Henry D Pfister

List of Publications by Year
in descending order

125 papers	2,545 citations	430754 18 h-index	315616 38 g-index
125 all docs	125 docs citations	125 times ranked	1300 citing authors

#	Article	IF	Citations
1	Joint Physical Layer Coding and Network Coding for Bidirectional Relaying. IEEE Transactions on Information Theory, 2010, 56, 5641-5654.	1.5	297
2	Capacity-approaching bandwidth-efficient coded modulation schemes based on low-density parity-check codes. IEEE Transactions on Information Theory, 2003, 49, 2141-2155.	1.5	238
3	Capacity-Achieving Ensembles for the Binary Erasure Channel With Bounded Complexity. IEEE Transactions on Information Theory, 2005, 51, 2352-2379.	1.5	103
4	Reedâ€“Muller Codes Achieve Capacity on Erasure Channels. IEEE Transactions on Information Theory, 2017, 63, 4298-4316.	1.5	89
5	Iterative collision resolution for slotted ALOHA: An optimal uncoordinated transmission policy. , 2012, , .		79
6	The effect of spatial coupling on compressive sensing. , 2010, , .		68
7	The replica-symmetric prediction for compressed sensing with Gaussian matrices is exact. , 2016, , .		65
8	Threshold Saturation for Spatially Coupled LDPC and LDGM Codes on BMS Channels. IEEE Transactions on Information Theory, 2014, 60, 7389-7415.	1.5	63
9	A simple proof of threshold saturation for coupled scalar recursions. , 2012, , .		55
10	A Simple Proof of Maxwell Saturation for Coupled Scalar Recursions. IEEE Transactions on Information Theory, 2014, 60, 6943-6965.	1.5	54
11	Enhancing Capacity of Spatial Multiplexing Systems Using Reconfigurable Cavity-Backed Metasurface Antennas in Clustered MIMO Channels. IEEE Transactions on Communications, 2019, 67, 1070-1084.	4.9	53
12	Physics-Based Deep Learning for Fiber-Optic Communication Systems. IEEE Journal on Selected Areas in Communications, 2021, 39, 280-294.	9.7	51
13	Capacity Upper Bounds for the Deletion Channel. , 2007, , .		50
14	Accumulateâ€“Repeatâ€“Accumulate Codes: Capacity-Achieving Ensembles of Systematic Codes for the Erasure Channel With Bounded Complexity. IEEE Transactions on Information Theory, 2007, 53, 2088-2115.	1.5	50
15	Universal codes for the Gaussian MAC via spatial coupling. , 2011, , .		50
16	Learned Belief-Propagation Decoding with Simple Scaling and SNR Adaptation. , 2019, , .		43
17	Nonlinear Interference Mitigation via Deep Neural Networks. , 2018, , .		41
18	Verification Decoding of High-Rate LDPC Codes With Applications in Compressed Sensing. IEEE Transactions on Information Theory, 2012, 58, 5042-5058.	1.5	39

