

## Publications and Preprints

Maria Chudnovsky

### Journal papers published

1. Triangle-free graphs with no six-vertex induced path. (with P. Seymour, S.Spirkl and M. Zhong), *Discrete Math*, 341 (2018) 2179-2196
2. Perfect divisibility and 2-divisibility, (with Vaidy Sivaraman) appeared on-line in *Journal of Graph Theory*, <https://doi.org/10.1002/jgt.22367>
3. 3-colorable subclasses of  $P_8$ -free graphs, (with Juraj Stacho), *SIDMA*, 32 (2018), 1111-1138
4. Piercing axes-parallel boxes. (with Sophie Spirkl and Shira Zerbib) *Electronic Journal of Combinatorics* 25 (2018) #P1.70
5. The sandwich problem for decompositions and almost monotone properties, (with C.M.H. de Figueiredo and S. Spirkl), appeared on-line in *Algorithmica*, <https://doi.org/10.1007>
6. Even pairs and prism corners in Berge graphs, (with F. Maffray, P. Seymour and S.Spirkl), *JCT B*, 131 (2018), 12-39 with an erratum to appear in *JCT B*
7. Odd-holes in bull-free graphs. (with Vaidy Sivaraman) *SIDMA*, 32 (2018), 951-955
8. A Short Proof of the Wonderful Lemma, *Journal of Graph Theory*, 87 (2018), 271-274
9. Three-coloring and list three-coloring of graphs without induced paths on seven vertices (with F. Bonomo, P. Maceli, O. Schaudt, M. Stein and M. Zhong), appeared on-line in *Combinatorica* (2017), DOI:10.1007/s00493-017-3553-8
10. Fair representations by independent sets, (with R. Aharoni, N. Alon, E. Berger, D. Kotlar, M. Loeb and R. Ziv), In: *Loebl M., Nesetril J., Thomas R. (eds) A Journey Through Discrete Mathematics. Springer*, 31-58.
11. Induced subgraphs of graphs with large chromatic number III. Long holes, (with Alex Scott and Paul Seymour), *Combinatorica*, 37 (2017), 1057-1072
12. Decomposing and clique-coloring (Diamond, Odd-hole)-free graphs (with Irene Lo), *Journal of Graph Theory*, 86 (2017), 5-41
13. 4-coloring  $P_6$ -free graphs with no induced 5-cycles. (with Peter Maceli, Juraj Stacho and Mingxian Zhong), *Journal of Graph Theory*, 84 (2017), 262-285
14. Graphs with no induced five-vertex path or antipath, (with L. Esperet, L. Lemoine, P. Maceli, F. Maffray and I. Penev), *Journal of Graph Theory*, 84 (2017), 221-232
15. Coloring perfect graphs with bounded clique number, (with A. Lagoutte, P. Seymour, S. Spirkl), *Journal of Combinatorial Theory, Ser B* 122 (2017), 757-775

