

# Ken R Duffy

## List of Publications by Year in descending order

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Version: 2024-02-01

111  
papers

3,183  
citations

304743

22  
h-index

189892

50  
g-index

115  
all docs

115  
docs citations

115  
times ranked

2958  
citing authors

#	ARTICLE	IF	CITATIONS
1	Guessing Random Additive Noise Decoding With Symbol Reliability Information (SRGRAND). IEEE Transactions on Communications, 2022, 70, 3-18.	7.8	21
2	A Universal Maximum Likelihood GRAND Decoder in 40nm CMOS. , 2022, , .		4
3	Replicative history marks transcriptional and functional disparity in the CD8+ T cell memory pool. Nature Immunology, 2022, 23, 791-801.	14.5	30
4	High-quality data from a forensically relevant single-cell pipeline enabled by low PBS and proteinase K concentrations. Journal of Forensic Sciences, 2022, 67, 697-706.	1.6	5
5	Keep the Bursts and Ditch the Interleavers. IEEE Transactions on Communications, 2022, 70, 3655-3667.	7.8	16
6	MDS coding is better than replication for job completion times. Operations Research Letters, 2021, 49, 91-95.	0.7	1
7	Towards developing forensically relevant single-cell pipelines by incorporating direct-to-PCR extraction: compatibility, signal quality, and allele detection. International Journal of Legal Medicine, 2021, 135, 727-738.	2.2	12
8	Inferring Differentiation Order in Adaptive Immune Responses from Population-Level Data. , 2021, , 133-149.		1
9	HSPCs display within-family homogeneity in differentiation and proliferation despite population heterogeneity. ELife, 2021, 10, .	6.0	7
10	CRC Codes as Error Correction Codes. , 2021, , .		18
11	Ordered Reliability Bits Guessing Random Additive Noise Decoding. , 2021, , .		47
12	Managing Noise and Interference Separately - Multiple Access Channel Decoding using Soft GRAND. , 2021, , .		4
13	The a posteriori probability of the number of contributors when conditioned on an assumed contributor. Forensic Science International: Genetics, 2021, 54, 102563.	3.1	4
14	Multi-Code Multi-Rate Universal Maximum Likelihood Decoder using GRAND. , 2021, , .		26
15	Cyton2: A Model of Immune Cell Population Dynamics That Includes Familial Instructional Inheritance. Frontiers in Bioinformatics, 2021, 1, .	2.1	7
16	Manipulating niche composition limits damage to haematopoietic stem cells during Plasmodium infection. Nature Cell Biology, 2020, 22, 1399-1410.	10.3	26
17	Soft Maximum Likelihood Decoding using GRAND. , 2020, , .		50
18	Noise Recycling. , 2020, , .		2

