Sarah J Johnson

List of Publications by Year
in descending order

111 papers	2,512 citations	279798 23 h-index	276875 41 g-index
115 all docs	115 docs citations	115 times ranked	2717 citing authors

#	Article	IF	Citations
1	Massive Non-Orthogonal Multiple Access for Cellular IoT: Potentials and Limitations. , 2017, 55, 55-61.		311
2	Grant-Free Non-Orthogonal Multiple Access for IoT: A Survey. IEEE Communications Surveys and Tutorials, 2020, 22, 1805-1838.	39.4	212
3	Chronic stress-induced disruption of the astrocyte network is driven by structural atrophy and not loss of astrocytes. Acta Neuropathologica, 2013, 126, 75-91.	7.7	151
4	On the Fundamental Limits of Random Non-Orthogonal Multiple Access in Cellular Massive IoT. IEEE Journal on Selected Areas in Communications, 2017, 35, 2238-2252.	14.0	122
5	A family of irregular LDPC codes with low encoding complexity. IEEE Communications Letters, 2003, 7, 79-81.	4.1	91
6	Quantitative assessment of microglial morphology and density reveals remarkable consistency in the distribution and morphology of cells within the healthy prefrontal cortex of the rat. Journal of Neuroinflammation, 2014, 11, 182.	7.2	89
7	The Capacity Region of Multiway Relay Channels Over Finite Fields With Full Data Exchange. IEEE Transactions on Information Theory, 2011, 57, 3016-3031.	2.4	62
8	An optimal coding strategy for the binary multi-way relay channel. IEEE Communications Letters, 2010, 14, 330-332.	4.1	57
9	Segmentation of Heavily Clustered Nuclei from Histopathological Images. Scientific Reports, 2019, 9, 4551.	3.3	52
10	Spatiotemporal analysis of impaired microglia process movement at sites of secondary neurodegeneration post-stroke. Journal of Cerebral Blood Flow and Metabolism, 2019, 39, 2456-2470.	4.3	52
11	Chronic stress exacerbates neuronal loss associated with secondary neurodegeneration and suppresses microglial-like cells following focal motor cortex ischemia in the mouse. Brain, Behavior, and Immunity, 2015, 48, 57-67.	4.1	51
12	Regular low-density parity-check codes from combinatorial designs. , 0, , .		50
13	Massive Multiple Access Based on Superposition Raptor Codes for Cellular M2M Communications. IEEE Transactions on Wireless Communications, 2017, 16, 307-319.	9.2	45
14	Impaired microglia process dynamics postâ€stroke are specific to sites of secondary neurodegeneration. Glia, 2017, 65, 1885-1899.	4.9	44
15	Growth Hormone Improves Cognitive Function After Experimental Stroke. Stroke, 2018, 49, 1257-1266.	2.0	44
16	Codes for Iterative Decoding From Partial Geometries. IEEE Transactions on Communications, 2004, 52, 236-243.	7.8	43
17	Resolvable 2-designs for regular low-density parity-check codes. IEEE Transactions on Communications, 2003, 51, 1413-1419.	7.8	39
18	Capacity Theorems for the AWGN multi-way relay channel. , 2010, , .		38