16. Disjoint dijoins (*with* Katherine Edwards, Ringi Kim, Alex Scott and Paul Seymour), *Journal of Combinatorial Theory, Ser B* 120 (2016), 18-35
17. Unavoidable induced subgraphs in large graphs with no homogeneous sets (*with* R. Kim, S. Oum and P. Seymour), *Journal of Combinatorial Theory, Ser. B*, 118 (2016), 1-12
18. Induced subgraphs of graphs with large chromatic number II. Three steps towards Gyarfás's conjecture, (*with* Alex Scott and Paul Seymour), *Journal of Combinatorial Theory, Ser B*, 118 (2016), 109-128
19. Bipartite minors (*with* Gil Kalai, Eran Nevo, Isabella Novik and Paul Seymour), *Journal of Combinatorial Theory, Ser B* 116 (2016), 219-228
20. Immersion in four-edge-connected graphs, (*with* Zdenek Dvorak, Tereza Klimosova, Paul Seymour), *Journal of Combinatorial Theory, Ser B* 116 (2016), 208-218
21. A De Bruijn–Erdős theorem for chordal graphs (*with* Laurent Beaudou, Adrian Bondy, Xiaomin Chen, Ehsan Chiniforooshan, Vašek Chvátal, Nicolas Fraiman, Yori Zwols), *Electronic Journal of Combinatorics*, 22 (2015), 1.70
22. Excluding paths and antipaths (*with* Paul Seymour), *Combinatorica*, 35 (2015), 389-412.
23. Edge-coloring 7-regular planar graphs (*with* Katherine Edwards, Ken-ichi Kawarabayashi and Paul Seymour), *Journal of Combinatorial Theory, Ser B* 115 (2015), 276-302.
24. Edge-coloring 8-regular planar graphs (*with* Katherine Edwards and Paul Seymour), *Journal of Combinatorial Theory, Ser B* 115 (2015), 303-338.
25. Coloring perfect graphs with no balanced skew-partitions (*with* Nicolas Trotignon, Théophile Trunck and Kristina Vusković), *Journal of Combinatorial Theory, Ser B* 115 (2015), 26-65.
26. Cliques in the union of graphs (*with* Ron Aharoni, Eli Berger and Juba Ziani), *Journal of Combinatorial Theory, Ser B* 114 (2015), 170-186.
27. Forcing large transitive subtournaments (*with* Eli Berger and Krzysztof Choromanski), *Journal of Combinatorial Theory, Ser B* 113 (2015), 1-17.
28. Disjoint paths in tournaments (*with* Alex Scott and Paul Seymour), *Advances in Mathematics*, 270 (2015), 582-597.
29. Wheel-free planar graphs (*with* Pierre Aboulker, Paul Seymour and Nicolas Trotignon), *European Journal of Combinatorics* (2015), pp. 57-67

30. Excluding a substar and an antistar (with Sergey Norin, Bruce Reed and Paul Seymour), *SIDMA*, 29 (2015), 297-308
31. Simplicial vertices in graphs with no induced four-edge path or four-edge antipath, and the  $H_6$ -conjecture (with Peter Maceli), *Journal of Graph Theory*, 76 (2014), 249-261.
32. Coloring graphs with forbidden induced subgraphs, *Proceedings of the ICM*, 2014, 291-302.
33. Tournaments with near-linear transitive subsets, (with Krzysztof Choromanski and Paul Seymour), *Journal of Combinatorial Theory, Ser B* 109 (2014), 228-249.
34. Large cliques and stable sets in undirected graphs, in *Geometry, Structure and Randomness in Combinatorics, Publications of the Scuola Normale Superiore / CRM Series*, (eds: J. Matousek, J. Nešetřil and M. Pellegrini), Edizioni della Normale
35. Excluding pairs of graphs (with Alex Scott and Paul Seymour), *Journal of Combinatorial Theory, Ser B*, 106(2014), 15-29
36. Lines in hypergraphs (with Laurent Beaudou, Adrian Bondy, Xiaomin Chen, Ehsan Chiniforooshan, Vašek Chvátal, Nicolas Fraiman, Yori Zwols), *Combinatorica*, 33 (2013), 633-654
37. The Erdős-Hajnal conjecture—A Survey, *Journal of Graph Theory*, 75 (2014), 178-190
38. The structure of claw-free perfect graphs (with with Matthieu Plumettaz), *Journal of Graph Theory*, 75 (2014), 203-230
39. Rao's conjecture on degree sequences (with Paul Seymour), *Journal of Combinatorial Theory, Ser. B* , 105 (2014), 44-92
40. Extending the Gyárfás-Sumner conjecture (with Paul Seymour), *Journal of Combinatorial Theory, Ser. B* , 105 (2014), 11-16
41. Detecting an induced net subdivision (with Paul Seymour and Nicolas Trotignon), *Journal of Combinatorial Theory, Ser. B* , 103 (2013), 630-641
42. Substitutions and  $\chi$ -boundedness (with Irena Penev, Alex Scott and Nicolas Trotignon), *Journal of Combinatorial Theory, Ser. B* , 103 (2013), 567-586
43. The structure of bull-free perfect graphs (with Irena Penev), *Journal of Graph Theory*, 74 (2013), 1-31

