

# Rodney A Kennedy

## List of Publications by Year in descending order

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175  
papers

4,843  
citations

304743

22  
h-index

114465

63  
g-index

177  
all docs

177  
docs citations

177  
times ranked

3557  
citing authors

#	ARTICLE	IF	CITATIONS
1	Relaying Protocols for Wireless Energy Harvesting and Information Processing. IEEE Transactions on Wireless Communications, 2013, 12, 3622-3636.	9.2	1,617
2	Finite-state Markov modeling of fading channels - a survey of principles and applications. IEEE Signal Processing Magazine, 2008, 25, 57-80.	5.6	373
3	Wireless-Powered Relays in Cooperative Communications: Time-Switching Relaying Protocols and Throughput Analysis. IEEE Transactions on Communications, 2015, 63, 1607-1622.	7.8	247
4	Theory and design of broadband sensor arrays with frequency invariant far-field beam patterns. Journal of the Acoustical Society of America, 1995, 97, 1023-1034.	1.1	215
5	Throughput and ergodic capacity of wireless energy harvesting based DF relaying network. , 2014, , .		195
6	Intrinsic Limits of Dimensionality and Richness in Random Multipath Fields. IEEE Transactions on Signal Processing, 2007, 55, 2542-2556.	5.3	192
7	A Survey of Medical Image Registration on Multicore and the GPU. IEEE Signal Processing Magazine, 2010, 27, 50-60.	5.6	163
8	Insights into head-related transfer function: Spatial dimensionality and continuous representation. Journal of the Acoustical Society of America, 2010, 127, 2347-2357.	1.1	106
9	Joint Resource Optimization for Multicell Networks With Wireless Energy Harvesting Relays. IEEE Transactions on Vehicular Technology, 2016, 65, 6168-6183.	6.3	101
10	An Optimal-Dimensionality Sampling Scheme on the Sphere With Fast Spherical Harmonic Transforms. IEEE Transactions on Signal Processing, 2014, 62, 4597-4610.	5.3	89
11	Timing and Carrier Synchronization With Channel Estimation in Multi-Relay Cooperative Networks. IEEE Transactions on Signal Processing, 2012, 60, 793-811.	5.3	68
12	Channel, Phase Noise, and Frequency Offset in OFDM Systems: Joint Estimation, Data Detection, and Hybrid Cram�r-Rao Lower Bound. IEEE Transactions on Communications, 2014, 62, 3311-3325.	7.8	65
13	Introducing Space into MIMO Capacity Calculations. Telecommunication Systems, 2003, 24, 415-436.	2.5	64
14	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, .	2.4	64
15	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.	4.7	63
16	On dimensionality of multipath fields: Spatial extent and richness. , 2002, , .		49
17	Interference Prediction in Mobile Ad Hoc Networks With a General Mobility Model. IEEE Transactions on Wireless Communications, 2015, 14, 4277-4290.	9.2	39
18	Cooperative jamming for secrecy in decentralized wireless networks. , 2012, , .		37

#	ARTICLE	IF	CITATIONS
19	Multi-Cell Multiuser Massive MIMO Networks: User Capacity Analysis and Pilot Design. IEEE Transactions on Communications, 2016, 64, 5064-5077.	7.8	36
20	Coupled Markov chain model: Characterization of membrane channel currents with multiple conductance sublevels as partially coupled elementary pores. Mathematical Biosciences, 1996, 133, 111-137.	1.9	30
21	Effects of basis-mismatch in compressive sampling of continuous sinusoidal signals. , 2010, , .		28
22	Convex Optimization of Distributed Cooperative Detection in Multi-Receiver Molecular Communication. IEEE Transactions on Molecular, Biological, and Multi-Scale Communications, 2017, 3, 166-182.	2.1	28
23	On azimuthally symmetric 2-sphere convolution. , 2011, 21, 660-666.		26
24	Nearfield broadband array design using a radially invariant modal expansion. Journal of the Acoustical Society of America, 2000, 107, 392-403.	1.1	25
25	Performance study of compressive sampling for ECG signal compression in noisy and varying sparsity acquisition. , 2013, , .		25
26	Constant Directivity Beamforming. Digital Signal Processing, 2001, , 3-17.	0.7	25
27	Spatio-Spectral Analysis on the Sphere Using Spatially Localized Spherical Harmonics Transform. IEEE Transactions on Signal Processing, 2012, 60, 1487-1492.	5.3	24
28	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.	7.8	24
29	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.	5.8	24
30	Blind adaptation of decision feedback equalizers: Gross convergence properties. International Journal of Adaptive Control and Signal Processing, 1993, 7, 497-523.	4.1	23
31	On high resolution head-related transfer function measurements: An efficient sampling scheme. IEEE Transactions on Audio Speech and Language Processing, 2011, , .	3.2	23
32	Cramér-Rao Lower Bounds for the Synchronization of UWB Signals. Eurasip Journal on Advances in Signal Processing, 2005, 2005, 1.	1.7	21
33	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.	5.3	21
34	Efficient Continuous HRTF Model Using Data Independent Basis Functions: Experimentally Guided Approach. IEEE Transactions on Audio Speech and Language Processing, 2009, 17, 819-829.	3.2	20
35	Performance of coarse and fine timing synchronization in OFDM receivers. , 2010, , .		20
36	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.	3.6	19

