Rodney A Kennedy

List of Publications by Year
in descending order

175 papers	4,843 citations	304368 22 h-index	114278 63 g-index
177 all docs	177 docs citations	177 times ranked	3557 citing authors

#	ARTICLE	IF	CITATIONS
1	Finite Blocklength Entropy-Achieving Coding for Linear System Stabilization. IEEE Transactions on Automatic Control, 2021, 66, 153-167.	3.6	2
2	Differential and Weighted Slepian Concentration Problems on the Sphere. IEEE Transactions on Signal Processing, 2020, 68, 2830-2840.	3.2	2
3	Accurate Reconstruction of Finite Rate of Innovation Signals on the Sphere. , 2019, , .		1
4	Symbol-by-Symbol Maximum Likelihood Detection for Cooperative Molecular Communication. IEEE Transactions on Communications, 2019, 67, 4885-4899.	4.9	16
5	Representing, Sampling and Reconstructing Diffusion MRI Signal in Space and Time. , 2019, , .		0
6	Design of a Spatially Constrained Anti-aliasing Filter using Slepian Functions on the Sphere. , 2019, , .		0
7	Spatially-Limited Sampling of Band-Limited Signals on the Sphere. , 2018, , .		1
8	Efficient Computation of Slepian Functions on the Real Line. , 2018, , .		0
9	Efficient Sampling on HEALPix Grid. , 2018, , .		0
10	An Improved Iterative Algorithm for Band-Limited Signal Extrapolation on the Sphere. , 2018, , .		0
11	Maximum Likelihood Detection for Cooperative Molecular Communication. , 2018, , .		7
12	An Optimal-Dimensionality Sampling for Spin-s Functions on the Sphere. IEEE Signal Processing Letters, 2018, 25, 1470-1474.	2.1	0
13	Determining Optimal Rates for Communication for Omniscience. IEEE Transactions on Information Theory, 2018, 64, 1919-1944.	1.5	10
14	Finite-Horizon Throughput Region for Wireless Multi-User Interference Channels. IEEE Transactions on Wireless Communications, 2017, 16, 634-646.	6.1	2
15	Slepian Spatial-Spectral Concentration Problem on the Sphere: Analytical Formulation for Limited Colatitude–Longitude Spatial Region. IEEE Transactions on Signal Processing, 2017, 65, 1527-1537.	3.2	11
16	A practical approach for successive omniscience. , 2017, , .		2
17	Robust reconstruction of spherical signals with finite rate of innovation. , 2017, , .		2
18	Signal analysis on the ball: Design of optimal basis functions with maximal multiplicative concentration in spatial and spectral domains. , 2017, , .		0

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19	Improving the spatial dimensionality of Gauss-Legendre and equiangular sampling schemes on the sphere. , 2017, , .		0
20	An optimal dimensionality multi-shell sampling scheme with accurate and efficient transforms for diffusion MRI. , 2017, , .		1
21	On the choice of Kernel for signal interpolation on the sphere using reproducing kernel Hilbert spaces. , 2017, , .		0
22	Fast extrapolation of band-limited signals on the 2-sphere. , 2017, , .		0
23	Efficient Computation of Slepian Functions for Arbitrary Regions on the Sphere. IEEE Transactions on Signal Processing, 2017, 65, 4379-4393.	3.2	13
24	Convex Optimization of Distributed Cooperative Detection in Multi-Receiver Molecular Communication. IEEE Transactions on Molecular, Biological, and Multi-Scale Communications, 2017, 3, 166-182.	1.4	28
25	Iterative residual fitting for spherical harmonic transform of band-limited signals on the sphere: Generalization and analysis. , 2017, , .		1
26	Optimal-dimensionality sampling on the sphere: Improvements and variations. , 2017, , .		1
27	Fairness in communication for omniscience. , 2016, , .		2
28	A Faster Algorithm for Asymptotic Communication for Omniscience. , 2016, , .		3
29	Comparative analysis of geometrical properties of sampling schemes on the sphere. , 2016, , .		1
30	Distributed Cooperative Detection for Multi-Receiver Molecular Communication. , 2016, , .		13
31	Multi-Cell Multiuser Massive MIMO Networks: User Capacity Analysis and Pilot Design. IEEE Transactions on Communications, 2016, 64, 5064-5077.	4.9	36
32	On Monotonicity of the Optimal Transmission Policy in Cross-Layer Adaptive m-QAM Modulation. IEEE Transactions on Communications, 2016, 64, 3771-3785.	4.9	4
33	Timing and carrier synchronization in wireless communication systems: a survey and classification of research in the last 5 years. Eurasip Journal on Wireless Communications and Networking, 2016, 2016, .	1.5	64
34	Rate-Achieving Policy in Finite-Horizon Throughput Region for Multi-User Interference Channels. , 2016, , .		0
35	User Load Analysis and Pilot Sequence Design for Multi-Cell Massive MIMO Networks. , 2016, , .		5
36	A game-theoretic perspective on communication for omniscience. , 2016, , .		6

