## Publications of Jochen Harant

## Theses

1. J. Harant, Eine Klasse von hamiltonschen Graphen, Diplomarbeit, TH Ilmenau, 1980.
2. J. Harant, Über den Shortness Exponent regulärer Polyedergraphen mit genau zwei Typen von Elementarflächen, Dissertation, TH Ilmenau, 1982.
3. J. Harant, Über leichte und schwere Probleme der Verkehrsoptimierung, Habilitation, TH Ilmenau, 1987.

## Journal Articles

1. Über Abstandsparameter in Polyedergraphen (with H. Walther), Wiss. Z. TH Ilmenau 25(1979)No. 2, 31-39.
2. On the Radius of Graphs (with H. Walther), Journ. of Comb. Theory, Series B 30 No. 1 (1981)113-117.
3. Ein Partitionierungsalgorithmus zur Distanzberechnung auf Verkehrsnetzen (with K.-H. Elster and H. Hutschenreuther), Math. Operationsforsch. u. Statist., ser. optimization 15 (1984) No. 3, 429-438.
4. Mitteilung zu mathematischen Problemen der Verkehrsoptimierung. 1. Mitteilung (with G. Ehnert and H. Walther), Wiss. Z. TH Ilmenau 30 (1984)No. 6, 29-32.
5. Ein Durchlaufungsproblem beim Layoutentwurf von Schaltkreisen, Wiss. Z. TH Ilmenau 31 (1985)No. 1, 37-38.
6. Mitteilungen zu Mathematischen Problemen der Verkehrsoptimierung. 2. Mitteilung (with G. Ehnert and H. Walther), Wiss. Z. TH Ilmenau 32 (1986)No. 3, 39-43.
7. Some new results about the shortness exponent in polyhedral graphs (with H. Walther), Casopis pestovani matematiky, 122 (1987) 2, 114122.
8. On a Problem Concerning Longest Circuits in Polyhedral Graphs (with H. Walther), Annals of Discrete Mathematics 41(1989)211-220.
9. On the circumference of regular polyhedra graphs (with H. Walther), Topics in Combinatorics and Graph theory, ed. R. Bodendiek, R. Henn, Physica-Verlag Heidelberg 1990, 319-330.
10. An upper bound for the radius of a 3 -connected planar graph with bounded faces. In: R. Bodendiek, Contemporary methods in graph theory, BI-Wissenschaftsverlag, 1990, 353-358.
11. Toughness and nonhamiltonicity of polyhedral graphs, Discrete Mathematics 113(1993)249-253.
12. An upper bound for the radius of a 3-connected graph, Discrete Mathematics 122(1993)335-341.
13. A lower bound for the shortness coefficient of a class of graphs (with H. Walther), Discrete Applied Mathematics 51(1994)103-105.
14. Non-hamiltonian 5/4-tough maximal planar graphs (with P.J. Owens), Discrete Mathematics 147(1995)301-305.
15. 5-regular 3-polytopal graphs with edges of only two types and shortness exponents (with P. Owens, M. Tkáč, and H. Walther), Discrete Mathematics 150(1996)143-153.
16. On minimal number of separating 3 -cycles in non-hamiltonian maximal planar graphs (with Th. Böhme and M. Tkáč), Tatra Mountains Mathematical Publications 9(1996)97-102.
17. A lower bound on the independence number of a graph, Discrete Mathematics 188(1998)239-243.
18. On Hamiltonian cycles in 4- and 5 -connected plane triangulations (with Th. Böhme), Discrete Mathematics 191(1998)25-30.
19. A planarity criterion for cubic bipartite graphs (with Th. Böhme, A. Pruchnewski, and I. Schiermeyer), Discrete Mathematics 191(1998)3143.
20. On certain Hamiltonian cycles in planar graphs (with Th. Böhme and M. Tkáč), Journal of Graph Theory 32(1999)81-96.
21. On 3-connected plane graphs without triangular faces (with S. Jendrol and M. Tkáč), Journ. of Comb. Theory, Series B 77(1999)150-161.
22. More than one tough chordal planar graphs are Hamiltonian (with Th. Böhme and M. Tkáč), Journal of Graph Theory 32(1999)405-410.
23. On dominating sets and independent sets of graphs (with A. Pruchnewski and M. Voigt), Combinatorics, Probability and Computing 8(1999)547553.