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37	3D Spatial Fading Correlation for Uniform Angle of Arrival Distribution. IEEE Communications Letters, 2015, 19, 1073-1076.	4.1	17
38	Symbol-by-Symbol Maximum Likelihood Detection for Cooperative Molecular Communication. IEEE Transactions on Communications, 2019, 67, 4885-4899.	7.8	16
39	An Optimal Basis of Band-Limited Functions for Signal Analysis and Design. IEEE Transactions on Signal Processing, 2010, 58, 5744-5755.	5.3	13
40	3D Mobile-to-Mobile wireless channel model. , 2010, , .		13
41	Fast Directional Spatially Localized Spherical Harmonic Transform. IEEE Transactions on Signal Processing, 2013, 61, 2192-2203.	5.3	13
42	Distributed Cooperative Detection for Multi-Receiver Molecular Communication. , 2016, , .		13
43	Efficient Computation of Slepian Functions for Arbitrary Regions on the Sphere. IEEE Transactions on Signal Processing, 2017, 65, 4379-4393.	5.3	13
44	Commutative Anisotropic Convolution on the 2-Sphere. IEEE Transactions on Signal Processing, 2012, 60, 6697-6703.	5.3	12
45	Spatially Varying Spectral Filtering of Signals on the Unit Sphere. IEEE Transactions on Signal Processing, 2013, 61, 530-544.	5.3	12
46	Optimal Training Sequences for Joint Timing Synchronization and Channel Estimation in Distributed Communication Networks. IEEE Transactions on Communications, 2013, 61, 3002-3015.	7.8	12
47	Gradient Intensity: A New Mutual Information-Based Registration Method. , 2007, , .		11
48	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.	5.3	11
49	Gradient Intensity-Based Registration of Multi-Modal Images of the Brain. , 2007, , .		10
50	Effect of Signal and Noise Mutual Coupling on MIMO Channel Capacity. Wireless Personal Communications, 2007, 40, 317-328.	2.7	10
51	Modal expansion of HRTFs: Continuous representation in frequency-range-angle. , 2009, , .		10
52	Blind Timing and Carrier Synchronization in Decode and Forward Cooperative Systems. , 2011, , .		10
53	Training-based synchronization and channel estimation in AF two-way relaying networks. , 2014, , .		10
54	Determining Optimal Rates for Communication for Omniscience. IEEE Transactions on Information Theory, 2018, 64, 1919-1944.	2.4	10