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37	Slepian spatial-spectral concentration on the ball. Applied and Computational Harmonic Analysis, 2016, 40, 470-504.	1.1	8
38	An Optimal Dimensionality Sampling Scheme on the Sphere with Accurate and Efficient Spherical Harmonic Transform for Diffusion MRI. IEEE Signal Processing Letters, 2016, 23, 15-19.	2.1	19
39	Spherical Harmonic Expansion of Fisher–Bingham Distribution and 3-D Spatial Fading Correlation for Multiple-Antenna Systems. IEEE Transactions on Vehicular Technology, 2016, 65, 5695-5700.	3.9	3
40	Gauss-Legendre Sampling on the Rotation Group. IEEE Signal Processing Letters, 2016, 23, 207-211.	2.1	1
41	Discrete Convexity and Stochastic Approximation for Cross-layer On– off Transmission Control. IEEE Transactions on Wireless Communications, 2016, 15, 389-400.	6.1	4
42	Joint Resource Optimization for Multicell Networks With Wireless Energy Harvesting Relays. IEEE Transactions on Vehicular Technology, 2016, 65, 6168-6183.	3.9	101
43	On the Use of Antipodal Optimal Dimensionality Sampling Scheme on the Sphere for Recovering Intra-Voxel Fibre Structure in Diffusion MRI. Mathematics and Visualization, 2016, , 75-86.	0.4	3
44	An optimal dimensionality sampling scheme on the sphere for antipodal signals in diffusion magnetic resonance imaging. , 2015, , .		5
45	Spherical harmonic transform for minimum dimensionality regular grid sampling on the sphere. , 2015, , .		1
46	On the use of Slepian functions for the reconstruction of the head-related transfer function on the sphere. , 2015, , .		2
47	Structured optimal transmission control in network-coded two-way relay channels. Eurasip Journal on Wireless Communications and Networking, 2015, 2015, .	1.5	0
48	Analysis and performance of CMA blind deconvolution for image restoration. International Journal of Adaptive Control and Signal Processing, 2015, 29, 1135-1151.	2.3	1
49	Empirical Determination of Frequency Representation in Spherical Harmonics-Based HRTF Functional Modeling. IEEE/ACM Transactions on Audio Speech and Language Processing, 2015, 23, 351-360.	4.0	3
50	Maximal multiplicative spatial-spectral concentration on the sphere: Optimal basis. , 2015, , .		3
51	Fairest constant sum-rate transmission for cooperative data exchange: An M-convex minimization approach. , 2015, , .		5
52	Estimating minimum sum-rate for cooperative data exchange. , 2015, , .		6
53	3D Spatial Fading Correlation for Uniform Angle of Arrival Distribution. IEEE Communications Letters, 2015, 19, 1073-1076.	2.5	17
54	Interference Prediction in Mobile Ad Hoc Networks With a General Mobility Model. IEEE Transactions on Wireless Communications, 2015, 14, 4277-4290.	6.1	39