24. Some news about the independence number of a graph, Discussiones Mathematicae Graph Theory 20, no. 1(2000)71-80.
25. On weights of induced paths and cycles in claw-free and $K_{1, r}$-free graphs (with S. Jendrol, B. Randerath, Z. Ryjacek, I. Schiermeyer, and M. Voigt), Journal of Graph Theory 36(2001)131-143.
26. On the independence number of a graph in terms of order and size (with I. Schiermeyer), Discrete Mathematics 232(2001)131-138.
27. Menger's Theorem (with Th. Böhme, and F. Göring), Journal of Graph Theory 37(2001)35-36.
28. A Note on the Domination Number of a Bibartite Graph (with A. Pruchnewski), Annals of Combinatorics 5(2001)175-178.
29. Separating 3 -cycles in plane triangulations (with M. Hornak and Z. Skupien), Discrete Mathematics 239(2001)127-136.
30. A note on domination in bipartite graphs (with T. Gerlach), Discussiones Mathematicae Graph Theory 22(2002)229-231.
31. Forbidden subgraphs implying the MIN-algorithm gives a maximum independent set (with Z. Ryjacek and I. Schiermeyer), Discrete Mathematics 256(2002)193-201.
32. Paths of low weight in planar graphs (with I. Fabrici and S. Jendrol), Discussiones Mathematicae Graph Theory 28(2008)121-135.
33. On short cycles through prescribed vertices of a graph (with F. Göring, E. Hexel, and Zs. Tuza), Discrete Mathematics 286(2004)67-74.
34. On paths and cycles through specified vertices, Discrete Mathematics 286(2004)95-98.
35. On cycles through specified vertices (with T. Gerlach, F. Göring, and M. Tkáč), Discrete Mathematics 306(2006)831-835.
36. On domination in graphs (with F. Göhring), Discussiones Mathematicae Graph Theory 25(2005)7-12.
37. On a cycle through a specified linear forest of a graph (with T. Gerlach). Discrete Mathematics 307(2007)892-895.
38. On double domination in graphs (with M. A. Henning), Discussiones Mathematicae Graph Theory 25(2005)29-34.
39. On cycles through a set of specified vertices (with T. Gerlach). Studies of the University of Zilina (Slovakia), Mathematical Series, Vol. 16(2003)35-46.
40. A realization algorithm for double domination in graphs (with M. A. Henning), Utilitas Mathematica 76(2008)11-24.
41. On long cycles through four prescribed vertices of a polyhedral graph (with S. Jendrol and H. Walther), Discussiones Matematicae Graph Theory 28(2008)441-451.
42. On the existence of specific stars in planar graphs (with S. Jendrol), Graphs and Combinatorics 23(2007)529-543.
43. A lower bound on the independence number of a graph in terms of degrees (with I. Schiermeyer), Discussiones Mathematicae Graph Theory 26(3)(2006)431-437.
44. A generalization of Tutte's Theorem on hamiltonian cycles in planar graphs (with S. Senitsch), Discrete Mathematics 309(2009)4949-4951.
45. Domination in bipartite graphs (with D. Rautenbach), Discrete Mathematics 309(2009)113-122.
46. The independece Number in Graphs of Maximum Degree Three (with M. A. Henning, D. Rautenbach, and I. Schiermeyer), Discrete Mathematics 308(2008) 5829-5833.
47. Locally dense independet sets in regular graphs of large girth - An example of a new approach (with F. Göring, D. Rautenbach, and I. Schiermeyer), in Research Trends in Combinatorial Optimization, SpringerVerlag Berlin Heidelberg (2008)163-183.
48. On F-independence in graphs (with F. Göring, D. Rautenbach, and I. Schiermeyer), Discussiones Mathematicae Graph Theory 29(2009)377383.
49. Random procedures for dominating sets in graphs (with S. Artmann, F. Göring, D. Rautenbach, and I. Schiermeyer), Electron. J. Comb. 17(2010)R102.
50. Closures, cycles and paths (with A. Kemnitz, A. Saito, and I. Schiermeyer), Journal of Graph Theory, 69(2012)314-323.
51. Packing edge-disjoint cycles in graphs and the cyclomatic number (with D. Rautenbach, P. Recht, and F. Regen), Discrete Mathematics 310(2010)14561462.
52. Hamiltonian cycles through prescribed edges of at least 4-connected maximal planar graphs (with F. Göring), Discrete Mathematics 310(2010) 1491-1494.