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55	Spherical harmonic analysis and model-limited extrapolation on the sphere: Integral equation formulation. , 2008, , .		9
56	Adaptive ordering for imperfect successive decision feedback multiuser detection. IEEE Transactions on Communications, 2008, 56, 173-176.	7.8	8
57	Quadratic Variational Framework for Signal Design on the 2-Sphere. IEEE Transactions on Signal Processing, 2011, 59, 5243-5252.	5.3	8
58	Block-wise time-switching energy harvesting protocol for wireless-powered AF relays. , 2015, , .		8
59	Slepian spatial-spectral concentration on the ball. Applied and Computational Harmonic Analysis, 2016, 40, 470-504.	2.2	8
60	Reverse-time modeling, optimal control and large deviations. Systems and Control Letters, 1989, 12, 351-356.	2.3	7
61	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.	2.6	7
62	Iterative extrapolation algorithm for data reconstruction over sphere. Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing, 2008, , .	1.8	7
63	Band-limited extrapolation on the sphere for signal reconstruction in the presence of noise. , 2014, , .		7
64	Joint phase noise estimation and data detection in coded multi-input-multi-output systems. IET Communications, 2014, 8, 981-989.	2.2	7
65	Maximum Likelihood Detection for Cooperative Molecular Communication. , 2018, , .		7
66	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.	4.1	6
67	Signal estimation from incomplete data on the sphere. , 2008, , .		6
68	Practical novel tests for ensuring safe adaptive control. , 2008, , .		6
69	Modified Constant Modulus Algorithm for joint blind equalization and synchronization. , 2010, , .		6
70	Spatial correlation from multipath with 3D power distributions having rotational symmetry. , 2013, , .		6
71	Estimating minimum sum-rate for cooperative data exchange. , 2015, , .		6
72	A game-theoretic perspective on communication for omniscience. , 2016, , .		6

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73	Band-limited signal concentration in time-frequency. , 2009, , .		5
74	On non-blind image restoration. , 2009, , .		5
75	Concentration uncertainty principles for signals on the unit sphere. , 2012, , .		5
76	On the choice of window for spatial smoothing of spherical data. , 2014, , .		5
77	Joint channel, phase noise, and carrier frequency offset estimation in cooperative OFDM systems. , 2014, , .		5
78	An optimal dimensionality sampling scheme on the sphere for antipodal signals in diffusion magnetic resonance imaging. , 2015, , .		5
79	Fairest constant sum-rate transmission for cooperative data exchange: An M-convex minimization approach. , 2015, , .		5
80	User Load Analysis and Pilot Sequence Design for Multi-Cell Massive MIMO Networks. , 2016, , .		5
81	Fast simulation of rare events using reverse-time models. Computer Networks, 1990, 20, 315-321.	1.0	4
82	Identification of individual channel kinetics from recordings containing many identical channels. Signal Processing, 1995, 43, 207-221.	3.7	4
83	Generalized Broadband Beamforming Using a Modal Subspace Decomposition. Eurasip Journal on Advances in Signal Processing, 2006, 2007, 1.	1.7	4
84	Spatial precoder design for space-time coded MIMO systems: based on fixed parameters of MIMO channels. Wireless Personal Communications, 2007, 43, 777-799.	2.7	4
85	Minimum Kurtosis CMA Deconvolution for Blind Image Restoration. , 2008, , .		4
86	Effect of Timing Error on the Performance of BPSK Modulation over a Fading Channel. IEEE Communications Letters, 2010, 14, 894-896.	4.1	4
87	Blind Fractionally Spaced Equalization and timing synchronization in wireless fading channels. , 2010, , .		4
88	Particle filter for joint blind carrier frequency offset estimation and data detection. , 2010, , .		4
89	On the construction of low-pass filters on the unit sphere. , 2011, , .		4
90	Conjugate gradient algorithm for extrapolation of sampled bandlimited signals on the 2-sphere. , 2012, , .		4

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91	Sum throughput maximization for heterogeneous multicell networks with RF-powered relays. , 2015, , .		4
92	On Monotonicity of the Optimal Transmission Policy in Cross-Layer Adaptive $\beta$ -QAM Modulation. IEEE Transactions on Communications, 2016, 64, 3771-3785.	7.8	4
93	Discrete Convexity and Stochastic Approximation for Cross-layer On-off Transmission Control. IEEE Transactions on Wireless Communications, 2016, 15, 389-400.	9.2	4
94	Efficient blind separable kernel deconvolution for image deblurring. , 2008, , .		3
95	Signal concentration on unit sphere: An azimuthally moment weighting approach. , 2010, , .		3
96	Blind deconvolution of natural images using segmentation based CMA. , 2010, , .		3
97	Radial Function Based Kernel Design for Time-Frequency Distributions. IEEE Transactions on Signal Processing, 2010, 58, 3395-3400.	5.3	3
98	2D Mobile-to-Mobile wireless channel model. , 2010, , .		3
99	Mixture Kalman filtering for joint carrier recovery and channel estimation in time-selective Rayleigh fading channels. , 2011, , .		3
100	Spatio-spectral formulation and design of spatially varying filters for signal estimation on the 2-sphere. , 2013, , .		3
101	Minimum mean square error equalization on the 2-sphere. , 2014, , .		3
102	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.	5.8	3
103	Maximal multiplicative spatial-spectral concentration on the sphere: Optimal basis. , 2015, , .		3
104	A Faster Algorithm for Asymptotic Communication for Omniscience. , 2016, , .		3
105	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.	6.3	3
106	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.	0.6	3
107	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.	4.1	2
108	Directional Random Scattering MIMO Channels: Entropy Analysis and Capacity Optimization. , 2006, , .		2