#	ARTICLE	IF	CITATIONS
19	Spatially Coupled Repeat-Accumulate Codes. IEEE Communications Letters, 2013, 17, 373-376.	4.1	34
20	On the Equal-Rate Capacity of the AWGN Multiway Relay Channel. IEEE Transactions on Information Theory, 2012, 58, 5761-5769.	2.4	33
21	Strategies to improve quantitative assessment of immunohistochemical and immunofluorescent labelling. Scientific Reports, 2015, 5, 10607.	3.3	31
22	Photothrombotic Stroke Induces Persistent Ipsilateral and Contralateral Astrogliosis in Key Cognitive Control Nuclei. Neurochemical Research, 2015, 40, 362-371.	3.3	31
23	Chronic stress induced disruption of the peri-infarct neurovascular unit following experimentally induced photothrombotic stroke. Journal of Cerebral Blood Flow and Metabolism, 2017, 37, 3709-3724.	4.3	31
24	A combined cumulative threshold spectra and digital reconstruction analysis reveal structural alterations of microglia within the prefrontal cortex following low-dose LPS administration. Neuroscience, 2015, 310, 629-640.	2.3	30
25	Interlinked Cycles for Index Coding: Generalizing Cycles and Cliques. IEEE Transactions on Information Theory, 2017, 63, 3692-3711.	2.4	28
26	Improving Patient Outcomes Following Total Knee Arthroplasty: Identifying Rehabilitation Pathways Based on Modifiable Psychological Risk and Resilience Factors. Frontiers in Psychology, 2020, 11, 1061.	2.1	27
27	Investigating the Mechanical Behavior of Clot Analogues Through Experimental and Computational Analysis. Annals of Biomedical Engineering, 2021, 49, 420-431.	2.5	26
28	Raptor Codes in the Low SNR Regime. IEEE Transactions on Communications, 2016, 64, 4449-4460.	7.8	25
29	Chronic stress induces prolonged suppression of the P2X7 receptor within multiple regions of the hippocampus: A cumulative threshold spectra analysis. Brain, Behavior, and Immunity, 2014, 42, 69-80.	4.1	23
30	Reconsidering the role of glial cells in chronic stress-induced dopaminergic neurons loss within the substantia nigra? Friend or foe?. Brain, Behavior, and Immunity, 2017, 60, 117-125.	4.1	23
31	Index Modulation Aided Uplink NOMA for Massive Machine Type Communications. IEEE Wireless Communications Letters, 2020, 9, 2159-2162.	5.0	23
32	Low oxygen post conditioning prevents thalamic secondary neuronal loss caused by excitotoxicity after cortical stroke. Scientific Reports, 2019, 9, 4841.	3.3	22
33	Sustained administration of corticosterone at stress-like levels after stroke suppressed glial reactivity at sites of thalamic secondary neurodegeneration. Brain, Behavior, and Immunity, 2018, 69, 210-222.	4.1	21
34	Segmentation, Tracing, and Quantification of Microglial Cells from 3D Image Stacks. Scientific Reports, 2019, 9, 8557.	3.3	21
35	Burst erasure correcting LDPC codes. IEEE Transactions on Communications, 2009, 57, 641-652.	7.8	20
36	Constraining LDPC degree distributions for improved error floor performance. IEEE Communications Letters, 2006, 10, 103-105.	4.1	19

#	Article	IF	Citations
37	On Capacity and Optimal Scheduling for the Half-Duplex Multiple-Relay Channel. IEEE Transactions on Information Theory, 2012, 58, 5770-5784.	2.4	17
38	A New Density Evolution Approximation for LDPC and Multi-Edge Type LDPC Codes. IEEE Transactions on Communications, 2016, , 1-1.	7.8	17
39	Memory‐efficient quasi‐cyclic spatially coupled low‐density parity‐check and repeat‐accumulate codes. IET Communications, 2014, 8, 3179-3188.	2.2	14
40	Oral administration of corticosterone at stress-like levels drives microglial but not vascular disturbances post-stroke. Neuroscience, 2017, 352, 30-38.	2.3	14
41	Multi-Sender Index Coding for Collaborative Broadcasting: A Rank-Minimization Approach. IEEE Transactions on Communications, 2019, 67, 1452-1466.	7.8	14
42	Cooperative Multi-Sender Index Coding. IEEE Transactions on Information Theory, 2019, 65, 1725-1739.	2.4	14
43	The capacity of three-receiver AWGN broadcast channels with receiver message side information. , 2014, , .		13
44	Optimal Coding Schemes for the Three-Receiver AWGN Broadcast Channel With Receiver Message Side Information. IEEE Transactions on Information Theory, 2015, 61, 5490-5503.	2.4	13
45	Graph-Theoretic Approaches to Two-Sender Index Coding. , 2016, , .		13
46	Chronic stress induced disturbances in Laminin: A significant contributor to modulating microglial pro-inflammatory tone?. Brain, Behavior, and Immunity, 2018, 68, 23-33.	4.1	13
47	Combinatorial Interleavers for Systematic Regular Repeat-Accumulate Codes [Transactions Letters]. IEEE Transactions on Communications, 2008, 56, 1201-1206.	7.8	12
48	Low Oxygen Post Conditioning as an Efficient Non-pharmacological Strategy to Promote Motor Function After Stroke. Translational Stroke Research, 2019, 10, 402-412.	4.2	11
49	Regular low-density parity-check codes from oval designs. European Transactions on Telecommunications, 2003, 14, 399-409.	1.2	10
50	Automated tracing of microglia using multilevel thresholding and minimum spanning trees. , 2016, 2016, 1208-1211.		10
51	Analysis and Design of Raptor Codes Using a Multi-Edge Framework. IEEE Transactions on Communications, 2017, 65, 5123-5136.	7.8	10
52	Improved bounds for multi-sender index coding. , 2017, , .		10
53	Constructions for irregular repeat-accumulate codes. , 2005, , .		9
54	Multi-Way Relay Networks: Orthogonal Uplink, Source-Channel Separation and Code Design. IEEE Transactions on Communications, 2013, 61, 753-768.	7.8	9