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19	Discrete convolution statistic for hypothesis testing. Communications in Statistics - Theory and Methods, 2020, , 1-22.	1.0	0
20	5G NR CA-Polar Maximum Likelihood Decoding by GRAND. , 2020, , .		21
21	A large-scale validation of NOCI™s a posteriori probability of the number of contributors and its integration into forensic interpretation pipelines. Forensic Science International: Genetics, 2020, 47, 102296.	3.1	10
22	Keep the bursts and ditch the interleavers. , 2020, , .		21
23	Network Infusion to Infer Information Sources in Networks. IEEE Transactions on Network Science and Engineering, 2019, 6, 402-417.	6.4	13
24	Privacy With Estimation Guarantees. IEEE Transactions on Information Theory, 2019, 65, 8025-8042.	2.4	22
25	Capacity-Achieving Guessing Random Additive Noise Decoding. IEEE Transactions on Information Theory, 2019, 65, 4023-4040.	2.4	95
26	Sample path properties of the average generation of a Bellmanâ€“Harris process. Journal of Mathematical Biology, 2019, 79, 673-704.	1.9	3
27	The variance of the average depth of a pure birth process converges to 7. Statistics and Probability Letters, 2019, 150, 88-93.	0.7	2
28	A Characterization of Guesswork on Swiftly Tilting Curves. IEEE Transactions on Information Theory, 2019, 65, 2850-2871.	2.4	10
29	Guessing random additive noise decoding with soft detection symbol reliability information - SGRAND. , 2019, , .		33
30	Proliferation dynamics of acute myeloid leukaemia and haematopoietic progenitors competing for bone marrow space. Nature Communications, 2018, 9, 519.	12.8	80
31	Inhibition of Endosteal Vascular Niche Remodeling Rescues Hematopoietic Stem Cell Loss in AML. Cell Stem Cell, 2018, 22, 64-77.e6.	11.1	249
32	A large-scale dataset of single and mixed-source short tandem repeat profiles to inform human identification strategies: PROVEDIt. Forensic Science International: Genetics, 2018, 32, 62-70.	3.1	61
33	Four model variants within a continuous forensic DNA mixture interpretation framework: Effects on evidential inference and reporting. PLoS ONE, 2018, 13, e0207599.	2.5	13
34	Stochastically Timed Competition Between Division and Differentiation Fates Regulates the Transition From B Lymphoblast to Plasma Cell. Frontiers in Immunology, 2018, 9, 2053.	4.8	20
35	Optimization-Based Linear Network Coding for General Connections of Continuous Flows. IEEE/ACM Transactions on Networking, 2018, 26, 2033-2047.	3.8	5
36	Guessing noise, not code-words. , 2018, , .		30

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37	Multiplexed Division Tracking Dyes for Proliferation-Based Clonal Lineage Tracing. <i>Journal of Immunology</i> , 2018, 201, 1097-1103.	0.8	13
38	Exploring STR signal in the single- and multicopy number regimes: Deductions from an in silico model of the entire DNA laboratory process. <i>Electrophoresis</i> , 2017, 38, 855-868.	2.4	16
39	Network Maximal Correlation. <i>IEEE Transactions on Network Science and Engineering</i> , 2017, 4, 229-247.	6.4	9
40	Principal Inertia Components and Applications. <i>IEEE Transactions on Information Theory</i> , 2017, 63, 5011-5038.	2.4	39
41	Production of high-fidelity electropherograms results in improved and consistent DNA interpretation: Standardizing the forensic validation process. <i>Forensic Science International: Genetics</i> , 2017, 31, 160-170.	3.1	8
42	A Linear Network Code Construction for General Integer Connections Based on the Constraint Satisfaction Problem. <i>IEEE/ACM Transactions on Networking</i> , 2017, 25, 3441-3454.	3.8	4
43	Guesswork subject to a total entropy budget. , 2017, , .		4
44	Site-specific recombinatorics: in situ cellular barcoding with the Cre Lox system. <i>BMC Systems Biology</i> , 2016, 10, 43.	3.0	15
45	T-cell stimuli independently sum to regulate an inherited clonal division fate. <i>Nature Communications</i> , 2016, 7, 13540.	12.8	43
46	Retracing the <i>in vivo</i> haematopoietic tree using single-cell methods. <i>FEBS Letters</i> , 2016, 590, 4068-4083.	2.8	14
47	Inferring average generation via division-linked labeling. <i>Journal of Mathematical Biology</i> , 2016, 73, 491-523.	1.9	7
48	A Linear Network Code Construction for General Integer Connections Based on the Constraint Satisfaction Problem. , 2015, , .		6
49	A geometric perspective on guesswork. , 2015, , .		11
50	Quantifying computational security subject to source constraints, guesswork and inscrutability. , 2015, , .		17
51	The Branching Point in Erythro-Myeloid Differentiation. <i>Cell</i> , 2015, 163, 1655-1662.	28.9	146
52	Probabilistic characterisation of baseline noise in STR profiles. <i>Forensic Science International: Genetics</i> , 2015, 19, 107-122.	3.1	22
53	Optimization-based linear network coding for general connections of continuous flows. , 2015, , .		5
54	Common myeloid progenitors are made up of distinct subpopulations that either yield erythrocytes or myeloid cells. <i>Experimental Hematology</i> , 2015, 43, S88.	0.4	0

