

Publications and Preprints

Maria Chudnovsky

Journal papers published

1. Odd-holes in bull-free graphs. (*with* Vaidy Sivaraman) *SIDMA*, 32 (2018), 951-955
2. A Short Proof of the Wonderful Lemma, *Journal of Graph Theory*, 87 (2018), 271-274
3. 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
4. Fair representations by independent sets, (*with* R. Aharoni, N. Alon, E. Berger, D. Kotlar, M. Loeb and R. Ziv), *In: Loeb M., Nešetřil J., Thomas R. (eds) A Journey Through Discrete Mathematics. Springer, 31-58.*
5. Induced subgraphs of graphs with large chromatic number III. Long holes, (*with* Alex Scott and Paul Seymour), *Combinatorica*, 37 (2017), 1057-1072
6. Decomposing and clique-coloring (Diamond, Odd-hole)-free graphs (*with* Irene Lo), *Journal of Graph Theory*, 86 (2017), 5-41
7. 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
8. 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
9. Coloring perfect graphs with bounded clique number, (*with* A. Lagoutte, P. Seymour, S. Spirkl), *Journal of Combinatorial Theory, Ser B* 122 (2017), 757-775
10. Disjoint dijoins (*with* Katherine Edwards, Ringi Kim, Alex Scott and Paul Seymour), *Journal of Combinatorial Theory, Ser B* 120 (2016), 18-35
11. 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
12. Induced subgraphs of graphs with large chromatic number II. Three steps towards Gyárfás's conjecture, (*with* Alex Scott and Paul Seymour), *Journal of Combinatorial Theory, Ser B*, 118 (2016), 109-128
13. Bipartite minors (*with* Gil Kalai, Eran Nevo, Isabella Novik and Paul Seymour), *Journal of Combinatorial Theory, Ser B* 116 (2016), 219-228
14. Immersion in four-edge-connected graphs, (*with* Zdenek Dvorak, Tereza Klimosova, Paul Seymour), *Journal of Combinatorial Theory, Ser B* 116 (2016), 208-218

15. 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
16. Excluding paths and antipaths (*with* Paul Seymour), *Combinatorica*, 35 (2015), 389–412.
17. 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.
18. Edge-coloring 8-regular planar graphs (*with* Katherine Edwards and Paul Seymour), *Journal of Combinatorial Theory, Ser B* 115 (2015), 303–338.
19. 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.
20. Cliques in the union of graphs (*with* Ron Aharoni, Eli Berger and Juba Ziani), *Journal of Combinatorial Theory, Ser B* 114 (2015), 170–186.
21. Forcing large transitive subtournaments (*with* Eli Berger and Krzysztof Choromanski), *Journal of Combinatorial Theory, Ser B* 113 (2015), 1–17.
22. Disjoint paths in tournaments (*with* Alex Scott and Paul Seymour), *Advances in Mathematics*, 270 (2015), 582–597.
23. Wheel-free planar graphs (*with* Pierre Aboulker, Paul Seymour and Nicolas Trotignon), *European Journal of Combinatorics* (2015), pp. 57–67
24. Excluding a substar and an antistar (*with* Sergey Norin, Bruce Reed and Paul Seymour), *SIDMA*, 29 (2015), 297–308
25. 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.
26. Coloring graphs with forbidden induced subgraphs, *Proceedings of the ICM, 2014*, 291–302.
27. Tournaments with near-linear transitive subsets, (*with* Krzysztof Choromanski and Paul Seymour), *Journal of Combinatorial Theory, Ser B* 109 (2014), 228–249.
28. 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