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55	Wireless-Powered Relays in Cooperative Communications: Time-Switching Relaying Protocols and Throughput Analysis. IEEE Transactions on Communications, 2015, 63, 1607-1622.	4.9	247
56	Novel Sampling Scheme on the Sphere for Head-Related Transfer Function Measurements. IEEE/ACM Transactions on Audio Speech and Language Processing, 2015, 23, 1068-1081.	4.0	24
57	Block-wise time-switching energy harvesting protocol for wireless-powered AF relays. , 2015, , .		8
58	Sum throughput maximization for heterogeneous multicell networks with RF-powered relays. , 2015, , .		4
59	Throughput and ergodic capacity of wireless energy harvesting based DF relaying network. , 2014, , .		195
60	On the choice of window for spatial smoothing of spherical data. , 2014, , .		5
61	Iterative method to compute the maximal concentration Slepian band-limited eigenfunction on the sphere. , 2014, , .		1
62	Joint channel, phase noise, and carrier frequency offset estimation in cooperative OFDM systems. , 2014, , .		5
63	Band-limited extrapolation on the sphere for signal reconstruction in the presence of noise. , 2014, , .		7
64	On the placement of latitudes in iso-latitude optimal-dimensionality sampling schemes on the sphere. , 2014, , .		0
65	Joint phase noise estimation and data detection in coded multiâ€inputâ€"multiâ€output systems. IET Communications, 2014, 8, 981-989.	1.5	7
66	Minimum mean square error equalization on the 2-sphere. , 2014, , .		3
67	Efficient kernel-based formulations of spatio-spectral and related transformations on the 2-sphere. , 2014, , .		0
68	An Optimal-Dimensionality Sampling Scheme on the Sphere With Fast Spherical Harmonic Transforms. IEEE Transactions on Signal Processing, 2014, 62, 4597-4610.	3.2	89
69	Adaptive multi-resolution windowing technique for localized spatio-spectral analysis. , 2014, , .		0
70	Channel, Phase Noise, and Frequency Offset in OFDM Systems: Joint Estimation, Data Detection, and Hybrid CramÃ©r-Rao Lower Bound. IEEE Transactions on Communications, 2014, 62, 3311-3325.	4.9	65
71	Training-based synchronization and channel estimation in AF two-way relaying networks. , 2014, , .		10
72	Relaying Protocols for Wireless Energy Harvesting and Information Processing. IEEE Transactions on Wireless Communications, 2013, 12, 3622-3636.	6.1	1,617

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73	Transceiver Design for Distributed STBC Based AF Cooperative Networks in the Presence of Timing and Frequency Offsets. IEEE Transactions on Signal Processing, 2013, 61, 3143-3158.	3.2	21
74	New expression for the functional transformation of the vector Cramér-Rao lower bound. , 2013, , .		0
75	Spatial correlation from multipath with 3D power distributions having rotational symmetry. , 2013, , .		6
76	Comparison of spherical harmonics based 3D-HRTF functional models. , 2013, , .		1
77	Fast Directional Spatially Localized Spherical Harmonic Transform. IEEE Transactions on Signal Processing, 2013, 61, 2192-2203.	3.2	13
78	Spatially Varying Spectral Filtering of Signals on the Unit Sphere. IEEE Transactions on Signal Processing, 2013, 61, 530-544.	3.2	12
79	Spatio-spectral formulation and design of spatially varying filters for signal estimation on the 2-sphere. , 2013, , .		3
80	DSTBC based DF cooperative networks in the presence of timing and frequency offsets. , 2013, , .		2
81	Optimal Training Sequences for Joint Timing Synchronization and Channel Estimation in Distributed Communication Networks. IEEE Transactions on Communications, 2013, 61, 3002-3015.	4.9	12
82	Sparse recovery of spherical harmonic expansions from uniform distribution on sphere. , 2013, , .		2
83	Performance study of compressive sampling for ECG signal compression in noisy and varying sparsity acquisition. , 2013, , .		25
84	Conjugate gradient algorithm for extrapolation of sampled bandlimited signals on the 2-sphere. , 2012, , .		4
85	Timing and Carrier Synchronization With Channel Estimation in Multi-Relay Cooperative Networks. IEEE Transactions on Signal Processing, 2012, 60, 793-811.	3.2	68
86	Ambiguity function and Wigner distribution on the sphere. , 2012, , .		0
87	Commutative Anisotropic Convolution on the 2-Sphere. IEEE Transactions on Signal Processing, 2012, 60, 6697-6703.	3.2	12
88	Spatio-Spectral Analysis on the Sphere Using Spatially Localized Spherical Harmonics Transform. IEEE Transactions on Signal Processing, 2012, 60, 1487-1492.	3.2	24
89	Concentration uncertainty principles for signals on the unit sphere. , 2012, , .		5
90	Estimation of synchronization parameters in AF cooperative networks. , 2012, , .		0