44. A counterexample to a conjecture of Schwartz (*with* Felix Brandt, Ilhee Kim, Gaku Liu, Sergey Norin, Alex Scott, Paul Seymour and Stephan Thomasse ) *Social Choice and Welfare*, 40 (2013), 739-743
45. A local strengthening of Reed's  $\omega$ ,  $\Delta$ , and  $\chi$  conjecture for quasi-line graphs (*with* Andrew King, Matthieu Plumettaz and Paul Seymour), *SIDMA*, 27 (2013), 95-108
46. Finding minimum clique capacity (*with* Sang-il Oum and Paul Seymour) *Combinatorica*, 32 (2012), 283-287
47. Packing seagulls (*with* Paul Seymour) *Combinatorica*, 32 (2012), 251-282
48. Clawfree Graphs VII. Quasi-line graphs (*with* Paul Seymour) *Journal of Combinatorial Theory, Ser. B* , 102 (2012), 1267-1294
49. Growing without cloning (*with* Paul Seymour), *SIDMA*, 26 (2012), 860-880
50. Tournaments and coloring (*with* Eli Berger, Krzysztof Choromanski, Jacob Fox, Martin Loebl, Alex Scott, Paul Seymour and Stephan Thomassé), *Journal of Combinatorial Theory, Ser. B* , 103 (2013), 1-20
51. Perfect matchings in planar cubic graphs (*with* Paul Seymour) *Combinatorica*, 32 (2012), 403-424
52. Large cliques or stable sets in graphs with no four-edge path and no five-edge path in the complement (*with* Yori Zwols), *Journal of Graph Theory*, 70 (2012), 449 - 472
53. Excluding induced subdivisions of the bull and related graphs (*with* Irena Penev, Alex Scott and Nicolas Trotignon), *Journal of Graph Theory*, 71 (2012), 49 - 68
54. Tournament immersion and cutwidth (*with* Alexandra Fradkin and Paul Seymour) *Journal of Combinatorial Theory. Ser B*, 102 (2012), 93-101
55. Three-colorable perfect graphs without even pairs (*with* Paul Seymour) *Journal of Combinatorial Theory. Ser B*, 102 (2012), 363-394
56. Analyzing the performance of greedy maximal scheduling via local pooling and graph theory (*with* Berk Birand, Bernard Ries, Paul Seymour, Gil Zussman and Yori Zwols), *IEEE/ACM Trans. Netw.* 20 (2012), 163–176.
57. The structure of bull-free graphs I — Three-edge-paths with center and anticenters *Journal of Combinatorial Theory. Ser B*, 102 (2012), 233-251
58. The structure of bull-free graphs II and III—a summary, *Journal of Combinatorial Theory. Ser B*, 102 (2012), pp. 252-282

59. Claw-free graphs with strongly perfect complements. Fractional and integral version. Part I. Basic graph (*with Bernard Ries and Yori Zwols*) *Discrete Applied Math*, 159(2011), 1971-1995
60. Claw-free graphs with strongly perfect complements. Fractional and integral version. Part II. Nontrivial strip structures (*with Bernard Ries and Yori Zwols*) *Discrete Applied Math*, 159(2011), 1996-2029
61. Edge density for  $K_{2,t}$  minors (*with Bruce Reed and Paul Seymour*) *Journal of Combinatorial Theory. Ser B*, 101 (2011), 18-46
62. Hadwigers conjecture and seagull packing, *Notices Amer. Math. Soc.* 57 (2010), 733-736
63. A well-quasi-order for tournaments (*with Paul Seymour*) *Journal of Combinatorial Theory. Ser B*, 101 (2011), 47-53
64. Clawfree Graphs VI. Coloring claw-free graphs (*with Paul Seymour*) *Journal of Combinatorial Theory. Ser B*, 100 (2010), 560-572
65.  $K_4$ -free graphs with no odd holes (*with N. Robertson, P. Seymour and R. Thomas*) *Journal of Combinatorial Theory. Ser B*, 100 (2010), 313-331
66. The three-in-a-tree problem (*with Paul Seymour*) *Combinatorica*, 30 (2010), 387-417
67. An approximate version of Hadwiger's conjecture for claw-free graphs (*with Alexandra Ovetsky Fradkin*) *Journal of Graph Theory*, 63 (2010) 259-278
68. Partial characterizations of clique-perfect graphs II : diamond-free and Helly circular-arc graphs (*with Flavia Bonomo and Guillermo Durán*) *Discrete Mathematics*, 309 (11) (2009), 3485-3499
69. Even pairs in Berge graphs (*with Paul Seymour*) *Journal of Combinatorial Theory. Ser B*, 99 (2009), 370-377
70. Bisimplicial vertices in even-hole-free graphs (*with L. Addario-Berry, F. Havet, B. Reed and P. Seymour*) *Journal of Combinatorial Theory. Ser B*, 98 (2008), 1119-1164
71. Clawfree Graphs V — Global structure (*with Paul Seymour*) *Journal of Combinatorial Theory. Ser B*, 98 (2008), 1373-1410
72. The Erdos Hajnal Conjecture for bullfree graphs (*with S. Safra*) *Journal of Combinatorial Theory. Ser B*, 98 (2008), 1301-1310

