

Patrick P C Lee

List of Publications by Year in descending order

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126
papers

3,150
citations

331670

21
h-index

254184

43
g-index

126
all docs

126
docs citations

126
times ranked

2063
citing authors

#	ARTICLE	IF	CITATIONS
1	Secure Deduplication with Efficient and Reliable Convergent Key Management. IEEE Transactions on Parallel and Distributed Systems, 2014, 25, 1615-1625.	5.6	409
2	A Hybrid Cloud Approach for Secure Authorized Deduplication. IEEE Transactions on Parallel and Distributed Systems, 2015, 26, 1206-1216.	5.6	312
3	SketchVisor. , 2017, , .		165
4	Sketchlearn. , 2018, , .		107
5	FADE: Secure Overlay Cloud Storage with File Assured Deletion. Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, 2010, , 380-397.	0.3	81
6	Distributed collaborative key agreement and authentication protocols for dynamic peer Groups. IEEE/ACM Transactions on Networking, 2006, 14, 263-276.	3.8	77
7	Enabling Data Integrity Protection in Regenerating-Coding-Based Cloud Storage: Theory and Implementation. IEEE Transactions on Parallel and Distributed Systems, 2014, 25, 407-416.	5.6	66
8	MV-Sketch: A Fast and Compact Invertible Sketch for Heavy Flow Detection in Network Data Streams. , 2019, , .		66
9	Optimal Repair Layering for Erasure-Coded Data Centers. ACM Transactions on Storage, 2017, 13, 1-24.	2.1	52
10	OmniMon. , 2020, , .		50
11	STAIR Codes. ACM Transactions on Storage, 2014, 10, 1-30.	2.1	47
12	Single Disk Failure Recovery for X-Code-Based Parallel Storage Systems. IEEE Transactions on Computers, 2014, 63, 995-1007.	3.4	45
13	SpreadSketch: Toward Invertible and Network-Wide Detection of Superspreaders. , 2020, , .		44
14	Rack-Aware Regenerating Codes for Data Centers. IEEE Transactions on Information Theory, 2019, 65, 4730-4745.	2.4	43
15	Distributed Algorithms for Secure Multipath Routing in Attack-Resistant Networks. IEEE/ACM Transactions on Networking, 2007, 15, 1490-1501.	3.8	42
16	Reconsidering Single Failure Recovery in Clustered File Systems. , 2016, , .		42
17	Rekeying for Encrypted Deduplication Storage. , 2016, , .		42
18	Enabling Efficient and Reliable Transition from Replication to Erasure Coding for Clustered File Systems. IEEE Transactions on Parallel and Distributed Systems, 2017, 28, 2500-2513.	5.6	41

#	ARTICLE	IF	CITATIONS
19	Opportunistic Use of Client Repeaters to Improve Performance of WLANs. IEEE/ACM Transactions on Networking, 2009, 17, 1160-1171.	3.8	39
20	On the speedup of single-disk failure recovery in XOR-coded storage systems: Theory and practice. , 2012, , .		37
21	Efficient Hybrid Inline and Out-of-Line Deduplication for Backup Storage. ACM Transactions on Storage, 2015, 11, 1-21.	2.1	37
22	Double Regenerating Codes for hierarchical data centers. , 2016, , .		36
23	A lock-free, cache-efficient multi-core synchronization mechanism for line-rate network traffic monitoring. , 2010, , .		35
24	NCFS: On the Practicality and Extensibility of a Network-Coding-Based Distributed File System. , 2011, , .		35
25	LD-Sketch: A distributed sketching design for accurate and scalable anomaly detection in network data streams. , 2014, , .		35
26	Live Deduplication Storage of Virtual Machine Images in an Open-Source Cloud. Lecture Notes in Computer Science, 2011, , 81-100.	1.3	35
27	Capability-Based Security Enforcement in Named Data Networking. IEEE/ACM Transactions on Networking, 2017, 25, 2719-2730.	3.8	34
28	RevDedup. , 2013, , .		33
29	The Design and Implementation of a Rekeying-Aware Encrypted Deduplication Storage System. ACM Transactions on Storage, 2017, 13, 1-30.	2.1	33
30	Cloud-based push-styled mobile botnets. , 2012, , .		31
31	CORE: Augmenting regenerating-coding-based recovery for single and concurrent failures in distributed storage systems. , 2013, , .		30
32	ProWord: An unsupervised approach to protocol feature word extraction. , 2014, , .		30
33	Dynamic Packet Forwarding Verification in SDN. IEEE Transactions on Dependable and Secure Computing, 2019, 16, 915-929.	5.4	30
34	Encoding-Aware Data Placement for Efficient Degraded Reads in XOR-Coded Storage Systems: Algorithms and Evaluation. IEEE Transactions on Parallel and Distributed Systems, 2018, 29, 2757-2770.	5.6	27
35	A cost-based heterogeneous recovery scheme for distributed storage systems with RAID-6 codes. , 2012, , .		24
36	Toward Unsupervised Protocol Feature Word Extraction. IEEE Journal on Selected Areas in Communications, 2014, 32, 1894-1906.	14.0	24