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91	Efficient computation of commutative anisotropic convolution on the 2-sphere. , 2012, , .		1
92	An approach to controlled drug infusion via tracking of the time-varying dose-response. , 2012, 2012, 3539-42.		1
93	Cooperative jamming for secrecy in decentralized wireless networks. , 2012, , .		37
94	Particle Filters for Joint Timing and Carrier Estimation: Improved Resampling Guidelines and Weighted Bayesian Cramer-Rao Bounds. IEEE Transactions on Communications, 2012, 60, 1407-1419.	4.9	24
95	A Robust Multiple-Model Adaptive Control System for Automatic Delivery of a Vasoactive Drug. , 2012, , .		1
96	Efficient computation of spherical harmonic transform using parallel architecture of CUDA. , 2011, , .		0
97	Achieving cooperative diversity with multiple frequency offset estimation. , 2011, , .		2
98	Time-frequency analysis compensating missing data for Atrial Fibrillation ECG assessment. , 2011, , .		1
99	Revisiting Slepian concentration problem on the sphere for azimuthally non-symmetric regions. , 2011, , .		2
100	Blind Timing and Carrier Synchronization in Decode and Forward Cooperative Systems. , 2011, , .		10
101	Zero-forcing and MMSE filters design on the 2-sphere. , 2011, , .		2
102	On high resolution head-related transfer function measurements: An efficient sampling scheme. IEEE Transactions on Audio Speech and Language Processing, 2011, , .	3.8	23
103	On azimuthally symmetric 2-sphere convolution. , 2011, 21, 660-666.		26
104	Second-order statistics of 2D non isotropic mobile-to-mobile wireless channels. , 2011, , .		2
105	Mixture Kalman filtering for joint carrier recovery and channel estimation in time-selective Rayleigh fading channels. , 2011, , .		3
106	Efficiency evaluation and orthogonal basis determination in functional HRTF modeling. , 2011, , .		0
107	Quadratic Variational Framework for Signal Design on the 2-Sphere. IEEE Transactions on Signal Processing, 2011, 59, 5243-5252.	3.2	8
108	On the construction of low-pass filters on the unit sphere. , 2011, , .		4

