

# Publication List

Chun-Hung Liu

January 12, 2025

1. G. J. Chang and C.-H. Liu, *Roman domination on 2-connected graphs*, SIAM J. Discrete Math. 26 (2012), 193–205.
2. G. J. Chang and C.-H. Liu, *Upper bounds on Roman domination numbers of graphs*, Discrete Math. 312 (2012), 1386–1391.
3. N. Jafari Rad and C.-H. Liu, *Trees with strong equality between the Roman domination number and the unique response Roman domination number*, Australas. J. Combin. 54 (2012), 133–140.
4. G. J. Chang and C.-H. Liu, *Roman domination on strongly chordal graphs*, J. Comb. Optim. 26 (2013), 608–619.
5. D. Král', C.-H. Liu, J.-S. Sereni, P. Whalen and Z. Yilma, *A new bound for the 2/3 conjecture*, Combin. Probab. Comput. 22 (2013), 384–393.
6. C.-H. Liu and G. Yu, *Linear colorings of subcubic graphs*, European J. Combin. 34 (2013), 1040–1050.
7. C.-H. Liu, *An upper bound on the fractional chromatic number of triangle-free subcubic graphs*, SIAM J. Discrete Math. 28 (2014), 1102–1136.
8. W. Abbas, M. Egerstedt, C.-H. Liu, R. Thomas and P. Whalen, *Deploying robots with two sensors in  $K_{1,6}$ -free graphs*, J. Graph Theory 82 (2016), 236–252.
9. G. J. Chang, S.-H. Chen and C.-H. Liu, *Edge Roman domination on graphs*, Graphs Combin. 32 (2016), 1731–1747.
10. T. Kelly and C.-H. Liu, *Minimum size of feedback vertex sets of planar graphs of girth at least five*, European J. Combin. 61 (2017), 138–150.
11. C.-H. Liu and L. Postle, *On the minimum edge-density of 4-critical graphs of girth five*, J. Graph Theory 86 (2017), 387–405.

12. C.-H. Liu and J. Ma, *Cycle lengths and minimum degree of graphs*, J. Combin. Theory Ser. B 128 (2018), 66–95.
13. C.-H. Liu and S. Oum, *Partitioning  $H$ -minor free graphs into three subgraphs with no large components*, J. Combin. Theory Ser. B 128 (2018), 114–133.
14. M. Chudnovsky, R. Kim, C.-H. Liu, P. Seymour and S. Thomassé, *Domination in tournaments*, J. Combin. Theory Ser. B 130 (2018), 98–113.
15. I. Choi, C.-H. Liu and S. Oum, *Characterization of cycle obstruction sets for improper coloring planar graphs*, SIAM J. Discrete Math. 32 (2018), 1209–1228.
16. T. Kelly and C.-H. Liu, *Size of the largest induced forest in subcubic graphs of girth at least four and five*, J. Graph Theory 89 (2018), 457–478.
17. C.-H. Liu and R. Thomas, *Excluding subdivisions of bounded degree graphs*, J. Combin. Theory Ser. B 134 (2019), 1–35.
18. M. Chudnovsky, C.-H. Liu, O. Schaudt, S. Spirkl, N. Trotignon and K. Vušković, *Triangle-free graphs that do not contain an induced subdivision of  $K_4$  are 3-colorable*, J. Graph Theory 92 (2019), 67–95.
19. C.-H. Liu, *Recent progress on well-quasi-ordering graphs*, Well-Quasi Orders in Computation, Logic, Language and Reasoning. Trends in Logic (Studia Logica Library) 53 (2020), 161–188.
20. Z. Dvořák, T. Huynh, G. Joret, C.-H. Liu and D. R. Wood, *Notes on graph product structure theory*, 2019-2020 MATRIX Annals. MATRIX Book Series, vol. 4 (2021), 515–533.
21. C.-H. Liu, *Asymptotic dimension of minor-closed families and beyond*, Proceedings of the 2021 ACM-SIAM Symposium on Discrete Algorithms (SODA), (2021), 1997–2013.
22. C.-H. Liu, *Packing and covering immersions in 4-edge-connected graphs*, J. Combin. Theory Ser. B 151 (2021), 148–222.
23. C.-H. Liu and D. R. Wood, *Clustered variants of Hajós’ conjecture*, J. Combin. Theory Ser. B 152 (2022), 27–54.
24. C.-H. Liu, *A global decomposition theorem for excluding immersions in graphs with no edge-cut of order three*, J. Combin. Theory Ser. B 154 (2022), 292–335.
25. J. Gao, Q. Huo, C.-H. Liu and J. Ma, *A unified proof of conjectures on cycle lengths in graphs*, Int. Math. Res. Not. 2022 (2022), 7615–7653.

