Zdenek Dvorak

List of Publications by Year
in descending order

135 papers	1,132 citations	516710 16 h-index	552781 26 g-index
138 all docs	138 docs citations	138 times ranked	491 citing authors

#	Article	IF	Citations
1	Correspondence coloring and its application to list-coloring planar graphs without cycles of lengths 4 to 8. Journal of Combinatorial Theory Series B, 2018, 129, 38-54.	1.0	112
2	Coloring squares of planar graphs with girth six. European Journal of Combinatorics, 2008, 29, 838-849.	0.8	57
3	Testing first-order properties for subclasses of sparse graphs. Journal of the ACM, 2013, 60, 1-24.	2.2	47
4	Constant-factor approximation of the domination number in sparse graphs. European Journal of Combinatorics, 2013, 34, 833-840.	0.8	40
5	Deciding First-Order Properties for Sparse Graphs. , 2010, , .		34
6	Assessment of Critical Infrastructure Elements in Transport. Procedia Engineering, 2017, 187, 548-555.	1.2	33
7	Star Chromatic Index. Journal of Graph Theory, 2013, 72, 313-326.	0.9	30
8	A minimum degree condition forcing complete graph immersion. Combinatorica, 2014, 34, 279-298.	1.2	30
9	Strongly Sublinear Separators and Polynomial Expansion. SIAM Journal on Discrete Mathematics, 2016, 30, 1095-1101.	0.8	25
10	Qualitative Approach to Environmental Risk Assessment in Transport. International Journal of Environmental Research and Public Health, 2020, 17, 5494.	2.6	25
11	RandiÄ‡ index and the diameter of a graph. European Journal of Combinatorics, 2011, 32, 434-442.	0.8	24
12	On forbidden subdivision characterizations of graph classes. European Journal of Combinatorics, 2008, 29, 1321-1332.	0.8	22
13	Forbidden graphs for tree-depth. European Journal of Combinatorics, 2012, 33, 969-979.	0.8	22
14	Classes of graphs with small rank decompositions are <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" display="inline" overflow="scroll"><mml:mi>Ï‡</mml:mi></mml:math>-bounded. European Journal of Combinatorics, 2012, 33, 679-683.	0.8	22
15	List-Coloring Squares of Sparse Subcubic Graphs. SIAM Journal on Discrete Mathematics, 2008, 22, 139-159.	0.8	21
16	On recognizing graphs by numbers of homomorphisms. Journal of Graph Theory, 2010, 64, 330-342.	0.9	18
17	Spectral radius of finite and infinite planar graphs and of graphs of bounded genus. Journal of Combinatorial Theory Series B, 2010, 100, 729-739.	1.0	18
18	On Planar Mixed Hypergraphs. Electronic Journal of Combinatorics, 2001, 8, .	0.4	15