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19	Approaching Miscorrection-Free Performance of Product Codes With Anchor Decoding. IEEE Transactions on Communications, 2018, 66, 2797-2808.	4.9	36
20	Determining and Approaching Achievable Rates of Binary Intersymbol Interference Channels Using Multistage Decoding. IEEE Transactions on Information Theory, 2007, 53, 1416-1429.	1.5	35
21	Decoding Reed-Muller Codes Using Minimum- Weight Parity Checks. , 2018, , .		32
22	Approaching capacity at high rates with iterative hard-decision decoding. , 2012, , .		31
23	Trellis BMA: Coded Trace Reconstruction on IDS Channels for DNA Storage. , 2021, , .		31
24	Revisiting Efficient Multi-Step Nonlinearity Compensation With Machine Learning: An Experimental Demonstration. Journal of Lightwave Technology, 2020, 38, 3114-3124.	2.7	31
25	Compressed sensing and linear codes over real numbers. , 2008, , .		30
26	The Replica-Symmetric Prediction for Random Linear Estimation With Gaussian Matrices Is Exact. IEEE Transactions on Information Theory, 2019, 65, 2252-2283.	1.5	28
27	Approaching Capacity at High Rates with Iterative Hard-Decision Decoding. IEEE Transactions on Information Theory, 2017, , 1-1.	1.5	27
28	Reed-Muller codes achieve capacity on erasure channels. , 2016, , .		25
29	Iterative hard-decision decoding of braided BCH codes for high-speed optical communication. , 2013, , .		24
30	Reinforcement Learning for Channel Coding: Learned Bit-Flipping Decoding. , 2019, , .		24
31	Decoding Reedâ€“Muller Codes Using Redundant Code Constraints. , 2020, , .		24
32	Density Evolution for Deterministic Generalized Product Codes on the Binary Erasure Channel at High Rates. IEEE Transactions on Information Theory, 2017, 63, 4357-4378.	1.5	21
33	A Single-Letter Upper Bound on the Feedback Capacity of Unifilar Finite-State Channels. IEEE Transactions on Information Theory, 2017, 63, 1392-1409.	1.5	21
34	A simple proof of threshold saturation for coupled vector recursions. , 2012, , .		20
35	Model-Based Machine Learning for Joint Digital Backpropagation and PMD Compensation. Journal of Lightwave Technology, 2021, 39, 949-959.	2.7	20
36	Joint iterative decoding of LDPC codes for channels with memory and erasure noise. IEEE Journal on Selected Areas in Communications, 2008, 26, 320-337.	9.7	19

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37	A proof of threshold saturation for spatially-coupled LDPC codes on BMS channels. , 2012, , .		19
38	LDPC codes for rank modulation in flash memories. , 2010, , .		18
39	Comparing the bit-MAP and block-MAP decoding thresholds of reed-muller codes on BMS channels. , 2016, , .		17
40	On Optimality of CSS Codes for Transversal T. IEEE Journal on Selected Areas in Information Theory, 2020, 1, 499-514.	1.9	17
41	Universality for the noisy Slepian-Wolf problem via spatial coupling. , 2011, , .		16
42	Threshold saturation of spatially-coupled codes on intersymbol-interference channels. , 2012, , .		16
43	Symmetric product codes. , 2015, , .		16
44	Near-optimal finite-length scaling for polar codes over large alphabets. , 2016, , .		16
45	Joint Decoding of LDPC Codes and Finite-State Channels Via Linear-Programming. IEEE Journal on Selected Topics in Signal Processing, 2011, 5, 1563-1576.	7.3	15
46	Deep Learning of the Nonlinear SchrÃ¶dinger Equation in Fiber-Optic Communications. , 2018, , .		15
47	List-Message Passing Achieves Capacity on the q-ary Symmetric Channel for Large q. , 2007, , .		14
48	Increasing the rate of spatially-coupled codes via optimized irregular termination. , 2016, , .		14
49	Spatially-coupled low density lattices based on construction a with applications to compute-and-forward. , 2013, , .		13
50	Spatially-coupled multi-edge type LDPC codes with bounded degrees that achieve capacity on the BEC under BP decoding. , 2013, , .		13
51	What Can Machine Learning Teach Us about Communications?. , 2018, , .		13
52	Code-Rate Selection, Queueing Behavior, and the Correlated Erasure Channel. IEEE Transactions on Information Theory, 2013, 59, 397-407.	1.5	12
53	On Parameter Optimization for Staircase Codes. , 2015, , .		12
54	Synthesis of Logical Clifford Operators via Symplectic Geometry. , 2018, , .		12