26. C.-H. Liu, *Legacy of Robin Thomas*, Notices Amer. Math. Soc. 69 (2022), 966–977.
27. C.-H. Liu, *Packing topological minors half-integrally*, J. Lond. Math. Soc. 106 (2022), 2193–2267.
28. C.-H. Liu, *Immersion and clustered coloring*, J. Combin. Theory Ser. B 158 (2023), 252–282.
29. C.-H. Liu and I. Muzi, *Well-quasi-ordering digraphs with no long alternating paths by the strong immersion relation*, J. Combin. Theory Ser. B 158 (2023), 210–251.
30. C.-H. Liu and F. Wei, *Phase transition of degeneracy in minor-closed families*, Adv. Appl. Math. 146 (2023), 102489.
31. C.-H. Liu, *Proper conflict-free list-coloring, odd minors, subdivisions, and layered treewidth*, Discrete Math. 347 (2024), 113668.
32. C.-H. Liu, *Defective coloring is perfect for minors*, Combinatorica 44 (2024), 467–507.
33. M. Bonamy, N. Bousquet, L. Esperet, C. Groenland, C.-H. Liu, F. Pirot and A. Scott, *Asymptotic dimension of minor-closed families and Assouad-Nagata dimension of surfaces*, J. Eur. Math. Soc. (JEMS) 26 (2024), 3739–3791.
34. C.-H. Liu and D. R. Wood, *Clustered coloring of graphs with bounded layered treewidth and bounded degree*, European J. Combin. 122 (2024), 103730.
35. D. W. Cranston and C.-H. Liu, *Proper conflict-free coloring of graphs with large maximum degree*, SIAM J. Discrete Math. 38 (2024), 3004–3027.
36. C.-H. Liu and D. R. Wood, *Clustered graph coloring and layered treewidth*, arXiv:1905.08969. (Submitted.)
37. C.-H. Liu and D. R. Wood, *Clustered coloring of graphs excluding a subgraph and a minor*, arXiv:1905.09495. (Submitted.)
38. C.-H. Liu and R. Thomas, *Robertson’s conjecture I. Well-quasi-ordering bounded tree-width graphs by the topological minor relation*, arXiv:2006.00192. (Submitted.)
39. C.-H. Liu, *Homomorphism counts in robustly sparse graphs*, arXiv:2107.00874. (Submitted.)
40. C.-H. Liu, *Assouad-Nagata dimension of minor-closed metrics*, arXiv:2308.12273. (Submitted.)
41. J. Crouch and C.-H. Liu, *Weak diameter choosability of graphs with an excluded minor*, arXiv:2310.17795. (Submitted.)

42. C.-H. Liu and B. Reed *Asymptotically optimal proper conflict-free colouring*, arXiv:2401.02155. (Submitted.)
43. C.-H. Liu and B. Reed *Peaceful colourings*, arXiv:2402.09762. (Submitted.)
44. C.-H. Liu and Y. Yoo, *Tight minimum degree conditions for apex-outerplanar minors and subdivisions in graphs and digraphs*, arXiv:2403.11470. (Submitted.)
45. C.-H. Liu and D. R. Wood, *Quasi-tree-partitions of graphs with an excluded subgraph*, arXiv:2408.00983. (Submitted.)
46. C.-H. Liu, S. Norin and D. R. Wood, *Product structure and tree-decompositions*, arXiv:2410.20333. (Submitted.)
47. C.-H. Liu and Y. Yoo, *Disjoint paths problem with group-expressible constraints*. (Submitted.)
48. M. Hatzel, C.-H. Liu, B. Reed and S. Wiederrecht, *Bounds on treewidth via excluding disjoint unions of cycles*, arXiv:2501.01703. (Submitted.)
49. C.-H. Liu, R. Thomas and P. Wollan, *Excluding weak immersions*, manuscript, 2013.
50. C.-H. Liu and R. Thomas, *Well-quasi-ordering graphs by the topological minor relation II-IV: Robertson's conjecture*, manuscript, 2014.
51. C.-H. Liu, L. Postle and P. Wollan, *Erdős-Pósa property for topological minors*, manuscript, 2015.