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19	Three-coloring triangle-free planar graphs in linear time. ACM Transactions on Algorithms, 2011, 7, 1-14.	1.0	14
20	Small graph classes and bounded expansion. Journal of Combinatorial Theory Series B, 2010, 100, 171-175.	1.0	13
21	Sublinear separators, fragility and subexponential expansion. European Journal of Combinatorics, 2016, 52, 103-119.	0.8	13
22	Integral approach to assessing the criticality of railway infrastructure elements. International Journal of Critical Infrastructures, 2020, 16, 107.	0.2	13
23	3-Choosability of Triangle-Free Planar Graphs with Constraints on 4-Cycles. SIAM Journal on Discrete Mathematics, 2010, 24, 934-945.	0.8	12
24	Planar 4-critical graphs with four triangles. European Journal of Combinatorics, 2014, 41, 138-151.	0.8	12
25	Software Support for Railway Traffic Simulation under Restricted Conditions of the Rail Section. Procedia Engineering, 2016, 134, 245-255.	1.2	12
26	Density of 5/2-critical graphs. Combinatorica, 2017, 37, 863-886.	1.2	11
27	Complete graph immersions and minimum degree. Journal of Graph Theory, 2018, 88, 211-221.	0.9	11
28	A Dynamic Data Structure for Counting Subgraphs in Sparse Graphs. Lecture Notes in Computer Science, 2013, , 304-315.	1.3	11
29	Coloring face hypergraphs on surfaces. European Journal of Combinatorics, 2005, 26, 95-110.	0.8	10
30	Probabilistic strategies for the partition and plurality problems. Random Structures and Algorithms, 2007, 30, 63-77.	1.1	10
31	Planar graphs without 3-, 7-, and 8-cycles are 3-choosable. Discrete Mathematics, 2009, 309, 5899-5904.	0.7	10
32	Crossing-critical graphs with large maximum degree. Journal of Combinatorial Theory Series B, 2010, 100, 413-417.	1.0	10
33	Planar Graphs of Odd-Girth at Least 9 are Homomorphic to the Petersen Graph. SIAM Journal on Discrete Mathematics, 2008, 22, 568-591.	0.8	9
34	Subcubic triangle-free graphs have fractional chromatic number at most 14/5. Journal of the London Mathematical Society, 2014, 89, 641-662.	1.0	9
35	3-choosability of planar graphs with<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML altimg="si1.gif" overflow="scroll"><mml:mo stretchy="false">(</mml:mo><mml:mo>â©½</mml:mo><mml:mn>4</mml:mn><mml:mo) Tj ETQq1 1 0.784314 rg BT /Overlock 10 Tf 2014, 104, 28-59.		
36	3â€Coloring Triangleâ€Free Planar Graphs with a Precolored 8â€Cycle. Journal of Graph Theory, 2015, 80, 98-111.	0.9	9

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37	On distance â€dominating and â€independent sets in sparse graphs. Journal of Graph Theory, 2019, 91, 162-173.	0.9	9
38	Distance constrained labelings of planar graphs with no short cycles. Discrete Applied Mathematics, 2009, 157, 2634-2645.	0.9	8
39	Two-factors in orientated graphs with forbidden transitions. Discrete Mathematics, 2009, 309, 104-112.	0.7	8
40	List coloring with requests. Journal of Graph Theory, 2019, 92, 191-206.	0.9	8
41	Singleâ€conflict colouring. Journal of Graph Theory, 2021, 97, 148-160.	0.9	8
42	IDENTIFYING CRITICAL ELEMENTS OF ROAD INFRASTRUCTURE USING CASCADING IMPACT ASSESSMENT. Transport, 2020, 35, 300-314.	1.2	8
43	Noncrossing Hamiltonian paths in geometric graphs. Discrete Applied Mathematics, 2007, 155, 1096-1105.	0.9	7
44	Graphs with Two Crossings Are 5-Choosable. SIAM Journal on Discrete Mathematics, 2011, 25, 1746-1753.	0.8	7
45	Bipartizing fullerenes. European Journal of Combinatorics, 2012, 33, 1286-1293.	0.8	7
46	Chromatic number and complete graph substructures for degree sequences. Combinatorica, 2013, 33, 513-529.	1.2	7
47	A Structure Theorem for Strong Immersions. Journal of Graph Theory, 2016, 83, 152-163.	0.9	7
48	Large Independent Sets in Triangle-Free Planar Graphs. SIAM Journal on Discrete Mathematics, 2017, 31, 1355-1373.	0.8	7
49	Induced subdivisions and bounded expansion. European Journal of Combinatorics, 2018, 69, 143-148.	0.8	7
50	Three-coloring triangle-free graphs on surfaces III. Graphs of girth five. Journal of Combinatorial Theory Series B, 2020, 145, 376-432.	1.0	7
51	Three-coloring triangle-free planar graphs in linear time (extended abstract). , 2009, , .		7
52	Coloring triangle-free graphs on surfaces. , 2009, , .		7
53	Fractional Coloring of Triangle-Free Planar Graphs. Electronic Journal of Combinatorics, 2015, 22, .	0.4	7
54	4-Critical Graphs on Surfaces Without Contractible $(le!4)$-Cycles. SIAM Journal on Discrete Mathematics, 2014, 28, 521-552.	0.8	6