29. Excluding pairs of graphs (*with* Alex Scott and Paul Seymour), *Journal of Combinatorial Theory, Ser B*, 106(2014), 15-29
30. Lines in hypergraphs (*with* Laurent Beaudou, Adrian Bondy, Xiaomin Chen, Ehsan Chiniforooshan, Vašek Chvátal, Nicolas Fraiman, Yori Zwols), *Combinatorica*, 33 (2013), 633-654
31. The Erdős-Hajnal conjecture—A Survey, *Journal of Graph Theory*, 75 (2014), 178-190
32. The structure of claw-free perfect graphs (*with* with Matthieu Plumettaz), *Journal of Graph Theory*, 75 (2014), 203-230
33. Rao's conjecture on degree sequences (*with* Paul Seymour), *Journal of Combinatorial Theory, Ser. B* , 105 (2014), 44-92
34. Extending the Gyárfás-Sumner conjecture (*with* Paul Seymour), *Journal of Combinatorial Theory, Ser. B* , 105 (2014), 11-16
35. Detecting an induced net subdivision (*with* Paul Seymour and Nicolas Trotignon), *Journal of Combinatorial Theory, Ser. B* , 103 (2013), 630-641
36. Substitutions and χ -boundedness (*with* Irena Penev, Alex Scott and Nicolas Trotignon), *Journal of Combinatorial Theory, Ser. B* , 103 (2013), 567-586
37. The structure of bull-free perfect graphs (*with* Irena Penev), *Journal of Graph Theory*, 74 (2013), 1-31
38. 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
39. A local strengthening of Reed's ω , Δ , and χ conjecture for quasi-line graphs (*with* Andrew King, Matthieu Plumettaz and Paul Seymour), *SIDMA*, 27 (2013), 95-108
40. Finding minimum clique capacity (*with* Sang-il Oum and Paul Seymour) *Combinatorica*, 32 (2012), 283-287
41. Packing seagulls (*with* Paul Seymour) *Combinatorica*, 32 (2012), 251-282
42. Clawfree Graphs VII. Quasi-line graphs (*with* Paul Seymour) *Journal of Combinatorial Theory, Ser. B* , 102 (2012), 1267-1294
43. Growing without cloning (*with* Paul Seymour), *SIDMA*, 26 (2012), 860-880

44. Tournaments and coloring (*with* Eli Berger, Krzysztof Choromanski, Jacob Fox, Martin Loeb, Alex Scott, Paul Seymour and Stephan Thomassé), *Journal of Combinatorial Theory, Ser. B*, 103 (2013), 1-20
45. Perfect matchings in planar cubic graphs (*with* Paul Seymour) *Combinatorica*, 32 (2012), 403-424
46. 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
47. 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
48. Tournament immersion and cutwidth (*with* Alexandra Fradkin and Paul Seymour) *Journal of Combinatorial Theory. Ser B*, 102 (2012), 93-101
49. Three-colorable perfect graphs without even pairs (*with* Paul Seymour) *Journal of Combinatorial Theory. Ser B*, 102 (2012), 363-394
50. 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.
51. The structure of bull-free graphs I — Three-edge-paths with center and anticenters *Journal of Combinatorial Theory. Ser B*, 102 (2012), 233-251
52. The structure of bull-free graphs II and III—a summary, *Journal of Combinatorial Theory. Ser B*, 102 (2012), pp. 252-282
53. 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
54. 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
55. Edge density for $K_{2,t}$ minors (*with* Bruce Reed and Paul Seymour) *Journal of Combinatorial Theory. Ser B*, 101 (2011), 18-46
56. Hadwiger's conjecture and seagull packing, *Notices Amer. Math. Soc.* 57 (2010), 733-736
57. A well-quasi-order for tournaments (*with* Paul Seymour) *Journal of Combinatorial Theory. Ser B*, 101 (2011), 47-53