#	ARTICLE	IF	CITATIONS
37	Erasure coding for small objects in in-memory KV storage. , 2017, , .		24
38	CellPAD: Detecting Performance Anomalies in Cellular Networks via Regression Analysis. , 2018, , .		24
39	Opportunistic use of client repeaters to improve performance of WLANs. , 2008, , .		24
40	Information Leakage in Encrypted Deduplication via Frequency Analysis. , 2017, , .		23
41	Security Policy Violations in SDN Data Plane. IEEE/ACM Transactions on Networking, 2018, 26, 1715-1727.	3.8	23
42	On the Speedup of Recovery in Large-Scale Erasure-Coded Storage Systems. IEEE Transactions on Parallel and Distributed Systems, 2014, 25, 1830-1840.	5.6	22
43	A Fast and Compact Invertible Sketch for Network-Wide Heavy Flow Detection. IEEE/ACM Transactions on Networking, 2020, 28, 2350-2363.	3.8	22
44	An experimental study of cascading performance interference in a virtualized environment. Performance Evaluation Review, 2013, 40, 43-52.	0.6	21
45	Fast Predictive Repair in Erasure-Coded Storage. , 2019, , .		21
46	Binary MDS Array Codes With Optimal Repair. IEEE Transactions on Information Theory, 2020, 66, 1405-1422.	2.4	21
47	Balancing storage efficiency and data confidentiality with tunable encrypted deduplication. , 2020, , .		21
48	Enabling Concurrent Failure Recovery for Regenerating-Coding-Based Storage Systems: From Theory to Practice. IEEE Transactions on Computers, 2015, 64, 1898-1911.	3.4	20
49	Toward high-performance distributed stream processing via approximate fault tolerance. Proceedings of the VLDB Endowment, 2016, 10, 73-84.	3.8	20
50	Boosting Degraded Reads in Heterogeneous Erasure-Coded Storage Systems. IEEE Transactions on Computers, 2015, 64, 2145-2157.	3.4	19
51	Analysis of Reliability Dynamics of SSD RAID. IEEE Transactions on Computers, 2016, 65, 1131-1144.	3.4	19
52	Analysis and construction of functional regenerating codes with uncoded repair for distributed storage systems. , 2013, , .		17
53	Triple-fault-tolerant binary MDS array codes with asymptotically optimal repair. , 2017, , .		17
54	Toward Optimal Storage Scaling via Network Coding: From Theory to Practice. , 2018, , .		17

