

David Eppstein

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

160
papers

3,905
citations

31
h-index

58
g-index

168
ext. papers

4,475
ext. citations

0.9
avg, IF

5.75
L-index

#	Paper	IF	Citations
160	Ununfoldable polyhedra with 6 vertices or 6 faces. <i>Computational Geometry: Theory and Applications</i> , 2022 , 103, 101857	0.4	
159	Limitations on Realistic Hyperbolic Graph Drawing. <i>Lecture Notes in Computer Science</i> , 2021 , 343-357	0.9	1
158	On Polyhedral Realization with Isosceles Triangles. <i>Graphs and Combinatorics</i> , 2021 , 37, 1247	0.5	
157	C-Planarity Testing of Embedded Clustered Graphs with Bounded Dual Carving-Width. <i>Algorithmica</i> , 2021 , 83, 2471-2502	0.9	1
156	NC Algorithms for Computing a Perfect Matching and a Maximum Flow in One-Crossing-Minor-Free Graphs. <i>SIAM Journal on Computing</i> , 2021 , 50, 1014-1033	1.1	
155	Parameterized Complexity of Finding Subgraphs with Hereditary Properties on Hereditary Graph Classes. <i>Lecture Notes in Computer Science</i> , 2021 , 217-229	0.9	0
154	Counting Polygon Triangulations is Hard. <i>Discrete and Computational Geometry</i> , 2020 , 64, 1210-1234	0.6	1
153	Parameterized Leaf Power Recognition via Embedding into Graph Products. <i>Algorithmica</i> , 2020 , 82, 2337-2359	0.9	3
152	Treetopes and Their Graphs. <i>Discrete and Computational Geometry</i> , 2020 , 64, 259-289	0.6	
151	Minor-Closed Graph Classes with Bounded Layered Pathwidth. <i>SIAM Journal on Discrete Mathematics</i> , 2020 , 34, 1693-1709	0.7	1
150	Grid Peeling and the Affine Curve-Shortening Flow. <i>Experimental Mathematics</i> , 2020 , 29, 306-316	0.5	1
149	Maximum Plane Trees in Multipartite Geometric Graphs. <i>Algorithmica</i> , 2019 , 81, 1512-1534	0.9	2
148	Track Layouts, Layered Path Decompositions, and Leveled Planarity. <i>Algorithmica</i> , 2019 , 81, 1561-1583	0.9	15
147	The Parametric Closure Problem. <i>ACM Transactions on Algorithms</i> , 2018 , 14, 1-22	1.2	1
146	Spanning Trees in Multipartite Geometric Graphs. <i>Algorithmica</i> , 2018 , 80, 3177-3191	0.9	2
145	From Discrepancy to Majority. <i>Algorithmica</i> , 2018 , 80, 1278-1297	0.9	4
144	Parameterized Complexity of 1-Planarity. <i>Journal of Graph Algorithms and Applications</i> , 2018 , 22, 23-49	1.5	17