73. Hadwiger's conjecture for quasi-line graphs (*with* A. Overtsky Fradkin) *Journal of Graph Theory* 59 (2008), 17-33
74. Detecting a theta or a prism (*with* R. Kapadia) *SIAM Journal on Discrete Math* 22(2008), 1164-1186
75. An algorithm for packing non-zero  $A$ -paths in group-labeled graphs (*with* William H. Cunningham and Jim Geelen) *Combinatorica* 28(2008), 145-161
76. Cycles in dense digraphs (*with* Paul Seymour and Blair Sullivan) *Combinatorica* 28(2008), 1-18
77. Partial characterizations of clique-perfect graphs I : subclasses of claw-free graphs (*with* Flavia Bonomo and Guillermo Durán) *Discrete Applied Mathematics* 156 (2008), 1058-1082
78. Clawfree Graphs IV — Decomposition theorem (*with* Paul Seymour) *Journal of Combinatorial Theory. Ser B*, 98 (2008), 839-938
79. Solution of three problems of Cornuéjols (*with* Paul Seymour) *Journal of Combinatorial Theory. Ser B*, 98 (2008), 116-135
80. Clawfree Graphs III — Circular interval graphs (*with* Paul Seymour) *Journal of Combinatorial Theory. Ser B* 98(2008), 812-834
81. Clawfree Graphs II — Non-orientable prismatic graphs (*with* Paul Seymour) *Journal of Combinatorial Theory. Ser B*, 98 (2008), 249-290
82. Clawfree Graphs I — Orientable prismatic graphs (*with* Paul Seymour) *Journal of Combinatorial Theory. Ser B*, 97 (2007), 867-901
83. Excluding induced subgraphs (*with* Paul Seymour) *Surveys in Combinatorics 2007, London Math Soc Lecture Note Series* 346, 99-119
84. Coloring quasi-line graphs (*with* Alexandra Ovetsky) *Journal of Graph Theory* 54(2007), 41-50
85. The Roots of the Independence Polynomial of a Clawfree Graph (*with* Paul Seymour) *Journal of Combinatorial Theory. Ser B*, 97 (2007), 350-357
86. The Strong Perfect Graph Theorem (*with* N.Robertson, P.Seymour, R.Thomas) *Annals of Math* 164(2006), 51-229
87. Non-zero  $A$ -paths in graphs with edges labeled by group elements (*with* Jim Geelen, Bert Gerards, Luis Goddyn, Michael Lohman, and Paul Seymour) *Combinatorica, Ser. B* 26(2006), 521-532

88. Berge Trigraphs *Journal of Graph Theory* 53(2006), 1-55
89. The Structure of Clawfree Graphs (*with Paul Seymour*) Surveys in Combinatorics 2005, *London Math Soc Lecture Note Series* 327, 153-171
90. Partial characterizations of clique-perfect graphs, (*with F. Bonomo, and G.Durán*) *Electronic Notes in Discrete Mathematics* 19(2005), 95–101 (extended abstract)
91. Recognizing Berge Graphs (*with G.Cornuéjols, X.Liu, P.Seymour, K.Vušković*) *Combinatorica* 25(2005), 143-187
92. Detecting Even Holes (*with K. Kawarabayashi, P. Seymour*) *Journal of Graph Theory* 48(2005), 85-111
93. Progress on Perfect Graphs (*with N.Robertson, P.Seymour, R.Thomas*) *Mathematical Programming Ser. B* 97(2003), 405-422
94. Berge Trigraphs and Their Applications, *Ph.D. Thesis, Princeton University, 2003*
95. Triangulated Spheres and Colored Cliques (*with R. Aharoni, A. Kotlov*) *Discrete and Computational Geometry* 28 (2002), 223-229
96. Systems of Disjoint Representatives, *M.Sc. Thesis, The Technion, 1999*