53. Random procedures for dominating sets in bipartite graphs (with S. Artmann), Discussiones Matematicae Graph Theory 30(2)(2010)277288.
54. Upper bounds on the sum of powers of the degrees of a simple planar graph (with S. Jendrol and T. Madaras), Journal of Graph Theory 67(2011)112-123.
55. Packing disjoint cycles over vertex cuts (with D. Rautenbach, P. Recht, I. Schiermeyer, and E.-M. Sprengel), Discrete Mathematics 310(2010)19741978.
56. Independence in Connected Graphs (with D. Rautenbach), Discrete Applied Mathematics 159(2011)79-86.
57. Nonrepetitive vertex colorings of graphs (with S. Jendrol'), Discrete Mathematics 312(2012)374-380.
58. A Lower Bound on Independence in Terms of Degrees, Discrete Applied Mathematics 159(2011)966-970.
59. Prescribed edges and forbidden edges for a cycle in a planar graph (with F. Göring), Discrete Applied Mathematics 161(2013)1734-1738.
60. Upper bounds on the sum of powers of the degrees of a simple 1-planar graph (with J. Czap and D. Hudák), Discrete Applied Mathematics 165(2014)146-151.
61. The Potential of Greed for Independence (with P. Borowiecki, F. Göring, and D. Rautenbach), Journal of Graph Theory 71(2012)245-259.
62. A Note on Barnette's Conjecture, Discussiones Matematicae Graph Theory 33(1)(2013)133-137.
63. On degree sums of a triangle-free graph (with S. Brandt and S. Pflugradt), Discrete Mathematics 337(2014)76-82.
64. A note on vertex colorings of plane graphs (with I. Fabrici, S. Jendrol, and R. Sotak), Discussiones Mathematicae Graph Theory 34(2014)849855.
65. A new eigenvalue bound for independent sets (with S. Richter), Discrete Mathematics 338(2015)1763-1765.
66. A note on adjacent vertex distinguishing colorings number of graphs (with M. Axenovich, J. Przybylo, R. Sotak, M. Voigt, and J. Weidlich), Discrete Applied Mathematics, 205(2016)1-7.
67. Eigenvalue conditions for induced subgraphs (with J. Niebling and S. Richter), Discussiones Mathematicae Graph Theory 35(2015)355-363.
68. Maximum weighted induced subgraphs (with S. Mohr), Discrete Mathematics 339(2016)1954-1959.
69. On Longest Cycles in Essentially 4-connected Planar Graphs (with I. Fabrici and S. Jendrol'), Discussiones Mathematicae Graph Theory 36(2016)565-575.
70. Lower bounds on the choice number of a graph (with A. Kemnitz), Electronic Notes in Discrete Mathematics 53(2016)421-431.
71. On Selkow's Bound on the Independence Number of Graphs (with S. Mohr), Discussiones Mathematicae Graph Theory, 39(2019)655-657.
72. Lightweight Paths in Graphs (with S. Jendrol'), Opuscula Math. 39, no. 6(2019)829-837.
73. Longer cycles in essentially 4 -connected planar graphs (with I. Fabrici, S. Mohr, and J.M. Schmidt), Discussiones Mathematicae Graph Theory 40(2020)269-277.
74. On the Circumference of Essentially 4-connected Planar Graphs (with I. Fabrici, S. Mohr, and J.M. Schmidt), Journal of Graphs Algorithms and Applications, 24(2020)21-46.
75. Long Cycles and Spanning Subgraphs of Locally Maximal 1-planar Graphs (with I. Fabrici, T. Madaras, S. Mohr, R. Sotak, C. T. Zamfirescu), Journal of Graph Theory 95(2020)125-137.
76. Rooted Minors and Locally Spanning Subgraphs (with T. Böhme, M. Kriesell, S. Mohr, and J.M. Schmidt), submitted, arXiv:2003.04011.
77. Circumference of Essentially 4-connected Planar Triangulations (with I. Fabrici, S. Mohr, and J.M. Schmidt), Journal of Graph Algorithms and Applications 25.1 (2021)121132.
78. New Bounds on Domination and Independence in Graphs (with S. Mohr), Discussiones Mathematicae Graph Theory 43(2023)809-824.
79. Spanning trees of smallest maximum degree in subdivisions of graphs (with C. Brause, F. Hörsch, S. Mohr), submitted, arXiv:2210.04669.