143	Reactive Proximity Data Structures for Graphs. <i>Lecture Notes in Computer Science</i> , 2018 , 777-789	0.9	
142	The Effect of Planarization on Width. <i>Lecture Notes in Computer Science</i> , 2018 , 560-572	0.9	
141	Realization and Connectivity of the Graphs of Origami Flat Foldings. <i>Lecture Notes in Computer Science</i> , 2018 , 541-554	0.9	
140	Subexponential-Time and FPT Algorithms for Embedded Flat Clustered Planarity. <i>Lecture Notes in Computer Science</i> , 2018 , 111-124	0.9	7
139	Triangle-Free Penny Graphs: Degeneracy, Choosability, and Edge Count. <i>Lecture Notes in Computer Science</i> , 2018 , 506-513	0.9	3
138	On the Planar Split Thickness of Graphs. <i>Algorithmica</i> , 2018 , 80, 977-994	0.9	11
137	Folding Polyominoes into (Poly)Cubes. <i>International Journal of Computational Geometry and Applications</i> , 2018 , 28, 197-226	0.3	2
136	Structure of Graphs with Locally Restricted Crossings. <i>SIAM Journal on Discrete Mathematics</i> , 2017 , 31, 805-824	0.7	19
135	Crossing Patterns in Nonplanar Road Networks 2017 ,		9
134	2-3 Cuckoo Filters for Faster Triangle Listing and Set Intersection 2017 ,		9
133	Simple Recognition of Halin Graphs and Their Generalizations. <i>Journal of Graph Algorithms and Applications</i> , 2016 , 20, 323-346	1.5	4
132	From Discrepancy to Majority. <i>Lecture Notes in Computer Science</i> , 2016 , 390-402	0.9	
131	Track Layout Is Hard. <i>Lecture Notes in Computer Science</i> , 2016 , 499-510	0.9	
130	Distance-sensitive planar point location. <i>Computational Geometry: Theory and Applications</i> , 2016 , 54, 17-31	0.4	1
129	Near-linear-time deterministic plane Steiner spanners for well-spaced point sets. <i>Computational Geometry: Theory and Applications</i> , 2015 , 49, 8-16	0.4	1
128	Improved Grid Map Layout by Point Set Matching. <i>International Journal of Computational Geometry and Applications</i> , 2015 , 25, 101-122	0.3	17
127	Ramified Rectilinear Polygons: Coordinatization by Dendrons. <i>Discrete and Computational Geometry</i> , 2015 , 54, 771-797	0.6	2
126	Automated Generation of Linkage Loop Equations for Planar One Degree-of-Freedom Linkages, Demonstrated up to 8-Bar. <i>Journal of Mechanisms and Robotics</i> , 2015 , 7,	2.2	8

125	Planar Induced Subgraphs of Sparse Graphs. <i>Journal of Graph Algorithms and Applications</i> , 2015 , 19, 281-297	2.97	3
124	Genus, Treewidth, and Local Crossing Number. <i>Lecture Notes in Computer Science</i> , 2015 , 87-98	0.9	5
123	Contact Graphs of Circular Arcs. <i>Lecture Notes in Computer Science</i> , 2015 , 1-13	0.9	1
122	Folding a Paper Strip to Minimize Thickness. <i>Lecture Notes in Computer Science</i> , 2015 , 113-124	0.9	
121	Diamond-kite adaptive quadrilateral meshing. <i>Engineering With Computers</i> , 2014 , 30, 223-235	4.5	4
120	A Möbius-Invariant Power Diagram and Its Applications to Soap Bubbles and Planar Lombardi Drawing. <i>Discrete and Computational Geometry</i> , 2014 , 52, 515-550	0.6	5
119	Antimatroids and Balanced Pairs. <i>Order</i> , 2014 , 31, 81-99	0.5	
118	Crossing Minimization for 1-page and 2-page Drawings of Graphs with Bounded Treewidth. <i>Lecture Notes in Computer Science</i> , 2014 , 210-221	0.9	9
117	Drawing Trees with Perfect Angular Resolution and Polynomial Area. <i>Discrete and Computational Geometry</i> , 2013 , 49, 157-182	0.6	6
116	On 2-Site Voronoi Diagrams Under Geometric Distance Functions. <i>Journal of Computer Science and Technology</i> , 2013 , 28, 267-277	1.7	1
115	The graphs of planar soap bubbles 2013 ,		2
114	Diamond-Kite Meshes: Adaptive Quadrilateral Meshing and Orthogonal Circle Packing 2013 , 261-277		
113	Bounds on the Complexity of Halfspace Intersections when the Bounded Faces have Small Dimension. <i>Discrete and Computational Geometry</i> , 2013 , 50, 1-21	0.6	1
112	Improved grid map layout by point set matching 2013 ,		5
111	Planar Lombardi Drawings for Subcubic Graphs. <i>Lecture Notes in Computer Science</i> , 2013 , 126-137	0.9	9
110	Listing All Maximal Cliques in Large Sparse Real-World Graphs. <i>Journal of Experimental Algorithmics</i> , 2013 , 18,	1.1	64
109	Flows in One-Crossing-Minor-Free Graphs. <i>Journal of Graph Algorithms and Applications</i> , 2013 , 17, 201-220	5	6
108	Fixed Parameter Tractability of Crossing Minimization of Almost-Trees. <i>Lecture Notes in Computer Science</i> , 2013 , 340-351	0.9	8