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55	Packing six T-joins in plane graphs. Journal of Combinatorial Theory Series B, 2016, 116, 287-305.	1.0	6
56	5-choosability of graphs with crossings far apart. Journal of Combinatorial Theory Series B, 2017, 123, 54-96.	1.0	6
57	Fine Structure of 4-Critical Triangle-Free Graphs III. General Surfaces. SIAM Journal on Discrete Mathematics, 2018, 32, 94-105.	0.8	6
58	Three-coloring triangle-free graphs on surfaces II. 4-critical graphs in a disk. Journal of Combinatorial Theory Series B, 2018, 132, 1-46.	1.0	6
59	Map of traffic accidents. Transportation Research Procedia, 2019, 40, 1418-1425.	1.5	6
60	Treewidth of graphs with balanced separations. Journal of Combinatorial Theory Series B, 2019, 137, 137-144.	1.0	6
61	Three-coloring triangle-free graphs on surfaces V. Coloring planar graphs with distant anomalies. Journal of Combinatorial Theory Series B, 2021, 150, 244-269.	1.0	6
62	Notes on Graph Product Structure Theory. MATRIX Book Series, 2021, , 513-533.	0.2	6
63	An Algorithm for Cyclic Edge Connectivity of Cubic Graphs. Lecture Notes in Computer Science, 2004, , 236-247.	1.3	6
64	Algorithms for Classes of Graphs with Bounded Expansion. Lecture Notes in Computer Science, 2010, , 17-32.	1.3	6
65	Sub-exponentially many 3-colorings of triangle-free planar graphs. Journal of Combinatorial Theory Series B, 2013, 103, 706-712.	1.0	5
66	Strong Immersions and Maximum Degree. SIAM Journal on Discrete Mathematics, 2014, 28, 177-187.	0.8	5
67	Immersion in four-edge-connected graphs. Journal of Combinatorial Theory Series B, 2016, 116, 208-218.	1.0	5
68	Fine Structure of 4-Critical Triangle-Free Graphs II. Planar Triangle-Free Graphs with Two Precolored 4-Cycles. SIAM Journal on Discrete Mathematics, 2017, 31, 865-874.	0.8	5
69	5-list-coloring planar graphs with distant precolored vertices. Journal of Combinatorial Theory Series B, 2017, 122, 311-352.	1.0	5
70	Treewidth of Grid Subsets. Combinatorica, 2018, 38, 1337-1352.	1.2	5
71	Sublinear Separators in Intersection Graphs of Convex Shapes. SIAM Journal on Discrete Mathematics, 2021, 35, 1149-1164.	0.8	5
72	A Thomassen-type method for planar graph recoloring. European Journal of Combinatorics, 2021, 95, 103319.	0.8	5