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55	Analysis of Verification-Based Decoding on the q-ary Symmetric Channel for Large q. IEEE Transactions on Information Theory, 2011, 57, 6754-6770.	1.5	11
56	On Low-Complexity Decoding of Product Codes for High-Throughput Fiber-Optic Systems. , 2018, , .		11
57	An Information-Theoretic Perspective on Successive Cancellation List Decoding and Polar Code Design. IEEE Transactions on Information Theory, 2022, 68, 5779-5791.	1.5	11
58	Multilevel lattices based on spatially-coupled LDPC codes with applications. , 2014, , .		10
59	ASIC Implementation of Time-Domain Digital Backpropagation with Deep-Learned Chromatic Dispersion Filters. , 2018, , .		10
60	Belief propagation with quantum messages for quantum-enhanced classical communications. Npj Quantum Information, 2021, 7, .	2.8	10
61	Can iterative decoding for erasure correlated sources be universal?. , 2009, , .		9
62	Logical Clifford Synthesis for Stabilizer Codes. IEEE Transactions on Quantum Engineering, 2020, 1, 1-17.	2.9	9
63	Delay-Sensitive Communication Over Fading Channels: Queueing Behavior and Code Parameter Selection. IEEE Transactions on Vehicular Technology, 2015, 64, 3957-3970.	3.9	8
64	Mutual Information as a Function of Matrix SNR for Linear Gaussian Channels. , 2018, , .		8
65	Minimal sets to destroy the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>k</mml:mi></mml:math> -core in random networks. Physical Review E, 2019, 99, 022310.	0.8	8
66	Density Evolution and Error Floor Analysis for Staircase and Braided Codes. , 2016, , .		8
67	Girth-10 LDPC Codes Based on 3-D Cyclic Lattices. IEEE Transactions on Vehicular Technology, 2008, 57, 1049-1060.	3.9	7
68	Design and implementation of physical-layer network-coding protocols. , 2009, , .		7
69	An Iterative Joint Linear-Programming Decoding of LDPC Codes and Finite-State Channels. , 2011, , .		7
70	On Multiple Decoding Attempts for Reedâ€“Solomon Codes: A Rate-Distortion Approach. IEEE Transactions on Information Theory, 2011, 57, 668-691.	1.5	7
71	Reed-muller codes achieve capacity on the quantum erasure channel. , 2016, , .		7
72	Model-Based Machine Learning for Joint Digital Backpropagation and PMD Compensation. , 2020, , .		7

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73	Upper bounds on the MAP threshold of iterative decoding systems with erasure noise. , 2008, , .		6
74	First-Passage Time and Large-Deviation Analysis for Erasure Channels With Memory. IEEE Transactions on Information Theory, 2013, 59, 5547-5565.	1.5	6
75	Code Design for the Noisy Slepian-Wolf Problem. IEEE Transactions on Communications, 2013, 61, 2535-2545.	4.9	6
76	Beyond double transitivity: Capacity-achieving cyclic codes on erasure channels. , 2016, , .		6
77	Polar Codes for Channels with Insertions, Deletions, and Substitutions. , 2021, , .		6
78	LDPC code design for transmission of correlated sources across noisy channels without CSIT. , 2010, , .		5
79	On the joint decoding of LDPC codes and finite-state channels via linear programming. , 2010, , .		5
80	The capacity of finite-state channels in the high-noise regime. , 0, , 179-222.		5
81	On the relevance of graph covers and zeta functions for the analysis of SPA decoding of cycle codes. , 2013, , .		5
82	Spatially-coupled codes for side-information problems. , 2014, , .		5
83	On the limits of treating interference as noise for two-user symmetric Gaussian interference channels. , 2015, , .		5
84	Kerdock Codes Determine Unitary 2-Designs. IEEE Transactions on Information Theory, 2020, 66, 6104-6120.	1.5	5
85	Polar Codes for the Deletion Channel: Weak and Strong Polarization. IEEE Transactions on Information Theory, 2022, 68, 2239-2265.	1.5	5
86	Convergence of weighted min-sum decoding via dynamic programming on coupled trees. , 2010, , .		4
87	On the queueing behavior of random codes over a gilbert-elliot erasure channel. , 2010, , .		4
88	IMP: A message-passing algorithm for matrix completion. , 2010, , .		4
89	First-passage time analysis for digital communication over erasure channels with delay-sensitive traffic. , 2010, , .		4
90	Direction of arrival estimation using canonical and crystallographic volumetric element configurations. , 2012, , .		4

