

# Eli Upfal

## List of Publications by Year in descending order

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151  
papers

7,175  
citations

159525

30  
h-index

110317

64  
g-index

155  
all docs

155  
docs citations

155  
times ranked

4531  
citing authors

#	ARTICLE	IF	CITATIONS
1	RePubLik: Reducing Polarized Bubble Radius with Link Insertions. , 2021, , .		16
2	Tiered Sampling. ACM Transactions on Knowledge Discovery From Data, 2021, 15, 1-52.	2.5	1
3	Distributed Graph Diameter Approximation. Algorithms, 2020, 13, 216.	1.2	4
4	Bandits and Experts in Metric Spaces. Journal of the ACM, 2019, 66, 1-77.	1.8	23
5	Differentially mutated subnetworks discovery. Algorithms for Molecular Biology, 2019, 14, 10.	0.3	7
6	A Rademacher Complexity Based Method for Controlling Power and Confidence Level in Adaptive Statistical Analysis. , 2019, , .		4
7	VizCertify: A Framework for Secure Visual Data Exploration. , 2019, , .		1
8	Optimizing static and adaptive probing schedules for rapid event detection. Theoretical Computer Science, 2019, 774, 14-30.	0.5	0
9	Towards Interactive Data Exploration. Lecture Notes in Business Information Processing, 2019, , 177-190.	0.8	1
10	Efficient Approximation for Restricted Biclique Cover Problems. Algorithms, 2018, 11, 84.	1.2	2
11	Towards Interactive Curation & Automatic Tuning of ML Pipelines. , 2018, , .		10
12	ABRA. ACM Transactions on Knowledge Discovery From Data, 2018, 12, 1-38.	2.5	44
13	MapReduce and streaming algorithms for diversity maximization in metric spaces of bounded doubling dimension. Proceedings of the VLDB Endowment, 2017, 10, 469-480.	2.1	15
14	Safe Visual Data Exploration. , 2017, , .		4
15	Controlling False Discoveries During Interactive Data Exploration. , 2017, , .		42
16	The k-Nearest Representatives Classifier: A Distance-Based Classifier with Strong Generalization Bounds. , 2017, , .		1
17	Minimizing operational cost for zero information leakage. , 2017, , .		0
18	Real-Time Targeted-Influence Queries over Large Graphs. , 2017, , .		2

#	ARTICLE	IF	CITATIONS
19	TRIÁST. ACM Transactions on Knowledge Discovery From Data, 2017, 11, 1-50.	2.5	78
20	Balanced Allocation: Patience is not a Virtue. , 2016, , .		1
21	TRIÁST. , 2016, , .		35
22	Wiggins. , 2016, , .		0
23	Scalable Betweenness Centrality Maximization via Sampling. , 2016, , .		24
24	A Practical Parallel Algorithm for Diameter Approximation of Massive Weighted Graphs. , 2016, , .		12
25	ABRA. , 2016, , .		26
26	On the Sample Complexity of Cancer Pathways Identification. Journal of Computational Biology, 2016, 23, 30-41.	0.8	6
27	On the Sample Complexity of Cancer Pathways Identification. Lecture Notes in Computer Science, 2015, , 326-337.	1.0	0
28	Enabling Robust and Efficient Distributed Computation in Dynamic Peer-to-Peer Networks. , 2015, , .		25
29	Distributed agreement in dynamic peer-to-peer networks. Journal of Computer and System Sciences, 2015, 81, 1088-1109.	0.9	5
30	Accurate Computation of Survival Statistics in Genome-Wide Studies. PLoS Computational Biology, 2015, 11, e1004071.	1.5	24
31	VC-Dimension and Rademacher Averages. , 2015, , .		2
32	Space and Time Efficient Parallel Graph Decomposition, Clustering, and Diameter Approximation. , 2015, , .		11
33	Mining Frequent Itemsets through Progressive Sampling with Rademacher Averages. , 2015, , .		29
34	Fast distributed PageRank computation. Theoretical Computer Science, 2015, 561, 113-121.	0.5	49
35	Efficient Discovery of Association Rules and Frequent Itemsets through Sampling with Tight Performance Guarantees. ACM Transactions on Knowledge Discovery From Data, 2014, 8, 1-32.	2.5	29
36	The Melbourne Shuffle: Improving Oblivious Storage in the Cloud. Lecture Notes in Computer Science, 2014, , 556-567.	1.0	27