107	Strict Confluent Drawing. <i>Lecture Notes in Computer Science</i> , 2013 , 352-363	0.9	6
106	Combinatorial Pair Testing: Distinguishing Workers from Slackers. <i>Lecture Notes in Computer Science</i> , 2013 , 316-327	0.9	3
105	Area-Universal and Constrained Rectangular Layouts. <i>SIAM Journal on Computing</i> , 2012 , 41, 537-564	1.1	37
104	UOBPRM: A uniformly distributed obstacle-based PRM 2012 ,		17
103	Lombardi Drawings of Graphs. <i>Journal of Graph Algorithms and Applications</i> , 2012 , 16, 85-108	1.5	25
102	Inapproximability of Orthogonal Compaction. <i>Journal of Graph Algorithms and Applications</i> , 2012 , 16, 651-673	1.5	5
101	Planar and Poly-arc Lombardi Drawings. <i>Lecture Notes in Computer Science</i> , 2012 , 308-319	0.9	11
100	Confluent Hasse Diagrams. <i>Lecture Notes in Computer Science</i> , 2012 , 2-13	0.9	1
99	What's the difference?. <i>Computer Communication Review</i> , 2011 , 41, 218-229	1.4	38
98	Succinct Greedy Geometric Routing Using Hyperbolic Geometry. <i>IEEE Transactions on Computers</i> , 2011 , 60, 1571-1580	2.5	33
97	On 2-Site Voronoi Diagrams under Geometric Distance Functions 2011 ,		2
96	Straggler Identification in Round-Trip Data Streams via Newton's Identities and Invertible Bloom Filters. <i>IEEE Transactions on Knowledge and Data Engineering</i> , 2011 , 23, 297-306	4.2	30
95	APPROXIMATE WEIGHTED FARTHEST NEIGHBORS AND MINIMUM DILATION STARS. <i>Discrete Mathematics, Algorithms and Applications</i> , 2010 , 02, 553-565	0.5	
94	Steinitz theorems for orthogonal polyhedra 2010 ,		12
93	Linear-Time Algorithms for Geometric Graphs with Sublinearly Many Edge Crossings. <i>SIAM Journal on Computing</i> , 2010 , 39, 3814-3829	1.1	6
92	Combinatorics and Geometry of Finite and Infinite Squaregraphs. <i>SIAM Journal on Discrete Mathematics</i> , 2010 , 24, 1399-1440	0.7	9
91	Manhattan orbifolds. <i>Topology and Its Applications</i> , 2010 , 157, 494-507	0.4	6
90	Paired Approximation Problems and Incompatible Inapproximabilities 2010 ,		5

