2012, , .		12
50	Syndrome-Based Robust Video Transmission Over Networks with Bursty Losses. , 2006, , .		11
51	Securing dynamic distributed storage systems from malicious nodes. , 2011, , .		11
52	Distributed Secret Dissemination Across a Network. IEEE Journal on Selected Topics in Signal Processing, 2015, 9, 1206-1216.	10.8	11
53	Communication-Efficient and Byzantine-Robust Distributed Learning With Error Feedback. IEEE Journal on Selected Areas in Information Theory, 2021, 2, 942-953.	2.5	10
54	Dithered A/D Conversion of Smooth Non-Bandlimited Signals. IEEE Transactions on Signal Processing, 2010, 58, 2654-2666.	5.3	9

#	ARTICLE	IF	CITATIONS
55	On scheduling redundant requests with cancellation overheads. , 2015, , .		9
56	A Fast and Robust Paradigm for Fourier Compressed Sensing Based on Coded Sampling. , 2019, , .		8
57	On decoder-latency versus performance tradeoffs in differential predictive coding. , 0, , .		7
58	Sparse covariance estimation based on sparse-graph codes. , 2015, , .		7
59	On multivariate estimation by thresholding. , 0, , .		6
60	Communication-Efficient Gradient Coding for Straggler Mitigation in Distributed Learning. , 2020, , .		6
61	CRISPR and $\lambda$ -scp: Interpretable large-scale inference of DNA repair landscape based on a spectral approach. <i>Bioinformatics</i> , 2020, 36, i560-i568.	4.1	6
62	Rumor Source Obfuscation on Irregular Trees. <i>Performance Evaluation Review</i> , 2016, 44, 153-164.	0.6	6
63	Compressed sensing using sparse-graph codes for the continuous-alphabet setting. , 2016, , .		5
64	Fast sparse 2-D DFT computation using sparse-graph alias codes. , 2016, , .		5
65	Asynchronous and noncoherent neighbor discovery for the IoT using sparse-graph codes. , 2017, , .		5
66	A Real-Time, 1.89-GHz Bandwidth, 175-kHz Resolution Sparse Spectral Analysis RISC-V SoC in 16-nm FinFET. <i>IEEE Journal of Solid-State Circuits</i> , 2019, 54, 1993-2008.	5.4	5
67	Robust wireless video multicast based on a distributed source coding approach. <i>Signal Processing</i> , 2006, 86, 3196-3211.	3.7	4
68	A Real-Time, Analog/Digital Co-Designed 1.89-GHz Bandwidth, 175-kHz Resolution Sparse Spectral Analysis RISC-V SoC in 16-nm FinFET. , 2018, , .		4
69	Robust Video Transmission With Distributed Source Coded Auxiliary Channel. <i>IEEE Transactions on Image Processing</i> , 2009, 18, 2695-2705.	9.8	3
70	Low-degree Pseudo-Boolean Function Recovery Using Codes. , 2019, , .		3
71	Metadata-conscious anonymous messaging. <i>IEEE Transactions on Signal and Information Processing Over Networks</i> , 2016, , 1-1.	2.8	2
72	Adaptive Douglas-Rachford Splitting Algorithm from a Yosida Approximation Standpoint. <i>SIAM Journal on Optimization</i> , 2021, 31, 1971-1998.	2.0	2

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73	Coding for sensor networks using untuned radios. , 0, , .		1
74	Unsupervised Discovery of Action Hierarchies in Large Collections of Activity Videos. , 2007, , .		1
75	Guest Editorial Communication Methodologies for the Next-Generation Storage Systems. IEEE Journal on Selected Areas in Communications, 2014, 32, 809-814.	14.0	1
76	Capacity-approaching PhaseCode for low-complexity compressive phase retrieval. , 2015, , .		1
77	The Square Root Agreement Rule for Incentivizing Truthful Feedback on Online Platforms. Management Science, 0, , .	4.1	1
78	On Source Encoding with Side-information Under Ambiguous State of Nature. , 2006, , .		0
79	Correction to "On Functional Duality in Multiuser Source and Channel Coding Problems Having One-Sided Collaboration" [Jul 06 2986-3002]. IEEE Transactions on Information Theory, 2010, 56, 4763-4763.	2.4	0
80	A sparse-graph-coded filter bank approach to minimum-rate spectrum-blind sampling. , 2016, , .		0
81	Density evolution on a class of smeared random graphs. , 2017, , .		0
82	Fast Compressive Large-Scale Matrix-Matrix Multiplication Using Product Codes. , 2020, , .		0