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109	Optimal implicit channel estimation for finite state Markov communication channels. , 2006, , .		2
110	Radio location using pattern matching techniques in fixed wireless communication networks. , 2007, , .		2
111	Model-based pilot and data power adaptation in psam with periodic delayed feedback. IEEE Transactions on Wireless Communications, 2009, 8, 2247-2252.	9.2	2
112	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, .	2.4	2
113	Achieving cooperative diversity with multiple frequency offset estimation. , 2011, , .		2
114	Revisiting Slepian concentration problem on the sphere for azimuthally non-symmetric regions. , 2011, , .		2
115	Zero-forcing and MMSE filters design on the 2-sphere. , 2011, , .		2
116	Second-order statistics of 2D non isotropic mobile-to-mobile wireless channels. , 2011, , .		2
117	DSTBC based DF cooperative networks in the presence of timing and frequency offsets. , 2013, , .		2
118	Sparse recovery of spherical harmonic expansions from uniform distribution on sphere. , 2013, , .		2
119	On the use of Slepian functions for the reconstruction of the head-related transfer function on the sphere. , 2015, , .		2
120	Fairness in communication for omniscience. , 2016, , .		2
121	Finite-Horizon Throughput Region for Wireless Multi-User Interference Channels. IEEE Transactions on Wireless Communications, 2017, 16, 634-646.	9.2	2
122	A practical approach for successive omniscience. , 2017, , .		2
123	Robust reconstruction of spherical signals with finite rate of innovation. , 2017, , .		2
124	Differential and Weighted Slepian Concentration Problems on the Sphere. IEEE Transactions on Signal Processing, 2020, 68, 2830-2840.	5.3	2
125	Finite Blocklength Entropy-Achieving Coding for Linear System Stabilization. IEEE Transactions on Automatic Control, 2021, 66, 153-167.	5.7	2
126	Modelling and identification of coupled markov chain model with application. International Journal of Adaptive Control and Signal Processing, 1996, 10, 623-634.	4.1	1



#	ARTICLE	IF	CITATIONS
127	Spatial Characterization of Multiple Antenna Channels. , 2005, , 145-158.		1
128	Efficient image registration by decoupled parameter estimation using gradient-based techniques and mutual information. , 2007, , .		1
129	Performance of dual-branch diversity receiver based SR-ARQ in Rayleigh fading channel. , 2009, , .		1
130	Modeling of adaptive wireless link for MPEG-4 video transport in UMTS network. , 2009, , .		1
131	Signal concentration on unit sphere: A local k-th moment zenithal energy concentration measure. , 2010, , .		1
132	Time-frequency analysis compensating missing data for Atrial Fibrillation ECG assessment. , 2011, , .		1
133	Efficient computation of commutative anisotropic convolution on the 2-sphere. , 2012, , .		1
134	An approach to controlled drug infusion via tracking of the time-varying dose-response. , 2012, 2012, 3539-42.		1
135	Comparison of spherical harmonics based 3D-HRTF functional models. , 2013, , .		1
136	Iterative method to compute the maximal concentration Slepian band-limited eigenfunction on the sphere. , 2014, , .		1
137	Spherical harmonic transform for minimum dimensionality regular grid sampling on the sphere. , 2015, , .		1
138	Analysis and performance of CMA blind deconvolution for image restoration. International Journal of Adaptive Control and Signal Processing, 2015, 29, 1135-1151.	4.1	1
139	Comparative analysis of geometrical properties of sampling schemes on the sphere. , 2016, , .		1
140	Gauss-Legendre Sampling on the Rotation Group. IEEE Signal Processing Letters, 2016, 23, 207-211.	3.6	1
141	An optimal dimensionality multi-shell sampling scheme with accurate and efficient transforms for diffusion MRI. , 2017, , .		1
142	Iterative residual fitting for spherical harmonic transform of band-limited signals on the sphere: Generalization and analysis. , 2017, , .		1
143	Optimal-dimensionality sampling on the sphere: Improvements and variations. , 2017, , .		1
144	Spatially-Limited Sampling of Band-Limited Signals on the Sphere. , 2018, , .		1