89	Graph-Theoretic Solutions to Computational Geometry Problems. <i>Lecture Notes in Computer Science</i> , 2010 , 1-16	0.9	13
88	Listing All Maximal Cliques in Sparse Graphs in Near-Optimal Time. <i>Lecture Notes in Computer Science</i> , 2010 , 403-414	0.9	115
87	Testing bipartiteness of geometric intersection graphs. <i>ACM Transactions on Algorithms</i> , 2009 , 5, 1-35	1.2	8
86	Area-universal rectangular layouts 2009 ,		13
85	Animating a continuous family of two-site Voronoi diagrams (and a proof of a bound on the number of regions) 2009 ,		5
84	All maximal independent sets and dynamic dominance for sparse graphs. <i>ACM Transactions on Algorithms</i> , 2009 , 5, 1-14	1.2	12
83	Squarepants in a tree. <i>ACM Transactions on Algorithms</i> , 2009 , 5, 1-24	1.2	4
82	Approximate topological matching of quad meshes. <i>Visual Computer</i> , 2009 , 25, 771-783	2.3	2
81	Dynamic Graph Algorithms. <i>Chapman & Hall/CRC Applied Algorithms and Data Structures Series</i> , 2009 , 1-28		9
80	Isometric Diamond Subgraphs. <i>Lecture Notes in Computer Science</i> , 2009 , 384-389	0.9	8
79	The h-Index of a Graph and Its Application to Dynamic Subgraph Statistics. <i>Lecture Notes in Computer Science</i> , 2009 , 278-289	0.9	22
78	Optimal Embedding into Star Metrics. <i>Lecture Notes in Computer Science</i> , 2009 , 290-301	0.9	1
77	Motorcycle Graphs: Canonical Quad Mesh Partitioning. <i>Computer Graphics Forum</i> , 2008 , 27, 1477-1486	2.4	26
76	Approximate topological matching of quadrilateral meshes 2008 ,		4
75	SKIP QUADTREES: DYNAMIC DATA STRUCTURES FOR MULTIDIMENSIONAL POINT SETS. <i>International Journal of Computational Geometry and Applications</i> , 2008 , 18, 131-160	0.3	17
74	Algorithms for media. <i>Discrete Applied Mathematics</i> , 2008 , 156, 1308-1320	1	6
73	Confluent Layered Drawings. <i>Algorithmica</i> , 2007 , 47, 439-452	0.9	19
72	Minimum dilation stars. <i>Computational Geometry: Theory and Applications</i> , 2007 , 37, 27-37	0.4	10

71	Interconnect Criticality-Driven Delay Relaxation. <i>IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems</i> , 2007 , 26, 1803-1817	2.5	3
70	Improved Combinatorial Group Testing Algorithms for Real-World Problem Sizes. <i>SIAM Journal on Computing</i> , 2007 , 36, 1360-1375	1.1	47
69	Space-Efficient Straggler Identification in Round-Trip Data Streams Via Newton's Identities and Invertible Bloom Filters. <i>Lecture Notes in Computer Science</i> , 2007 , 637-648	0.9	6
68	The Effect of Faults on Network Expansion. <i>Theory of Computing Systems</i> , 2006 , 39, 903-928	0.6	16
67	Quasiconvex analysis of multivariate recurrence equations for backtracking algorithms. <i>ACM Transactions on Algorithms</i> , 2006 , 2, 492-509	1.2	36
66	Single Triangle Strip and Loop on Manifolds with Boundaries. <i>Computer Graphics and Image Processing (SIBGRAPI), Proceedings of the Brazilian Symposium on</i> , 2006 ,		1
65	Upright-Quad Drawing of st-Planar Learning Spaces 2006 , 282-293		
64	Trees with Convex Faces and Optimal Angles 2006 , 77-88		10
63	The lattice dimension of a graph. <i>European Journal of Combinatorics</i> , 2005 , 26, 585-592	0.7	30
62	Minimum dilation stars 2005 ,		6
61	Confluent Drawings: Visualizing Non-planar Diagrams in a Planar Way. <i>Journal of Graph Algorithms and Applications</i> , 2005 , 9, 31-52	1.5	41
60	Improved Combinatorial Group Testing for Real-World Problem Sizes. <i>Lecture Notes in Computer Science</i> , 2005 , 86-98	0.9	9
59	Selected Open Problems in Graph Drawing. <i>Lecture Notes in Computer Science</i> , 2004 , 515-539	0.9	26
58	The geometric thickness of low degree graphs 2004 ,		16
57	Tiling space and slabs with acute tetrahedra. <i>Computational Geometry: Theory and Applications</i> , 2004 , 27, 237-255	0.4	40
56	Geometric Thickness of Complete Graphs 2004 , 39-51		
55	Confluent Drawings: Visualizing Non-planar Diagrams in a Planar Way. <i>Lecture Notes in Computer Science</i> , 2004 , 1-12	0.9	23
54	Optimized color gamuts for tiled displays 2003 ,		8