#	Article	IF	Citations
55	Receiver Design for Uplink Power Domain NOMA With Discontinuous Transmissions. IEEE Communications Letters, 2021, 25, 2738-2742.	4.1	9
56	Generalized interlinked cycle cover for index coding. , 2015, , .		8
57	Repeat-accumulate codes for reconciliation in continuous variable quantum key distribution. , 2016, , .		8
58	Clinical Decision Support Tools for Predicting Outcomes in Patients Undergoing Total Knee Arthroplasty: A Systematic Review. Journal of Arthroplasty, 2021, 36, 1832-1845.e1.	3.1	8
59	The Capacity Region of the Restricted Two-Way Relay Channel with Any Deterministic Uplink. IEEE Communications Letters, 2012, 16, 396-399.	4.1	7
60	The Three-User Finite-Field Multi-Way Relay Channel with Correlated Sources. IEEE Transactions on Communications, 2013, 61, 3125-3135.	7.8	7
61	On the capacity of the binary–symmetric parallel–relay network. Transactions on Emerging Telecommunications Technologies, 2014, 25, 217-230.	3.9	7
62	On Index Coding in Noisy Broadcast Channels with Receiver Message Side Information. IEEE Communications Letters, 2014, 18, 640-643.	4.1	7
63	Design of Raptor codes in the low SNR regime with applications in quantum key distribution. , 2016, , .		7
64	A Design of Reconfigurable Raptor Codes for Wide SNR Ranges Using a Multi-Edge Framework. IEEE Communications Letters, 2018, 22, 1532-1535.	4.1	7
65	Joint channel–network coding strategies for networks with low–complexity relays. European Transactions on Telecommunications, 2011, 22, 396-406.	1.2	6
66	Joint optimisation technique for multi–edge type low–density parity–check codes. IET Communications, 2017, 11, 61-68.	2.2	6
67	On the problem of non-zero word error rates for fixed-rate error correction codes in continuous variable quantum key distribution. New Journal of Physics, 2017, 19, 023003.	2.9	6
68	Exploring How Low Oxygen Post Conditioning Improves Stroke-Induced Cognitive Impairment: A Consideration of Amyloid-Beta Loading and Other Mechanisms. Frontiers in Neurology, 2021, 12, 585189.	2.4	6
69	The Half-Duplex AWGN Single-Relay Channel: Full Decoding or Partial Decoding?. IEEE Transactions on Communications, 2012, 60, 3156-3160.	7.8	5
70	An analysis of signal processing algorithm performance for cortical intrinsic optical signal imaging and strategies for algorithm selection. Scientific Reports, 2017, 7, 7198.	3.3	5
71	Centralized Caching with Unequal Cache Sizes. , 2018, , .		5
72	Raptor Codes for Higher-Order Modulation Using a Multi-Edge Framework. IEEE Wireless Communications Letters, 2018, 7, 110-113.	5.0	5