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37	Genome-Wide Survival Analysis of Somatic Mutations in Cancer. Lecture Notes in Computer Science, 2013, , 285-286.	1.0	0
38	Storage and search in dynamic peer-to-peer networks. , 2013, , .		27
39	Identifying significant mutations in large cohorts of cancer genomes. , 2013, , .		0
40	Fast Distributed PageRank Computation. Lecture Notes in Computer Science, 2013, , 11-26.	1.0	37
41	An Efficient Rigorous Approach for Identifying Statistically Significant Frequent Itemsets. Journal of the ACM, 2012, 59, 1-22.	1.8	20
42	Space-round tradeoffs for MapReduce computations. , 2012, , .		39
43	Learning-based Query Performance Modeling and Prediction. , 2012, , .		118
44	Workshop: Algorithms for discovery of mutated pathways in cancer. , 2012, , .		0
45	PARMA. , 2012, , .		83
46	Algorithms on evolving graphs. , 2012, , .		21
47	PageRank on an evolving graph. , 2012, , .		41
48	Finding driver pathways in cancer: models and algorithms. Algorithms for Molecular Biology, 2012, 7, 23.	0.3	18
49	De novo discovery of mutated driver pathways in cancer. Genome Research, 2012, 22, 375-385.	2.4	391
50	Algorithms and Genome Sequencing: Identifying Driver Pathways in Cancer. Computer, 2012, 45, 39-46.	1.2	10
51	Efficient Discovery of Association Rules and Frequent Itemsets through Sampling with Tight Performance Guarantees. Lecture Notes in Computer Science, 2012, , 25-41.	1.0	13
52	Towards Robust and Efficient Computation in Dynamic Peer-to-Peer Networks. , 2012, , .		37
53	Discovery of mutated subnetworks associated with clinical data in cancer. Pacific Symposium on Biocomputing Pacific Symposium on Biocomputing, 2012, , 55-66.	0.7	60
54	DISCOVERY OF MUTATED SUBNETWORKS ASSOCIATED WITH CLINICAL DATA IN CANCER. , 2011, , .		59

#	ARTICLE	IF	CITATIONS
55	Algorithms for Detecting Significantly Mutated Pathways in Cancer. Journal of Computational Biology, 2011, 18, 507-522.	0.8	434
56	Performance prediction for concurrent database workloads. , 2011, , .		96
57	Sorting and selection on dynamic data. Theoretical Computer Science, 2011, 412, 2564-2576.	0.5	2
58	Tight bounds on information dissemination in sparse mobile networks. , 2011, , .		35
59	MADMX: A Strategy for Maximal Dense Motif Extraction. Journal of Computational Biology, 2011, 18, 535-545.	0.8	14
60	De Novo Discovery of Mutated Driver Pathways in Cancer. Lecture Notes in Computer Science, 2011, , 499-500.	1.0	9
61	Finding Driver Pathways in Cancer: Models and Algorithms. Lecture Notes in Computer Science, 2011, , 314-325.	1.0	0
62	The VC-Dimension of SQL Queries and Selectivity Estimation through Sampling. Lecture Notes in Computer Science, 2011, , 661-676.	1.0	9
63	Database-support for continuous prediction queries over streaming data. Proceedings of the VLDB Endowment, 2010, 3, 1291-1301.	2.1	7
64	Mining top-K frequent itemsets through progressive sampling. Data Mining and Knowledge Discovery, 2010, 21, 310-326.	2.4	33
65	Online stochastic optimization under time constraints. Annals of Operations Research, 2010, 177, 151-183.	2.6	33
66	The Hiring Problem and Lake Wobegon Strategies. SIAM Journal on Computing, 2010, 39, 1233-1255.	0.8	11
67	Algorithms for Detecting Significantly Mutated Pathways in Cancer. Lecture Notes in Computer Science, 2010, , 506-521.	1.0	18
68	MADMX: A Novel Strategy for Maximal Dense Motif Extraction. Lecture Notes in Computer Science, 2009, , 362-374.	1.0	5
69	An efficient rigorous approach for identifying statistically significant frequent itemsets. , 2009, , .		15
70	Sort Me If You Can: How to Sort Dynamic Data. Lecture Notes in Computer Science, 2009, , 339-350.	1.0	4
71	Commitment under uncertainty: Two-stage stochastic matching problems. Theoretical Computer Science, 2008, 408, 213-223.	0.5	29
72	Finding near neighbors through cluster pruning. , 2007, , .		21