58. Clawfree Graphs VI. Coloring claw-free graphs (*with Paul Seymour*) *Journal of Combinatorial Theory. Ser B*, 100 (2010), 560-572
59. 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
60. The three-in-a-tree problem (*with Paul Seymour*) *Combinatorica*, 30 (2010), 387-417
61. An approximate version of Hadwiger's conjecture for claw-free graphs (*with Alexandra Ovetsky Fradkin*) *Journal of Graph Theory*, 63 (2010) 259-278
62. 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
63. Even pairs in Berge graphs (*with Paul Seymour*) *Journal of Combinatorial Theory. Ser B*, 99 (2009), 370-377
64. 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
65. Clawfree Graphs V — Global structure (*with Paul Seymour*) *Journal of Combinatorial Theory. Ser B*, 98 (2008), 1373-1410
66. The Erdos Hajnal Conjecture for bullfree graphs (*with S. Safra*) *Journal of Combinatorial Theory. Ser B*, 98 (2008), 1301-1310
67. Hadwiger's conjecture for quasi-line graphs (*with A. Overtsky Fradkin*) *Journal of Graph Theory* 59 (2008), 17-33
68. Detecting a theta or a prism (*with R. Kapadia*) *SIAM Journal on Discrete Math* 22(2008), 1164-1186
69. An algorithm for packing non-zero A -paths in group-labeled graphs (*with William H. Cunningham and Jim Geelen*) *Combinatorica* 28(2008), 145-161
70. Cycles in dense digraphs (*with Paul Seymour and Blair Sullivan*) *Combinatorica* 28(2008), 1-18
71. 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

72. Clawfree Graphs IV — Decomposition theorem (*with Paul Seymour*) *Journal of Combinatorial Theory. Ser B*, 98 (2008), 839-938
73. Solution of three problems of Cornuéjols (*with Paul Seymour*) *Journal of Combinatorial Theory. Ser B*, 98 (2008), 116-135
74. Clawfree Graphs III — Circular interval graphs (*with Paul Seymour*) *Journal of Combinatorial Theory. Ser B* 98(2008), 812-834
75. Clawfree Graphs II — Non-orientable prismatic graphs (*with Paul Seymour*) *Journal of Combinatorial Theory. Ser B*, 98 (2008), 249-290
76. Clawfree Graphs I — Orientable prismatic graphs (*with Paul Seymour*) *Journal of Combinatorial Theory. Ser B*, 97 (2007), 867-901
77. Excluding induced subgraphs (*with Paul Seymour*) *Surveys in Combinatorics 2007, London Math Soc Lecture Note Series 346*, 99-119
78. Coloring quasi-line graphs (*with Alexandra Ovetsky*) *Journal of Graph Theory* 54(2007), 41-50
79. The Roots of the Independence Polynomial of a Clawfree Graph (*with Paul Seymour*) *Journal of Combinatorial Theory. Ser B*, 97 (2007), 350-357
80. The Strong Perfect Graph Theorem (*with N.Robertson, P.Seymour, R.Thomas*) *Annals of Math* 164(2006), 51-229
81. 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
82. Berge Trigraphs *Journal of Graph Theory* 53(2006), 1-55
83. The Structure of Clawfree Graphs (*with Paul Seymour*) *Surveys in Combinatorics 2005, London Math Soc Lecture Note Series 327*, 153-171
84. Partial characterizations of clique-perfect graphs, (*with F. Bonomo, and G.Durán*) *Electronic Notes in Discrete Mathematics* 19(2005), 95-101 (extended abstract)
85. Recognizing Berge Graphs (*with G.Cornuéjols, X.Liu, P.Seymour, K.Vušković*) *Combinatorica* 25(2005), 143-187
86. Detecting Even Holes (*with K. Kawarabayashi, P. Seymour*) *Journal of Graph Theory* 48(2005), 85-111

87. Progress on Perfect Graphs (*with* N.Robertson, P.Seymour, R.Thomas) *Mathematical Programming Ser. B* 97(2003), 405-422
88. Berge Trigraphs and Their Applications, *Ph.D. Thesis, Princeton University, 2003*
89. Triangulated Spheres and Colored Cliques (*with* R. Aharoni, A. Kotlov) *Discrete and Computational Geometry* 28 (2002), 223-229
90. 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. 3-colorable subclasses of P_8 -free graphs, (*with* Juraj Stacho), *to appear in SIDMA*
2. Piercing axes-parallel boxes. (*with* Sophie Spirkl and Shira Zerbib) *to appear in European Journal of Combinatorics*
3. Even pairs and prism corners in Berge graphs, (*with* F. Maffray, P. Seymour and S.Spirkl), *to appear in JCT B*
4. The sandwich problem for decompositions and almost monotone properties, (*with* C.M.H. de Figueiredo and S. Spirkl), *to appear in Algorithmica*