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109	Parallel computation of mutual information on the GPU with application to real-time registration of 3D medical images. Computer Methods and Programs in Biomedicine, 2010, 99, 133-146.	2.6	63
110	Signal concentration on unit sphere: An azimuthally moment weighting approach. , 2010, , .		3
111	Insights into head-related transfer function: Spatial dimensionality and continuous representation. Journal of the Acoustical Society of America, 2010, 127, 2347-2357.	0.5	106
112	Performance of coarse and fine timing synchronization in OFDM receivers. , 2010, , .		20
113	Blind deconvolution of natural images using segmentation based CMA. , 2010, , .		3
114	Effects of basis-mismatch in compressive sampling of continuous sinusoidal signals. , 2010, , .		28
115	A Survey of Medical Image Registration on Multicore and the GPU. IEEE Signal Processing Magazine, 2010, 27, 50-60.	4.6	163
116	Radial Function Based Kernel Design for Time-Frequency Distributions. IEEE Transactions on Signal Processing, 2010, 58, 3395-3400.	3.2	3
117	An Optimal Basis of Band-Limited Functions for Signal Analysis and Design. IEEE Transactions on Signal Processing, 2010, 58, 5744-5755.	3.2	13
118	Effect of Timing Error on the Performance of BPSK Modulation over a Fading Channel. IEEE Communications Letters, 2010, 14, 894-896.	2.5	4
119	Further results on signal concentration in time-frequency. , 2010, , .		0
120	3D Mobile-to-Mobile wireless channel model. , 2010, , .		13
121	Blind Fractionally Spaced Equalization and timing synchronization in wireless fading channels. , 2010, , .		4
122	Internal structure identification of random process using principal component analysis. , 2010, , .		0
123	Modified Constant Modulus Algorithm for joint blind equalization and synchronization. , 2010, , .		6
124	2D Mobile-to-Mobile wireless channel model. , 2010, , .		3
125	Particle filter for joint blind carrier frequency offset estimation and data detection. , 2010, , .		4
126	Signal concentration on unit sphere: A local k-th moment zenithal energy concentration measure. , 2010, , .		1

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127	Performance of hybrid ARQ on dual-branch diversity receiver in Rayleigh fading channel. , 2010, , .		0
128	Particle filter for joint blind carrier frequency offset estimation and data detection. , 2010, , .		0
129	Performance of dual-branch diversity receiver based SR-ARQ in Rayleigh fading channel. , 2009, , .		1
130	Band-limited signal concentration in time-frequency. , 2009, , .		5
131	Modeling of adaptive wireless link for MPEG-4 video transport in UMTS network. , 2009, , .		1
132	On non-blind image restoration. , 2009, , .		5
133	Efficient Continuous HRTF Model Using Data Independent Basis Functions: Experimentally Guided Approach. IEEE Transactions on Audio Speech and Language Processing, 2009, 17, 819-829.	3.8	20
134	Space-time cross correlation between signals at moving receiver. , 2009, , .		0
135	Model-based pilot and data power adaptation in psam with periodic delayed feedback. IEEE Transactions on Wireless Communications, 2009, 8, 2247-2252.	6.1	2
136	Modal expansion of HRTFs: Continuous representation in frequency-range-angle. , 2009, , .		10
137	Reduced-Rank Shift-Invariant Technique and Its Application for Synchronization and Channel Identification in UWB Systems. Eurasip Journal on Wireless Communications and Networking, 2009, 2008, .	1.5	2
138	Adaptive ordering for imperfect successive decision feedback multiuser detection. IEEE Transactions on Communications, 2008, 56, 173-176.	4.9	8
139	Finite-state Markov modeling of fading channels - a survey of principles and applications. IEEE Signal Processing Magazine, 2008, 25, 57-80.	4.6	373
140	Efficient blind separable kernel deconvolution for image deblurring. , 2008, , .		3
141	Signal estimation from incomplete data on the sphere. , 2008, , .		6
142	Spherical harmonic analysis and model-limited extrapolation on the sphere: Integral equation formulation. , 2008, , .		9
143	On the spatial localization of a wireless transmitter from a multisensor receiver. , 2008, , .		0
144	Minimum Kurtosis CMA Deconvolution for Blind Image Restoration. , 2008, , .		4