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91	Spatially-coupled codes for write-once memories. , 2015, , .		4
92	Kerdock Codes Determine Unitary 2-Designs. , 2019, , .		4
93	Near-Optimal Finite-Length Scaling for Polar Codes Over Large Alphabets. IEEE Transactions on Information Theory, 2019, 65, 5643-5655.	1.5	4
94	Successive Cancellation Inactivation Decoding for Modified Reed-Muller and eBCH Codes. , 2020, , .		4
95	Code rate, queueing behavior and the correlated erasure channel. , 2010, , .		3
96	Queueing behavior of the Gilbert-Elliott channel: BCH codes and Poisson arrivals. , 2011, , .		3
97	Density evolution for deterministic generalized product codes with higher-order modulation. , 2016, , .		3
98	Wideband Time-Domain Digital Backpropagation via Subband Processing and Deep Learning. , 2018, , .		3
99	Classical Coding Problem from Transversal T Gates. , 2020, , .		3
100	Efficient Maximum-Likelihood Decoding of Reedâ€“Muller RM(mâˆ’3,m) Codes. , 2020, , .		3
101	WLC08-5: Link-Level Modeling and Performance of CDMA Interference Cancellation. IEEE Global Telecommunications Conference (GLOBECOM), 2006, , .	0.0	2
102	A rate-distortion perspective on multiple decoding attempts for Reed-Solomon codes. , 2009, , .		2
103	On the performance of random block codes over finite-state fading channels. , 2012, , .		2
104	On the maximum a posteriori decoding thresholds of multiuser systems with erasures. , 2012, , .		2
105	On the Performance of Block Codes Over Finite-State Channels in the Rare-Transition Regime. IEEE Transactions on Communications, 2015, 63, 3974-3990.	4.9	2
106	A single-letter upper bound on the feedback capacity of unifilar finite-state channels. , 2016, , .		2
107	Cycle-expansion method for the Lyapunov exponent, susceptibility, and higher moments. Physical Review E, 2017, 96, 032129.	0.8	2
108	Adaptive Procedures for Discriminating Between Arbitrary Tensor-Product Quantum States. , 2020, , .		2

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109	Reinforcement Learning with Neural Networks for Quantum Multiple Hypothesis Testing. , 2020, , .		2
110	Quantum Advantage via Qubit Belief Propagation. , 2020, , .		2
111	Understanding Phase Transitions via Mutual Information and MMSE. , 2021, , 197-228.		2
112	On the Duality Between the BSC and Quantum PSC. , 2021, , .		2
113	Recent Results on Capacity-Achieving Codes for the Erasure Channel with Bounded Complexity. , 2006, , .		1
114	On the queueing behavior of Gilbert-Elliott channels in the rare-transition regime. , 2012, , .		1
115	An introduction to spatially-coupled codes via practical examples. , 2014, , .		1
116	Convergence of Weighted Min-Sum Decoding Via Dynamic Programming on Trees. IEEE Transactions on Information Theory, 2014, 60, 943-963.	1.5	1
117	Deterministic and ensemble-based spatially-coupled product codes. , 2016, , .		1
118	On Approaching the Capacity of Finite-State Intersymbol Interference Channels. , 2002, , 365-378.		1
119	Adaptive procedures for discriminating between arbitrary tensor-product quantum states. Physical Review A, 2022, 106, .	1.0	1
120	Modulation codes for flash memory based on load-balancing theory. , 2009, , .		0
121	A rate-distortion exponent approach to multiple decoding attempts for Reed-Solomon codes. , 2010, , .		0
122	Large deviations on empirical service for erasure channels with memory. , 2011, , .		0
123	Belief-propagation reconstruction for compressed sensing: Quantization vs. Gaussian approximation. , 2015, , .		0
124	Cyclic polar codes. , 2015, , .		0
125	Reinforcement Learning with Neural Networks for Quantum Multiple Hypothesis Testing. Quantum - the Open Journal for Quantum Science, 0, 6, 633.	0.0	0