#	ARTICLE	IF	CITATIONS
55	Cross-Rack-Aware Updates in Erasure-Coded Data Centers. , 2018, , .		17
56	A New Design of Binary MDS Array Codes With Asymptotically Weak-Optimal Repair. IEEE Transactions on Information Theory, 2019, 65, 7095-7113.	2.4	17
57	Cross-Rack-Aware Single Failure Recovery for Clustered File Systems. IEEE Transactions on Dependable and Secure Computing, 2020, 17, 248-261.	5.4	17
58	On the Optimal Repair-Scaling Trade-off in Locally Repairable Codes. , 2020, , .		16
59	A New Construction of EVENODD Codes With Lower Computational Complexity. IEEE Communications Letters, 2018, 22, 1120-1123.	4.1	15
60	A Panoramic View of 3G Data/Control-Plane Traffic: Mobile Device Perspective. Lecture Notes in Computer Science, 2012, , 318-330.	1.3	15
61	A lock-free, cache-efficient shared ring buffer for multi-core architectures. , 2009, , .		13
62	Information Leakage in Encrypted Deduplication via Frequency Analysis. ACM Transactions on Storage, 2020, 16, 1-30.	2.1	13
63	Fine-grained dissection of WeChat in cellular networks. , 2015, , .		12
64	Elastic Parity Logging for SSD RAID Arrays. , 2016, , .		12
65	A Weighted Crowdsourcing Approach for Network Quality Measurement in Cellular Data Networks. IEEE Transactions on Mobile Computing, 2017, 16, 300-313.	5.8	12
66	UniKV: Toward High-Performance and Scalable KV Storage in Mixed Workloads via Unified Indexing. , 2020, , .		12
67	ANOC: Anonymous Network-Coding-Based Communication with Efficient Cooperation. IEEE Journal on Selected Areas in Communications, 2012, 30, 1738-1745.	14.0	11
68	Metadedup: Deduplicating Metadata in Encrypted Deduplication via Indirection. , 2019, , .		11
69	Enhancing the Trust of Internet Routing With Lightweight Route Attestation. IEEE Transactions on Information Forensics and Security, 2012, 7, 691-703.	6.9	10
70	Elastic Parity Logging for SSD RAID Arrays: Design, Analysis, and Implementation. IEEE Transactions on Parallel and Distributed Systems, 2018, 29, 2241-2253.	5.6	10
71	Proxy-Assisted Regenerating Codes With Uncoded Repair for Distributed Storage Systems. IEEE Transactions on Information Theory, 2018, 64, 2512-2528.	2.4	10
72	Coupling Decentralized Key-Value Stores with Erasure Coding. , 2019, , .		10

#	ARTICLE	IF	CITATIONS
73	Even data placement for load balance in reliable distributed deduplication storage systems. , 2015, , .		9
74	A simulation analysis of reliability in primary storage deduplication. , 2016, , .		9
75	Enabling Efficient Updates in KV Storage via Hashing. ACM Transactions on Storage, 2019, 15, 1-29.	2.1	9
76	Minimum Storage Rack-Aware Regenerating Codes with Exact Repair and Small Sub-Packetization. , 2020, , .		9
77	A Unified Approach to Routing Protection in IP Networks. IEEE Transactions on Network and Service Management, 2012, 9, 306-319.	4.9	8
78	Cross-Rack-Aware Updates in Erasure-Coded Data Centers: Design and Evaluation. IEEE Transactions on Parallel and Distributed Systems, 2020, 31, 2315-2328.	5.6	8
79	STAR+ Codes: Triple-Fault-Tolerant Codes with Asymptotically Optimal Updates and Efficient Encoding/Decoding. , 2021, , .		8
80	Toward Optimal Network Fault Correction in Externally Managed Overlay Networks. IEEE Transactions on Parallel and Distributed Systems, 2010, 21, 354-366.	5.6	7
81	Achieving Content-Oriented Anonymity with CRISP. IEEE Transactions on Dependable and Secure Computing, 2017, 14, 578-590.	5.4	7
82	A Simulation Analysis of Redundancy and Reliability in Primary Storage Deduplication. IEEE Transactions on Computers, 2018, 67, 1259-1272.	3.4	7
83	Enabling I/O-Efficient Redundancy Transitioning in Erasure-Coded KV Stores via Elastic Reed-Solomon Codes. , 2020, , .		7
84	SEAL: A secure communication library for building dynamic group key agreement applications. Journal of Systems and Software, 2007, 80, 356-370.	4.5	6
85	CloudVS: Enabling version control for virtual machines in an open-source cloud under commodity settings. , 2012, , .		6
86	Seek-Efficient I/O Optimization in Single Failure Recovery for XOR-Coded Storage Systems. IEEE Transactions on Parallel and Distributed Systems, 2017, 28, 877-890.	5.6	6
87	Relieving Both Storage and Recovery Burdens in Big Data Clusters with R-STAIR Codes. IEEE Internet Computing, 2018, 22, 15-26.	3.3	6
88	On the performance and convergence of distributed stream processing via approximate fault tolerance. VLDB Journal, 2019, 28, 821-846.	4.1	6
89	Correlation-Aware Stripe Organization for Efficient Writes in Erasure-Coded Storage: Algorithms and Evaluation. IEEE Transactions on Parallel and Distributed Systems, 2019, 30, 1552-1564.	5.6	6
90	Repair Pipelining for Erasure-coded Storage: Algorithms and Evaluation. ACM Transactions on Storage, 2021, 17, 1-29.	2.1	6