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145	Practical novel tests for ensuring safe adaptive control. , 2008, , .		6
146	Iterative extrapolation algorithm for data reconstruction over sphere. Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing, 2008, , .	1.8	7
147	Radio location using pattern matching techniques in fixed wireless communication networks. , 2007, , .		2
148	Intrinsic Limits of Dimensionality and Richness in Random Multipath Fields. IEEE Transactions on Signal Processing, 2007, 55, 2542-2556.	3.2	192
149	Gradient Intensity: A New Mutual Information-Based Registration Method. , 2007, , .		11
150	Gradient Intensity-Based Registration of Multi-Modal Images of the Brain. , 2007, , .		10
151	Spatial Degrees of Freedom of Correlated Multipath. , 2007, , .		0
152	Efficient image registration by decoupled parameter estimation using gradient-based techniques and mutual information. , 2007, , .		1
153	Effect of Signal and Noise Mutual Coupling on MIMO Channel Capacity. Wireless Personal Communications, 2007, 40, 317-328.	1.8	10
154	Spatial precoder design for space–time coded MIMO systems: based on fixed parameters of MIMO channels. Wireless Personal Communications, 2007, 43, 777-799.	1.8	4
155	Spatial Precoder Design for Differential Space-Time Coded Systems: Based on Fixed Parameters of MIMO Channels. , 2006, , .		0
156	Generalized Broadband Beamforming Using a Modal Subspace Decomposition. Eurasip Journal on Advances in Signal Processing, 2006, 2007, 1.	1.0	4
157	Directional Random Scattering MIMO Channels: Entropy Analysis and Capacity Optimization. , 2006, , .		2
158	Optimal implicit channel estimation for finite state Markov communication channels. , 2006, , .		2
159	Spatial Correlation based Degrees of Freedom of Multipath. , 2006, , .		0
160	Cramér-Rao Lower Bounds for the Synchronization of UWB Signals. Eurasip Journal on Advances in Signal Processing, 2005, 2005, 1.	1.0	21
161	Spatial Characterization of Multiple Antenna Channels. , 2005, , 145-158.		1
162	Performance analysis of space-time codes in realistic propagation environments: A moment generating function-based approach. Journal of Communications and Networks, 2005, 7, 450-461.	1.8	7

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163	Introducing Space into MIMO Capacity Calculations. Telecommunication Systems, 2003, 24, 415-436.	1.6	64
164	On dimensionality of multipath fields: Spatial extent and richness. , 2002, , .		49
165	Constant Directivity Beamforming. Digital Signal Processing, 2001, , 3-17.	0.7	25
166	Nearfield broadband array design using a radially invariant modal expansion. Journal of the Acoustical Society of America, 2000, 107, 392-403.	0.5	25
167	Blind adaptive decision feedback equalization: a class of channels resulting in ill-convergence from a zero initialization. International Journal of Adaptive Control and Signal Processing, 1998, 12, 173-193.	2.3	6
168	Coupled Markov chain model: Characterization of membrane channel currents with multiple conductance sublevels as partially coupled elementary pores. Mathematical Biosciences, 1996, 133, 111-137.	0.9	30
169	Modelling and identification of coupled markov chain model with application. International Journal of Adaptive Control and Signal Processing, 1996, 10, 623-634.	2.3	1
170	Blind equalization for QAM systems based on general linearly constrained convex cost functions. International Journal of Adaptive Control and Signal Processing, 1996, 10, 707-744.	2.3	2
171	Identification of individual channel kinetics from recordings containing many identical channels. Signal Processing, 1995, 43, 207-221.	2.1	4
172	Theory and design of broadband sensor arrays with frequency invariant farâ€field beam patterns. Journal of the Acoustical Society of America, 1995, 97, 1023-1034.	0.5	215
173	Blind adaptation of decision feedback equalizers: Gross convergence properties. International Journal of Adaptive Control and Signal Processing, 1993, 7, 497-523.	2.3	23
174	Fast simulation of rare events using reverse-time models. Computer Networks, 1990, 20, 315-321.	1.0	4
175	Reverse-time modeling, optimal control and large deviations. Systems and Control Letters, 1989, 12, 351-356.	1.3	7