Papers submitted for publication

1. Vertex-minors and the Erdős-Hajnal conjecture. (*with* Sang-il Oum), *submitted for publication*
2. Towards Erdős-Hajnal for graphs with no 5-hole. (*with* Jacob Fox, Alex Scott, Paul Seymour and Sophie Spirkl), *submitted for publication*

3. Four-coloring P_6 -free graphs I. Extending an excellent precoloring. (*with* S. Spirkl and M. Zhong), *submitted for publication*
4. Four-coloring P_6 -free graphs II. Finding an excellent precoloring. (*with* S. Spirkl and M. Zhong), *submitted for publication*
5. Obstructions to three-coloring and list-three-coloring H -free graphs, (*with* J. Goedgebeur, O. Schaudt and M. Zhong), *submitted for publication*.
6. Induced subgraphs of graphs with large chromatic number IX. Orientations. (*with* A. Scott and P. Seymour), *submitted for publication*.
7. Induced subgraphs of graphs with large chromatic number. XII. Distant Stars. (*with* A. Scott and P. Seymour), *submitted for publication*.
8. Triangle-free graphs with no six-vertex induced path. (*with* P. Seymour, S. Spirkl and M. Zhong), *submitted for publication*.
9. $\{ISK_4, triangle\}$ -free graphs are 3-colorable, (*with* C.-H. Lui, O. Schaudt, S. Spirkl, N. Trotignon, and K. Vuskovic), *submitted for publication*
10. Perfect divisibility and 2-divisibility, (*with* Vaidy Sivaraman) *submitted for publication*
11. Induced subgraphs of graphs with large chromatic number VIII. Long odd holes, (*with* A. Scott, P. Seymour and S. Spirkl), *submitted for publication*
12. Large rainbow matchings in general graphs, (*with* R. Aharoni, E. Berger, D. Howard and P. Seymour), *submitted for publication*
13. Approximately coloring graphs without long induced paths, (*with* O. Schaudt, S. Spirkl, M. Stein and M. Zhong), *submitted for publication*
14. Domination in tournaments (*with* R. Kim, C.-H. Liu, P. Seymour and S. Thomasse), *submitted for publication*
15. Induced subgraphs of graphs with large chromatic number V. Chandaliers and strings, (*with* Alex Scott and Paul Seymour), *submitted for publication*
16. 6-vertex tournaments and the Erdős-Hajnal Conjecture. (*with* E. Berger and K. Choromanski), *submitted for publication*
17. Coloring square-free Berge graphs (*with* F. Maffray, I. Lo, N. Trotignon and K. Vuskovic), *submitted for publication*
18. 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. 3-coloring graphs with no $P_6 + kP_3$, (*with* S. Huang, S. Spirkl and M. Zhong), *in preparation*
2. Sparse graphs without linear anticomplete pairs. (*with* A. Scott, P. Seymour and S.Spirkl), *manuscript*
3. Trees and linear anticomplete pairs. (*with* A. Scott, P. Seymour and S.Spirkl), *manuscript*
4. Sparse graphs with no polynomial-size anticomplete pairs. (*with* J. Fox, A. Scott, P. Seymour and S.Spirkl), *manuscript*
5. Optimal anti-thickenings of claw-free graphs (*with* Andrew King), *manuscript*
6. On the Erdős-Lovász Tihany Conjecture in claw-free graphs, (*with* Alexandra Fradkin and Matthieu Plumettaz), *manuscript*