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91	Optimal Rack-Coordinated Updates in Erasure-Coded Data Centers. , 2021, , .		6
92	Optimal Data Placement for Stripe Merging in Locally Repairable Codes. , 2022, , .		6
93	A Privacy-Preserving Defense Mechanism against Request Forgery Attacks. , 2011, , .		5
94	Toward I/O-efficient protection against silent data corruptions in RAID arrays. , 2014, , .		5
95	SimEDC: A Simulator for the Reliability Analysis of Erasure-Coded Data Centers. IEEE Transactions on Parallel and Distributed Systems, 2019, 30, 2836-2848.	5.6	5
96	Parity-Only Caching for Robust Straggler Tolerance. , 2019, , .		5
97	Achieving Unified Protection for IP Routing. , 2010, , .		4
98	Modeling time correlation in passive network loss tomography. , 2011, , .		4
99	Toward a practical approach for BGP stability with root cause check. Journal of Parallel and Distributed Computing, 2011, 71, 1098-1110.	4.1	4
100	Identity attack and anonymity protection for P2P-VoD systems. , 2011, , .		4
101	Enhancing the trust of internet routing with lightweight route attestation. , 2011, , .		4
102	VegaNet: a virtualized experimentation platform for production networks with connectivity consistency. IEEE Network, 2012, 26, 15-21.	6.9	4
103	Enabling Secure and Space-Efficient Metadata Management in Encrypted Deduplication. IEEE Transactions on Computers, 2022, 71, 959-970.	3.4	4
104	Optimal Repair-Scaling Trade-off in Locally Repairable Codes: Analysis and Evaluation. IEEE Transactions on Parallel and Distributed Systems, 2021, , 1-1.	5.6	4
105	Stochastic modeling and optimization of garbage collection algorithms in solid-state drive systems. Queueing Systems, 2014, 77, 115-148.	0.9	3
106	New Regenerating Codes over Binary Cyclic Codes. , 2019, , .		3
107	Zigzag-Decodable Reconstruction Codes With Asymptotically Optimal Repair for All Nodes. IEEE Transactions on Communications, 2020, 68, 5999-6011.	7.8	3
108	On the robustness of wireless opportunistic routing toward inaccurate link-level measurements. , 2010, , .		2

#	ARTICLE	IF	CITATIONS
109	Experiences building network-coding-based distributed storage systems. , 2014, , .		2
110	Exploiting intra-packet dependency for fine-grained protocol format inference. , 2015, , .		2
111	Binary MDS Array Codes with Asymptotically Optimal Repair for All Columns. , 2019, , .		2
112	Toward Optimality in Both Repair and Update via Generic MDS Code Transformation. , 2020, , .		2
113	Two Classes of Binary MDS Array Codes With Asymptotically Optimal Repair for Any Single Column. IEEE Transactions on Communications, 2020, 68, 6723-6736.	7.8	2
114	Relieving Both Storage and Recovery Burdens in Big Data Clusters with R-STAIR Codes. IEEE Internet Computing, 2017, , 1-1.	3.3	2
115	Revisiting Frequency Analysis against Encrypted Deduplication via Statistical Distribution. , 2022, , .		2
116	An Algebraic Approach to Computing the Reliability of Internet Routing. , 2011, , .		1
117	Analyzing credit evolution for credit-based incentive schemes in wireless mesh networks. , 2011, , .		1
118	Efficient routing for cooperative data regeneration in heterogeneous storage networks. , 2016, , .		1
119	Modeling SSD RAID reliability under general settings. , 2018, , .		1
120	NCScale: Toward Optimal Storage Scaling via Network Coding. IEEE/ACM Transactions on Networking, 2022, 30, 271-284.	3.8	1
121	Generalized Rack-aware Regenerating Codes for Jointly Optimal Node and Rack Repairs. , 2021, , .		1
122	StreamDFP: A General Stream Mining Framework for Adaptive Disk Failure Prediction. IEEE Transactions on Computers, 2023, 72, 520-534.	3.4	1
123	Guest Editorial: Cloud Security. IEEE Transactions on Cloud Computing, 2014, 2, 377-379.	4.4	0
124	Making mapreduce scheduling effective in erasure-coded storage clusters. , 2015, , .		0
125	Enabling Low-Redundancy Proactive Fault Tolerance for Stream Machine Learning via Erasure Coding. , 2021, , .		0
126	Fast Proactive Repair in Erasure-Coded Storage: Analysis, Design, and Implementation. IEEE Transactions on Parallel and Distributed Systems, 2022, 33, 3400-3414.	5.6	0