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55	Multi-User Guesswork and Brute Force Security. IEEE Transactions on Information Theory, 2015, 61, 6876-6886.	2.4	22
56	Large Deviation Asymptotics for Busy Periods. Stochastic Systems, 2014, 4, 300-319.	1.1	7
57	A signal model for forensic DNA mixtures. , 2014, , .		3
58	Antigen affinity, costimulation, and cytokine inputs sum linearly to amplify T cell expansion. Science, 2014, 346, 1123-1127.	12.6	185
59	Determining Lineage Pathways from Cellular Barcoding Experiments. Cell Reports, 2014, 6, 617-624.	6.4	40
60	Combining cellular barcoding and mathematical modeling to infer the structure of the hematopoietic pathway. Experimental Hematology, 2014, 42, S56.	0.4	0
61	Why the immune system takes its chances with randomness. Nature Reviews Immunology, 2014, 14, 711-711.	22.7	16
62	A Linear Network Code Construction for General Integer Connections Based on the Constraint Satisfaction Problem. , 2014, , .		0
63	Guessing a password over a wireless channel (on the effect of noise non-uniformity). , 2013, , .		15
64	Decentralized Constraint Satisfaction. IEEE/ACM Transactions on Networking, 2013, 21, 1298-1308.	3.8	29
65	Bounds on inference. , 2013, , .		24
66	H-RCA: 802.11 Collision-Aware Rate Control. IEEE/ACM Transactions on Networking, 2013, 21, 1021-1034.	3.8	22
67	Decentralised learning MACs for collision-free access in WLANs. Wireless Networks, 2013, 19, 83-98.	3.0	45
68	Guesswork, Large Deviations, and Shannon Entropy. IEEE Transactions on Information Theory, 2013, 59, 796-802.	2.4	57
69	Brute force searching, the typical set and Guesswork. , 2013, , .		11
70	Lists that are smaller than their parts: A coding approach to tunable secrecy. , 2012, , .		8
71	Activation-Induced B Cell Fates Are Selected by Intracellular Stochastic Competition. Science, 2012, 335, 338-341.	12.6	199
72	Intracellular competition for fates in the immune system. Trends in Cell Biology, 2012, 22, 457-464.	7.9	44

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73	The 802.11g 11 Mb/s Rate is More Robust than 6 Mb/s. IEEE Transactions on Wireless Communications, 2011, 10, 1015-1020.	9.2	12
74	Sample Path Large Deviations for Order Statistics. Journal of Applied Probability, 2011, 48, 238-257.	0.7	1
75	Sample Path Large Deviations of Poisson Shot Noise with Heavy-Tailed Semiexponential Distributions. Journal of Applied Probability, 2011, 48, 688-698.	0.7	0
76	Sample Path Large Deviations for Order Statistics. Journal of Applied Probability, 2011, 48, 238-257.	0.7	4
77	Sample Path Large Deviations of Poisson Shot Noise with Heavy-Tailed Semiexponential Distributions. Journal of Applied Probability, 2011, 48, 688-698.	0.7	4
78	On the large deviations of a class of modulated additive processes. ESAIM - Probability and Statistics, 2011, 15, 83-109.	0.5	4
79	Estimating Loynes's exponent. Queueing Systems, 2011, 68, 285-293.	0.9	5
80	Most likely paths to error when estimating the mean of a reflected random walk. Performance Evaluation, 2010, 67, 1290-1303.	1.2	11
81	A minimum of two distinct heritable factors are required to explain correlation structures in proliferating lymphocytes. Journal of the Royal Society Interface, 2010, 7, 1049-1059.	3.4	27
82	Log-convexity of rate region in 802.11e WLANs. IEEE Communications Letters, 2010, 14, 57-59.	4.1	19
83	On the Validity of IEEE 802.11 MAC Modeling Hypotheses. IEEE/ACM Transactions on Networking, 2010, 18, 1935-1948.	3.8	21
84	On the impact of correlation between collaterally consanguineous cells on lymphocyte population dynamics. Journal of Mathematical Biology, 2009, 59, 255-285.	1.9	17
85	Existence and uniqueness of fair rate allocations in lossy wireless networks. IEEE Transactions on Wireless Communications, 2009, 8, 3401-3406.	9.2	9
86	On a buffering hypothesis in 802.11 analytic models. IEEE Communications Letters, 2009, 13, 312-314.	4.1	13
87	Logarithmic asymptotics for a single-server processing distinguishable sources. Mathematical Methods of Operations Research, 2008, 68, 509-537.	1.0	3
88	Determining the expected variability of immune responses using the cyton model. Journal of Mathematical Biology, 2008, 56, 861-892.	1.9	38
89	Complexity analysis of a decentralised graph colouring algorithm. Information Processing Letters, 2008, 107, 60-63.	0.6	26
90	Investigating the validity of IEEE 802.11 MAC modeling hypotheses. , 2008, , .		9