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73	Three Optimal Algorithms for Balls of Three Colors. Lecture Notes in Computer Science, 2005, , 206-217.	1.3	5
74	LEAN MANUFACTURING vs COVID-19. MEST Journal, 2022, 10, 1-11.	0.3	5
75	A Theorem About a Contractible and Light Edge. SIAM Journal on Discrete Mathematics, 2006, 20, 55-61.	0.8	4
76	Spectrally degenerate graphs: Hereditary case. Journal of Combinatorial Theory Series B, 2012, 102, 1099-1109.	1.0	4
77	Three-coloring triangle-free graphs on surfaces I. Extending a coloring to a disk with one triangle. Journal of Combinatorial Theory Series B, 2016, 120, 1-17.	1.0	4
78	On classes of graphs with strongly sublinear separators. European Journal of Combinatorics, 2018, 71, 1-11.	0.8	4
79	Effect of a power failure on rail transport. Transportation Research Procedia, 2019, 40, 1289-1296.	1.5	4
80	Flexibility of planar graphs of girth at least six. Journal of Graph Theory, 2020, 95, 457-466.	0.9	4
81	Flexibility of triangleâ€free planar graphs. Journal of Graph Theory, 2021, 96, 619-641.	0.9	4
82	Three-coloring triangle-free graphs on surfaces IV. Bounding face sizes of 4-critical graphs. Journal of Combinatorial Theory Series B, 2021, 150, 270-304.	1.0	4
83	List-coloring embedded graphs. , 2013, , .		4
84	Matchings and Nonrainbow Colorings. SIAM Journal on Discrete Mathematics, 2009, 23, 344-348.	0.8	3
85	Toughness threshold for the existence of 2-walks in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si26.gif" display="inline" overflow="scroll"><mml:msub><mml:mrow><mml:mi>K</mml:mi></mml:mrow><mml:mrow><mml:mn>4</mml:mn></mml:mrow></mml:msub> graphs. Discrete Mathematics, 2010, 310, 642-651.	0.7	3
86	Crossing Numbers of Periodic Graphs. Journal of Graph Theory, 2016, 83, 34-43.	0.9	3
87	Fatigue Damage Prediction as a Part of Technical Systems Reliability Assessment. Key Engineering Materials, 0, 755, 131-138.	0.4	3
88	Planar graphs without cycles of length 4 or 5 are(11:3)-colorable. European Journal of Combinatorics, 2019, 82, 102996.	0.8	3
89	Cyclic coloring of plane graphs with maximum face size 16 and 17. European Journal of Combinatorics, 2021, 94, 103287.	0.8	3
90	Three-coloring triangle-free graphs on surfaces VII. A linear-time algorithm. Journal of Combinatorial Theory Series B, 2022, 152, 483-504.	1.0	3

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91	Do Triangle-Free Planar Graphs have Exponentially Many 3-Colorings?. Electronic Journal of Combinatorics, 2017, 24, .	0.4	3
92	Non‐rainbow colorings of 3‐, 4‐ and 5‐connected plane graphs. Journal of Graph Theory, 2010, 63, 129-145.	0.9	2
93	A note on antisymmetric flows in graphs. European Journal of Combinatorics, 2010, 31, 320-324.	0.8	2
94	Exponentially Many Nowhere-Zero $\mathbb{Z}_3$-, $\mathbb{Z}_4$-, and $\mathbb{Z}_6$-Flows. Combinatorica, 2019, 39, 1237-1253.	1.2	2
95	Objectification of Criteria for a Critical Infrastructure Elements in the Rail Transport Sub-sector. Transportation Research Procedia, 2019, 40, 1349-1355.	1.5	2
96	Irreducible 4-critical triangle-free toroidal graphs. European Journal of Combinatorics, 2020, 88, 103112.	0.8	2
97	Methodological Framework for Resilience Assessment of Electricity Infrastructure in Conditions of Slovak Republic. International Journal of Environmental Research and Public Health, 2021, 18, 8286.	2.6	2
98	Noncrossing Hamiltonian Paths in Geometric Graphs. Lecture Notes in Computer Science, 2004, , 86-97.	1.3	2
99	Large Independent Sets in Triangle-Free Planar Graphs. Lecture Notes in Computer Science, 2014, , 346-357.	1.3	2
100	Locally Consistent Constraint Satisfaction Problems. Lecture Notes in Computer Science, 2004, , 469-480.	1.3	2
101	Locally consistent constraint satisfaction problems. Theoretical Computer Science, 2005, 348, 187-206.	0.9	1
102	Eulerian colorings and the bipartizing matchings conjecture of Fleischner. European Journal of Combinatorics, 2006, 27, 1088-1101.	0.8	1
103	Spectral radius of finite and infinite planar graphs and of graphs of bounded genus (extended) Tj ETQq1 1 0.784314 rgBT /Overlock 10	0.4	1
104	Distance-two coloring of sparse graphs. European Journal of Combinatorics, 2014, 36, 406-415.	0.8	1
105	Exponentially many nowhere-zero $\mathbb{Z}_3$ $\mathbb{Z}_4$	0.4	1
106	Irreducible 4-critical triangle-free toroidal graphs. Electronic Notes in Discrete Mathematics, 2017, 61, 383-389.	0.4	1
107	Treewidth of grid subsets. Combinatorica, 0, , .	1.2	1
108	1-Subdivisions, the Fractional Chromatic Number and the Hall Ratio. Combinatorica, 2020, 40, 759-774.	1.2	1