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73	Entropy-based bounds for online algorithms. ACM Transactions on Algorithms, 2007, 3, 1-19.	0.9	6
74	Using PageRank to Characterize Web Structure. Internet Mathematics, 2006, 3, 1-20.	0.7	40
75	Steady state analysis of balanced-allocation routing. Random Structures and Algorithms, 2005, 26, 446-467.	0.6	3
76	Load Balancing in Arbitrary Network Topologies with Stochastic Adversarial Input. SIAM Journal on Computing, 2005, 34, 616-639.	0.8	6
77	A learned comparative expression measure for Affymetrix genechip DNA microarrays. , 2005, , 144-54.		2
78	Sequence Reconstruction from Nucleic Acid Microarray Data*. , 2005, , .		0
79	A simple and deterministic competitive algorithm for online facility location. Information and Computation, 2004, 194, 175-202.	0.5	33
80	Efficient communication in an ad-hoc network. Journal of Algorithms, 2004, 52, 1-7.	0.9	7
81	On-line routing of random calls in networks. Probability Theory and Related Fields, 2003, 125, 457-482.	0.9	8
82	Building low-diameter peer-to-peer networks. IEEE Journal on Selected Areas in Communications, 2003, 21, 995-1002.	9.7	115
83	A Wait-Free Sorting Algorithm. Theory of Computing Systems, 2001, 34, 519-544.	0.7	0
84	Efficient methods for computing investment strategies for multi-market commodity trading. Applied Artificial Intelligence, 2001, 15, 429-452.	2.0	0
85	A general approach to dynamic packet routing with bounded buffers. Journal of the ACM, 2001, 48, 324-349.	1.8	8
86	STATIC AND DYNAMIC EVALUATION OF QoS PROPERTIES. Journal of Interconnection Networks, 2000, 01, 135-150.	0.6	0
87	Sequencing-by-Hybridization at the Information-Theory Bound: An Optimal Algorithm. Journal of Computational Biology, 2000, 7, 621-630.	0.8	28
88	Balanced Allocations. SIAM Journal on Computing, 1999, 29, 180-200.	0.8	493
89	Real-Time Communication Scheduling in a Multicomputer Video Server. Journal of Parallel and Distributed Computing, 1999, 58, 425-445.	2.7	1
90	Static and Dynamic Path Selection on Expander Graphs: A Random Walk Approach. Random Structures and Algorithms, 1999, 14, 87-109.	0.6	26

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91	Optimal Reconstruction of a Sequence from its Probes. Journal of Computational Biology, 1999, 6, 361-368.	0.8	32
92	Static and Dynamic Path Selection on Expander Graphs: A Random Walk Approach. , 1999, 14, 87.		2
93	A Steady State Analysis of Diffracting Trees. Theory of Computing Systems, 1998, 31, 403-423.	0.7	17
94	Optimal Construction of Edge-Disjoint Paths in Random Graphs. SIAM Journal on Computing, 1998, 28, 541-573.	0.8	33
95	Stochastic Contention Resolution With Short Delays. SIAM Journal on Computing, 1998, 28, 709-719.	0.8	50
96	Dynamic packet routing on arrays with bounded buffers. Lecture Notes in Computer Science, 1998, , 273-281.	1.0	2
97	Reliable Fault Diagnosis with Few Tests. Combinatorics Probability and Computing, 1998, 7, 323-333.	0.8	7
98	Design and Analysis of Dynamic Processes: A Stochastic Approach (Invited Paper). Lecture Notes in Computer Science, 1998, , 26-34.	1.0	1
99	A wait-free sorting algorithm. , 1997, , .		4
100	How much can hardware help routing?. Journal of the ACM, 1997, 44, 726-741.	1.8	5
101	<title>Updates to the QBIC system</title>. , 1997, , .		37
102	Static and dynamic path selection on expander graphs (preliminary version). , 1997, , .		6
103	Efficient algorithms for all-to-all communications in multiport message-passing systems. IEEE Transactions on Parallel and Distributed Systems, 1997, 8, 1143-1156.	4.0	200
104	Stochastic analysis of dynamic processes. Lecture Notes in Computer Science, 1997, , 85-92.	1.0	0
105	A theory of wormhole routing in parallel computers. IEEE Transactions on Computers, 1996, 45, 704-713.	2.4	22
106	Dynamic deflection routing on arrays (preliminary version). , 1996, , .		20
107	Safe and efficient traffic laws for mobile robots. Lecture Notes in Computer Science, 1996, , 357-367.	1.0	1
108	The worst-case running time of the random simplex algorithm is exponential in the height. Information Processing Letters, 1995, 56, 79-81.	0.4	12