#	Article	IF	Citations
73	Structural Characteristics of Two-Sender Index Coding. Entropy, 2019, 21, 615.	2.2	5
74	Indexing Cerebrovascular Health Using Transcranial Doppler Ultrasound. Ultrasound in Medicine and Biology, 2021, 47, 919-927.	1.5	5
75	Wave reflection: More than a round trip. Medical Engineering and Physics, 2021, 92, 40-44.	1.7	5
76	Corticosterone Administration Alters White Matter Tract Structure and Reduces Gliosis in the Sub-Acute Phase of Experimental Stroke. International Journal of Molecular Sciences, 2021, 22, 6693.	4.1	5
77	NOMA Joint Channel Estimation and Signal Detection Using Rotational Invariant Codes and GMM-Based Clustering. IEEE Communications Letters, 2022, 26, 2485-2489.	4.1	5
78	Interleaver and Accumulator Design for Systematic Repeat-Accumulate Codes. , 0, , .		4
79	Practical Interleavers for Repeat--Accumulate Codes. IEEE Transactions on Communications, 2009, 57, 1225-1228.	7.8	4
80	A unified scheme for two-receiver broadcast channels with receiver message side information. , 2015, , .		4
81	Protograph LDPC Code Design for Asynchronous Random Access. Algorithms, 2019, 12, 170.	2.1	4
82	Finite-Length Repeat-Accumulate Codes on the Binary Erasure Channel. , 0, , .		3
83	Functional-decode-forward for the general discrete memoryless two-way relay channel. , 2010, , .		3
84	On achievable rate regions of the asymmetric AWGN two-way relay channel. , 2011, , .		3
85	Optimization of graph based codes for belief propagation decoding. , 2014, , .		3
86	A new index coding scheme exploiting interlinked cycles. , 2015, , .		3
87	Corrections to â€œInterlinked Cycles for Index Coding: Generalizing Cycles and Cliquesâ€[Jun 17 3692-3711]. IEEE Transactions on Information Theory, 2018, 64, 6460-6460.	2.4	3
88	A Dynamic Model of Brain Hemodynamics in Near-Infrared Spectroscopy. IEEE Transactions on Biomedical Engineering, 2019, 67, 1-1.	4.2	3
89	Enabling transmission status detection in grantâ€free power domain nonâ€orthogonal multiple access for massive Internet of Things. Transactions on Emerging Telecommunications Technologies, 2022, 33, .	3.9	3
90	Joint network and channel coding for cooperative networks. , 2007, , .		2

#	Article	IF	Citations
91	Irregular repeat-accumulate-like codes with improved error floor performance. , 2010, , .		2
92	The finite field multi-way relay channel with correlated sources: The three-user case. , 2011, , .		2
93	Coding schemes for a class of receiver message side information in AWGN broadcast channels. , 2014, , .		2
94	A comparison of signal processing techniques for Intrinsic Optical Signal imaging in mice. , 2015, 2015, 6281-4.		2
95	Approaching the capacity of AWGN channels using multi-layer raptor codes and superposition modulation. , 2016, , .		2
96	Indexing cerebrovascular health using near-infrared spectroscopy. Scientific Reports, 2021, 11, 14812.	3.3	2
97	Achievable rate regions of the butterfly network with noisy links and end-to-end error correction. , 2009, , .		1
98	Optimal schedules for the D-node half duplex phase fading MRC. , 2009, , .		1
99	A Finite-Length Algorithm for LDPC Codes Without Repeated Edges on the Binary Erasure Channel. IEEE Transactions on Information Theory, 2009, 55, 27-32.	2.4	1
100	The capacity of a class of multi-way relay channels. , 2010, , .		1
101	The binary-symmetric parallel-relay network. , 2010, , .		1
102	The finite field multi-way relay channel with correlated sources: Beyond three users. , 2012, , .		1
103	The capacity region of restricted multi-way relay channels with deterministic uplinks. , 2012, , .		1
104	Optimal coding functions for pairwise message sharing on finite-field multi-way relay channels. , 2014, , .		1
105	A unified inner bound for the two-receiver memoryless broadcast channel with channel state and message side information. , 2016, , .		1
106	The DoF Region of the Three-Receiver Gaussian MIMO Broadcast Channel With Receiver Message Side Information. IEEE Transactions on Communications, 2017, 65, 2000-2010.	7.8	1
107	Do P2Y12 receptor inhibitors prescribed poststroke modify the risk of cognitive disorder or dementia? Protocol for a target trial using multiple national Swedish registries. BMJ Open, 2022, 12, e058244.	1.9	1
108	When Differential Privacy Implies Syntactic Privacy. IEEE Transactions on Information Forensics and Security, 2022, 17, 2110-2124.	6.9	1

#	Article	IF	Citations
109	Absorbing sets and cycles. , 2012, , .		0
110	Leveraging Receiver Message Side Information in Two-Receiver Broadcast Channels: A General Approach â€. Entropy, 2017, 19, 138.	2.2	0
111	A Dynamic Model of Synthetic Resting-State Brain Hemodynamics. , 2018, , .		0