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91	The Large Deviation Principle for the On-Off Weibull Sojourn Process. Journal of Applied Probability, 2008, 45, 107-117.	0.7	4
92	The Large Deviation Principle for the On-Off Weibull Sojourn Process. Journal of Applied Probability, 2008, 45, 107-117.	0.7	15
93	Some remarks on Id plots for heavy-tailed traffic. Computer Communication Review, 2007, 37, 41-42.	1.8	3
94	Modeling the 802.11 Distributed Coordination Function in Nonsaturated Heterogeneous Conditions. IEEE/ACM Transactions on Networking, 2007, 15, 159-172.	3.8	504
95	Modeling the Impact of Buffering on 802.11. IEEE Communications Letters, 2007, 11, 219-221.	4.1	43
96	Ambiguities in estimates of critical exponents for long-range dependent processes. Physica A: Statistical Mechanics and Its Applications, 2007, 377, 43-52.	2.6	0
97	Loss aversion, large deviation preferences and optimal portfolio weights for some classes of return processes. Physica A: Statistical Mechanics and Its Applications, 2007, 378, 408-422.	2.6	3
98	Modeling 802.11 mesh networks. IEEE Communications Letters, 2006, 10, 635-637.	4.1	15
99	The Large Deviations of Estimating Rate Functions. Journal of Applied Probability, 2005, 42, 267-274.	0.7	10
100	How to estimate the rate function of a cumulative process. Journal of Applied Probability, 2005, 42, 1044-1052.	0.7	3
101	How to estimate the rate function of a cumulative process. Journal of Applied Probability, 2005, 42, 1044-1052.	0.7	2
102	Modeling the 802.11 distributed coordination function in non-saturated conditions. IEEE Communications Letters, 2005, 9, 715-717.	4.1	166
103	The Large Deviations of Estimating Rate Functions. Journal of Applied Probability, 2005, 42, 267-274.	0.7	15
104	Some Useful Functions for Functional Large Deviations. Stochastic and Stochastics Reports, 2004, 76, 267-279.	0.6	12
105	Logarithmic asymptotics for the supremum of a stochastic process. Annals of Applied Probability, 2003, 13, .	1.3	24
106	Distribution-free confidence intervals for measurement of effective bandwidth. Journal of Applied Probability, 2000, 37, 224-235.	0.7	4
107	Distribution-free confidence intervals for measurement of effective bandwidth. Journal of Applied Probability, 2000, 37, 224-235.	0.7	2
108	Modelling 802.11 Wireless Links. , 0, , .		3

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109	On Improving Voice Capacity in 802.11 Infrastructure Networks. , 0, , .		23
110	Improving Fairness in Multi-Hop Mesh Networks Using 802.11e. , 0, , .		9
111	Modeling 802.11e for data traffic parameter design. , 0, , .		21