53	Ununfoldable polyhedra with convex faces. <i>Computational Geometry: Theory and Applications</i> , 2003 , 24, 51-62	0.4	34
52	Setting Parameters by Example. <i>SIAM Journal on Computing</i> , 2003 , 32, 643-653	1.1	19
51	Fat 4-Polytopes and Fatter 3-Spheres. <i>Pure and Applied Mathematics</i> , 2003 , 239-265		8
50	Small Maximal Independent Sets and Faster Exact Graph Coloring. <i>Journal of Graph Algorithms and Applications</i> , 2003 , 7, 131-140	1.5	56
49	Beta-skeletons have unbounded dilation. <i>Computational Geometry: Theory and Applications</i> , 2002 , 23, 43-52	0.4	10
48	The minimum expectation selection problem. <i>Random Structures and Algorithms</i> , 2002 , 21, 278-292	0.8	
47	Vertex-unfoldings of simplicial manifolds 2002 ,		4
46	Subgraph Isomorphism in Planar Graphs and Related Problems 2002 , 283-309		16
45	Separating Thickness from Geometric Thickness. <i>Lecture Notes in Computer Science</i> , 2002 , 150-162	0.9	6
44	Tangent Spheres and Triangle Centers. <i>American Mathematical Monthly</i> , 2001 , 108, 63-66	0.3	3
43	Optimal Möbius Transformations for Information Visualization and Meshing. <i>Lecture Notes in Computer Science</i> , 2001 , 14-25	0.9	9
42	Clustering for faster network simplex pivots. <i>Networks</i> , 2000 , 35, 173-180	1.6	2
41	Incremental and Decremental Maintenance of Planar Width. <i>Journal of Algorithms</i> , 2000 , 37, 570-577		5
40	Spanning Trees and Spanners 2000 , 425-461		87
39	QUADRILATERAL MESHING BY CIRCLE PACKING. <i>International Journal of Computational Geometry and Applications</i> , 2000 , 10, 347-360	0.3	33
38	Geometric Thickness of Complete Graphs. <i>Journal of Graph Algorithms and Applications</i> , 2000 , 4, 5-17	1.5	41
37	PARALLEL CONSTRUCTION OF QUADTREES AND QUALITY TRIANGULATIONS. <i>International Journal of Computational Geometry and Applications</i> , 1999 , 09, 517-532	0.3	40
36	Optimal Point Placement for Mesh Smoothing. <i>Journal of Algorithms</i> , 1999 , 30, 302-322		64