#### **Conference Proceedings**

1. Analyzing the Performance of Greedy Maximal Scheduling via Local Pooling and Graph Theory, (*with Berk Birand, Bernard. Ries, Paul Seymour, Gil Zussman and Yori Zwols*) Proc. IEEE INFOCOM'10, 2010.
2. Obstructions to 3-coloring  $P_6$ -free graphs (*with J. Goedgebeur, O.Schautdt and M. Zhong*), *Proc. SODA'16, 2016*

#### **Papers to appear**

1. Coloring square-free Berge graphs (*with F. Maffray, I. Lo, N. Trotignon and K. Vuskovic*), *to appear in JCT B*

#### **Papers submitted for publication**

1. Proof of the Kalai-Meshulam conjecture. (*with* A. Scott, P. Seymour and S. Spirkl) *submitted for publication*
2. Trees and linear anticomplete pairs. (*with* A. Scott, P. Seymour and S.Spirkl), *submitted for publication*
3. Sparse graphs with no polynomial-size anticomplete pairs. (*with* J. Fox, A. Scott, P. Seymour and S.Spirkl), *manuscript*
4. 3-coloring graphs with no  $P_6+rP_3$ , (*with* S. Huang, S. Spirkl and M. Zhong), *submitted for publication*
5. Cooperative colorings of trees and of bipartite graphs. (*with* Ron Aharoni, Eli Berger, Frederic Havet and Zilin Jiang) *submitted for publication*
6. Sparse graphs without linear anticomplete pairs. (*with* A. Scott, P. Seymour and S.Spirkl), *submitted for publication*
7. Vertex-minors and the Erdős-Hajnal conjecture. (*with* Sang-il Oum), *submitted for publication*
8. Towards Erdős-Hajnal for graphs with no 5-hole. (*with* Jacob Fox, Alex Scott, Paul Seymour and Sophie Spirkl), *submitted for publication*
9. Four-coloring  $P_6$ -free graphs I. Extending an excellent precoloring. (*with* S. Spirkl and M. Zhong), *submitted for publication*
10. Four-coloring  $P_6$ -free graphs II. Finding an excellent precoloring. (*with* S. Spirkl and M. Zhong), *submitted for publication*
11. Obstructions to three-coloring and list-three-coloring  $H$ -free graphs, (*with* J. Goedgebeur, O. Schaudt and M. Zhong), *submitted for publication*.
12. Induced subgraphs of graphs with large chromatic number IX. Orientations. (*with* A. Scott and P. Seymour), *submitted for publication*.
13. Induced subgraphs of graphs with large chromatic number. XII. Distant Stars. (*with* A. Scott and P. Seymour), *submitted for publication*.
14.  $\{ISK_4, triangle\}$ -free graphs are 3-colorable, (*with* C.-H. Lui, O. Schaudt, S. Spirkl, N. Trotignon, and K. Vuskovic), *submitted for publication*
15. Induced subgraphs of graphs with large chromatic number VIII. Long odd holes, (*with* A. Scott, P. Seymour and S. Spirkl), *submitted for publication*



16. Large rainbow matchings in general graphs, (*with* R. Aharoni, E. Berger, D. Howard and P. Seymour), *submitted for publication*
17. Approximately coloring graphs without long induced paths, (*with* O. Schaudt, S. Spirkl, M. Stein and M. Zhong), *submitted for publication*
18. Domination in tournaments (*with* R. Kim, C.-H. Liu, P. Seymour and S. Thomasse), *submitted for publication*
19. Induced subgraphs of graphs with large chromatic number V. Chandeliers and strings, (*with* Alex Scott and Paul Seymour), *submitted for publication*
20. 6-vertex tournaments and the Erdős-Hajnal Conjecture. (*with* E. Berger and K. Choromanski), *submitted for publication*
21. Obstructions to 3-coloring  $P_6$ -free graphs (*with* J. Goedgebeur, O. Schaudt and M. Zhong), *submitted for publication*

**Manuscripts not yet submitted and papers in preparation**

1. Optimal anti-thickenings of claw-free graphs (*with* Andrew King), *manuscript*
2. On the Erdős-Lovász Tihany Conjecture in claw-free graphs, (*with* Alexandra Fradkin and Matthieu Plumettaz), *manuscript*