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145	Accurate Reconstruction of Finite Rate of Innovation Signals on the Sphere. , 2019, , .		1
146	A Robust Multiple-Model Adaptive Control System for Automatic Delivery of a Vasoactive Drug. , 2012, , .		1
147	Spatial Precoder Design for Differential Space-Time Coded Systems: Based on Fixed Parameters of MIMO Channels. , 2006, , .		0
148	Spatial Correlation based Degrees of Freedom of Multipath. , 2006, , .		0
149	Spatial Degrees of Freedom of Correlated Multipath. , 2007, , .		0
150	On the spatial localization of a wireless transmitter from a multisensor receiver. , 2008, , .		0
151	Space-time cross correlation between signals at moving receiver. , 2009, , .		0
152	Further results on signal concentration in time-frequency. , 2010, , .		0
153	Internal structure identification of random process using principal component analysis. , 2010, , .		0
154	Performance of hybrid ARQ on dual-branch diversity receiver in Rayleigh fading channel. , 2010, , .		0
155	Efficient computation of spherical harmonic transform using parallel architecture of CUDA. , 2011, , .		0
156	Efficiency evaluation and orthogonal basis determination in functional HRTF modeling. , 2011, , .		0
157	Ambiguity function and Wigner distribution on the sphere. , 2012, , .		0
158	Estimation of synchronization parameters in AF cooperative networks. , 2012, , .		0
159	New expression for the functional transformation of the vector Cram&#x00E9;r-Rao lower bound. , 2013, , .		0
160	On the placement of latitudes in iso-latitude optimal-dimensionality sampling schemes on the sphere. , 2014, , .		0
161	Efficient kernel-based formulations of spatio-spectral and related transformations on the 2-sphere. , 2014, , .		0
162	Adaptive multi-resolution windowing technique for localized spatio-spectral analysis. , 2014, , .		0

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163	Structured optimal transmission control in network-coded two-way relay channels. Eurasip Journal on Wireless Communications and Networking, 2015, 2015, .	2.4	0
164	Rate-Achieving Policy in Finite-Horizon Throughput Region for Multi-User Interference Channels. , 2016, , .		0
165	Signal analysis on the ball: Design of optimal basis functions with maximal multiplicative concentration in spatial and spectral domains. , 2017, , .		0
166	Improving the spatial dimensionality of Gauss-Legendre and equiangular sampling schemes on the sphere. , 2017, , .		0
167	On the choice of Kernel for signal interpolation on the sphere using reproducing kernel Hilbert spaces. , 2017, , .		0
168	Fast extrapolation of band-limited signals on the 2-sphere. , 2017, , .		0
169	Efficient Computation of Slepian Functions on the Real Line. , 2018, , .		0
170	Efficient Sampling on HEALPix Grid. , 2018, , .		0
171	An Improved Iterative Algorithm for Band-Limited Signal Extrapolation on the Sphere. , 2018, , .		0
172	An Optimal-Dimensionality Sampling for Spin- $s$ Functions on the Sphere. IEEE Signal Processing Letters, 2018, 25, 1470-1474.	3.6	0
173	Representing, Sampling and Reconstructing Diffusion MRI Signal in Space and Time. , 2019, , .		0
174	Design of a Spatially Constrained Anti-aliasing Filter using Slepian Functions on the Sphere. , 2019, , .		0
175	Particle filter for joint blind carrier frequency offset estimation and data detection. , 2010, , .		0