35	The Crust and the Skeleton: Combinatorial Curve Reconstruction. <i>Graphical Models</i> , 1998 , 60, 125-135		252
34	Separator-Based Sparsification II: Edge and Vertex Connectivity. <i>SIAM Journal on Computing</i> , 1998 , 28, 341-381	1.1	11
33	Finding the k Shortest Paths. <i>SIAM Journal on Computing</i> , 1998 , 28, 652-673	1.1	716
32	Sparsification technique for speeding up dynamic graph algorithms. <i>Journal of the ACM</i> , 1997 , 44, 669-696	2	147
31	Faster Circle Packing with Application to Nonobtuse Triangulation. <i>International Journal of Computational Geometry and Applications</i> , 1997 , 07, 485-491	0.3	13
30	Faster geometric k-point MST approximation. <i>Computational Geometry: Theory and Applications</i> , 1997 , 8, 231-240	0.4	6
29	Dynamic connectivity in digital images. <i>Information Processing Letters</i> , 1997 , 62, 121-126	0.8	7
28	Separator Based Sparsification. <i>Journal of Computer and System Sciences</i> , 1996 , 52, 3-27	1	22
27	Algorithms for proximity problems in higher dimensions. <i>Computational Geometry: Theory and Applications</i> , 1996 , 5, 277-291	0.4	23
26	Average case analysis of dynamic geometric optimization. <i>Computational Geometry: Theory and Applications</i> , 1996 , 6, 45-68	0.4	6
25	APPROXIMATING CENTER POINTS WITH ITERATIVE RADON POINTS. <i>International Journal of Computational Geometry and Applications</i> , 1996 , 06, 357-377	0.3	42
24	A DETERMINISTIC LINEAR TIME ALGORITHM FOR GEOMETRIC SEPARATORS AND ITS APPLICATIONS. <i>Fundamenta Informaticae</i> , 1995 , 22, 309-329	1	9
23	TRIANGULATING POLYGONS WITHOUT LARGE ANGLES. <i>International Journal of Computational Geometry and Applications</i> , 1995 , 05, 171-192	0.3	15
22	MESH GENERATION AND OPTIMAL TRIANGULATION. <i>Lecture Notes Series on Computing</i> , 1995 , 47-123		59
21	TREE-WEIGHTED NEIGHBORS AND GEOMETRIC k SMALLEST SPANNING TREES. <i>International Journal of Computational Geometry and Applications</i> , 1994 , 04, 229-238	0.3	1
20	Approximating the minimum weight steiner triangulation. <i>Discrete and Computational Geometry</i> , 1994 , 11, 163-191	0.6	25
19	Iterated nearest neighbors and finding minimal polytopes. <i>Discrete and Computational Geometry</i> , 1994 , 11, 321-350	0.6	72
18	Arboricity and bipartite subgraph listing algorithms. <i>Information Processing Letters</i> , 1994 , 51, 207-211	0.8	70

17	Provably good mesh generation. <i>Journal of Computer and System Sciences</i> , 1994 , 48, 384-409	1	150
16	Connectivity, graph minors, and subgraph multiplicity. <i>Journal of Graph Theory</i> , 1993 , 17, 409-416	0.8	11
15	Efficient Algorithms for Sequence Analysis 1993 , 225-244		1
14	Sparse dynamic programming II. <i>Journal of the ACM</i> , 1992 , 39, 546-567	2	55
13	POLYNOMIAL-SIZE NONOBTUSE TRIANGULATION OF POLYGONS. <i>International Journal of Computational Geometry and Applications</i> , 1992 , 02, 241-255	0.3	18
12	MESH GENERATION AND OPTIMAL TRIANGULATION. <i>Lecture Notes Series on Computing</i> , 1992 , 23-90		143
11	Dynamic Three-Dimensional Linear Programming. <i>ORSA Journal on Computing</i> , 1992 , 4, 360-368		21
10	The farthest point Delaunay triangulation minimizes angles. <i>Computational Geometry: Theory and Applications</i> , 1992 , 1, 143-148	0.4	15
9	Maintenance of a minimum spanning forest in a dynamic plane graph. <i>Journal of Algorithms</i> , 1992 , 13, 33-54		69
8	Finding minimum area-gons. <i>Discrete and Computational Geometry</i> , 1992 , 7, 45-58	0.6	45
7	Finding the smallest spanning trees. <i>BIT Numerical Mathematics</i> , 1992 , 32, 237-248	1.7	7
6	Offline algorithms for dynamic minimum spanning tree problems 1991 , 392-399		7
5	Planar orientations with low out-degree and compaction of adjacency matrices. <i>Theoretical Computer Science</i> , 1991 , 86, 243-266	1.1	74
4	THE EXPECTED EXTREMES IN A DELAUNAY TRIANGULATION. <i>International Journal of Computational Geometry and Applications</i> , 1991 , 01, 79-91	0.3	29
3	Sequence comparison with mixed convex and concave costs. <i>Journal of Algorithms</i> , 1990 , 11, 85-101		48
2	Reset Sequences for Monotonic Automata. <i>SIAM Journal on Computing</i> , 1990 , 19, 500-510	1.1	143
1	Stack-Number is Not Bounded by Queue-Number. <i>Combinatorica</i> , 1	0.9	1