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109	Efficient routing in all-optical networks. , 1994, , .		167
110	Balanced allocations (extended abstract). , 1994, , .		78
111	Near-perfect token distribution. Random Structures and Algorithms, 1994, 5, 559-572.	0.6	5
112	Existence and Construction of Edge-Disjoint Paths on Expander Graphs. SIAM Journal on Computing, 1994, 23, 976-989.	0.8	56
113	Trading Space for Time in Undirected s-t Connectivity. SIAM Journal on Computing, 1994, 23, 324-334.	0.8	28
114	Computing with Noisy Information. SIAM Journal on Computing, 1994, 23, 1001-1018.	0.8	194
115	On the theory of interconnection networks for parallel computers. Lecture Notes in Computer Science, 1994, , 473-486.	1.0	1
116	Randomized routing with shorter paths. , 1993, , .		3
117	How much can hardware help routing?. , 1993, , .		18
118	An experimental study of wormhole routing in parallel computers. Lecture Notes in Computer Science, 1993, , 156-165.	1.0	3
119	Existence and construction of edge disjoint paths on expander graphs. , 1992, , .		8
120	An O (log N ) deterministic packet-routing scheme. Journal of the ACM, 1992, 39, 55-70.	1.8	77
121	Randomized broadcast in networks. Random Structures and Algorithms, 1990, 1, 447-460.	0.6	168
122	A Time-Randomness Trade-Off for Oblivious Routing. SIAM Journal on Computing, 1990, 19, 256-266.	0.8	14
123	Randomized broadcast in networks. Lecture Notes in Computer Science, 1990, , 128-137.	1.0	32
124	A trade-off between space and efficiency for routing tables. Journal of the ACM, 1989, 36, 510-530.	1.8	294
125	Constructing disjoint paths on expander graphs. Combinatorica, 1989, 9, 289-313.	0.6	38
126	The Token Distribution Problem. SIAM Journal on Computing, 1989, 18, 229-243.	0.8	78



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127	A tradeoff between search and update time for the implicit dictionary problem. Theoretical Computer Science, 1988, 58, 57-68.	0.5	18
128	The complexity of parallel search. Journal of Computer and System Sciences, 1988, 36, 225-253.	0.9	71
129	Fault Tolerance in Networks of Bounded Degree. SIAM Journal on Computing, 1988, 17, 975-988.	0.8	82
130	A time-randomness tradeoff for oblivious routing. , 1988, , .		32
131	Parallel hashing. Journal of the ACM, 1988, 35, 876-892.	1.8	48
132	A tradeoff between space and efficiency for routing tables. , 1988, , .		65
133	How to share memory in a distributed system. Journal of the ACM, 1987, 34, 116-127.	1.8	121
134	A Time-Space Tradeoff for Element Distinctness. SIAM Journal on Computing, 1987, 16, 97-99.	0.8	37
135	The generalized packet routing problem. Theoretical Computer Science, 1987, 53, 281-293.	0.5	32
136	A probabilistic approach to the load-sharing problem in distributed systems. Journal of Parallel and Distributed Computing, 1987, 4, 521-530.	2.7	16
137	The parallel complexity of scheduling with precedence constraints. Journal of Parallel and Distributed Computing, 1986, 3, 553-576.	2.7	8
138	Constructing a perfect matching is in random NC. Combinatorica, 1986, 6, 35-48.	0.6	209
139	The token distribution problem. , 1986, , .		12
140	A tradeoff between search and update time for the implicit dictionary problem. Lecture Notes in Computer Science, 1986, , 50-59.	1.0	5
141	A Fast Parallel Construction of Disjoint Paths in Networks. North-Holland Mathematics Studies, 1985, 102, 141-153.	0.2	1
142	Random hypergraph coloring algorithms and the weak chromatic number. Journal of Graph Theory, 1985, 9, 347-362.	0.5	22
143	The complexity of parallel computation on matroids. , 1985, , .		5
144	A probabilistic relation between desirable and feasible, models of parallel computation. , 1984, , .		22

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145	Efficient Schemes for Parallel Communication. Journal of the ACM, 1984, 31, 507-517.	1.8	117
146	Sequential and distributed graph coloring algorithms with performance analysis in random graph spaces. Journal of Algorithms, 1984, 5, 488-501.	0.9	23
147	A fast construction of disjoint paths in communication networks. Lecture Notes in Computer Science, 1983, , 428-438.	1.0	3
148	Efficient schemes for parallel communication. , 1982, , .		30
149	N-processors graphs distributively achieve perfect matchings in $O(\log 2N)$ beats. , 1982, , .		5
150	One-factor in random graphs based on vertex choice. Discrete Mathematics, 1982, 41, 281-286.	0.4	19
151	On factors in random graphs. Israel Journal of Mathematics, 1981, 39, 296-302.	0.4	25