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109	Fractional Coloring of Planar Graphs of Girth Five. SIAM Journal on Discrete Mathematics, 2020, 34, 538-555.	0.8	1
110	Coloring near-quadrangulations of the cylinder and the torus. European Journal of Combinatorics, 2021, 93, 103258.	0.8	1
111	A Dynamic Data Structure for MSO Properties in Graphs with Bounded Tree-Depth. Lecture Notes in Computer Science, 2014, , 334-345.	1.3	1
112	Electric or Internal Combustion Engines for Passenger Cars? - Environmental and Economic Aspects. Communications - Scientific Letters of the University of Zilina, 2022, 24, B49-B58.	0.6	1
113	On weighted sublinear separators. Journal of Graph Theory, 0, , .	0.9	1
114	Bounded Degree Conjecture Holds Precisely for c-Crossing-Critical Graphs with c ≤ 12. Combinatorica, 2022, 42, 701-728.	1.2	1
115	Four gravity results. Discrete Mathematics, 2007, 307, 181-190.	0.7	0
116	<i>k</i>-Chromatic Number of Graphs on Surfaces. SIAM Journal on Discrete Mathematics, 2009, 23, 477-486.	0.8	0
117	Fine Structure of 4-Critical Triangle-Free Graphs I. Planar Graphs with Two Triangles and 3-Colorability of Chains. SIAM Journal on Discrete Mathematics, 2018, 32, 1775-1805.	0.8	0
118	Improving the recovery system of damaged roads due to safety. Transportation Research Procedia, 2019, 40, 1305-1310.	1.5	0
119	Triangle-free planar graphs with small independence number. European Journal of Combinatorics, 2019, 76, 88-103.	0.8	0
120	Triangle-free planar graphs with the smallest independence number. Journal of Graph Theory, 2019, 90, 443-454.	0.9	0
121	$(3a:a)$-List-Colorability of Embedded Graphs of Girth at Least Five. SIAM Journal on Discrete Mathematics, 2020, 34, 2137-2165.	0.8	0
122	Additive non-approximability of chromatic number in proper minor-closed classes. Journal of Combinatorial Theory Series B, 2020, , .	1.0	0
123	A note on sublinear separators and expansion. European Journal of Combinatorics, 2021, 93, 103273.	0.8	0
124	Bounding the number of cycles in a graph in terms of its degree sequence. European Journal of Combinatorics, 2021, 91, 103206.	0.8	0
125	Safety indicators as a basis for increasing the resilience of critical infrastructure. Haditechnika, 2021, 55, 25-30.	0.0	0
126	Interval Representation of Balanced Separators in Graphs Avoiding a Minor. Trends in Mathematics, 2021, , 829-834.	0.1	0

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127	Complexity of Pattern Coloring of Cycle Systems. Lecture Notes in Computer Science, 2002, , 164-175.	1.3	0
128	On the Complexity of the G-Reconstruction Problem. Lecture Notes in Computer Science, 2005, , 196-205.	1.3	0
129	On a Rado Type Problem for Homogeneous Second Order Linear Recurrences. Electronic Journal of Combinatorics, 2010, 17, .	0.4	0
130	Transport Infrastructures Safety and Security. Advances in Information Security, Privacy, and Ethics Book Series, 2020, , 31-62.	0.5	0
131	Organization of Damaged Road Rehabilitation in the Village of Rybany. Lecture Notes in Intelligent Transportation and Infrastructure, 2020, , 466-473.	0.5	0
132	Coloring Triangle-Free Graphs on Surfaces. , 2007, , 2-4.		0
133	Coloring count cones of planar graphs. Journal of Graph Theory, 0, , .	0.9	0
134	Characterization of 4-critical triangle-free toroidal graphs. Journal of Combinatorial Theory Series B, 2022, 154, 336-369.	1.0	0
135	Triangle-free planar graphs with at most $64^{...}$ 3-colorings. Journal of Combinatorial Theory Series B, 2022, 156, 294-298.	1.0	0