

# Publications

## Herbert Fleischner

1. Über endliche, ebene Eulersche und paare, kubische Graphen, Monatshefte f. Mathematik 74 (1970), 410-420.
2. Sätze über Eulersche Graphen mit speziellen Eigenschaften, Sätze über die Existenz von Hamiltonschen Linien, Sitzungsberichte d. Österr. Akademie d. Wissenschaften, math.-nat. Klasse, Abt. II, 178. Bd., 1.-3. Heft (1969), 77-123.
3. Über Hamiltonsche Linien im Quadrat kubischer und pseudokubischer Graphen, Mathematische Nachrichten, Bd. 49, Heft 1-6 (1971), 163-171.
4. Die Struktur der Automorphismen spezieller, endlicher, ebener, dreifach-knotenzusammenhängender Graphen, Compositio Mathematica 23, Fasc. 4 (1971), 435-444.
5. Fixpunkteigenschaften von Automorphismen spezieller, endlicher, ebener, dreifachknotenzusammenhängender Graphen, Compositio Mathematica 23, Fasc. 4 (1971), 445-452.
6. The Square of Every Nonseparable Graph is Hamiltonian, Bulletin of the American Mathematical Society (Nov. 1971), 77, No. 6, 1052-1054.
7. Hamiltonsche Linien im Quadrat brückenloser Graphen mit Artikulationen (with H.V. Kronk), Monatshefte f. Mathematik 76 (1972), 112-117.
8. Die Bestimmung der kubischen Graphen mit Hamiltonischem Quadrat, Mathematische Nachrichten 55 (1973), Heft 1-6, 213-221.
9. The Uniquely Embeddable Planar Graphs, Discrete Mathematics 4, No. 4 (April 1973), 347-358.
10. On Spanning Subgraphs of a Connected Bridgeless Graph and Their Application to DT-Graphs, Journal of Combinatorial Theory 16, No. 1 (1974), 17-28.
11. The Square of Every Two-Connected Graph is Hamiltonian, Journal of Combinatorial Theory 16, No. 1 (1974), 29-34.
12. Distribution of Points of Odd Degree of Certain Triangulations in the Plane (with P. Roy), Monatshefte f. Mathematik 78 (1974), 385-390.
13. The Importance of Being Euler, Abhandlungen a.d. Mathem. Seminar der Universität Hamburg, Bd. 42 (Nov. 1974), 90-99.
14. On Regulating Sets and the Disparity of Planar Cubic Graphs, Canad. Math. Bull. 17 (3) (1974), 367-374.
15. Outerplanar Graphs and Weak Duals (with D.P. Geller and F. Harary), Journal of the Indian Math. Soc. 38 (1974), 215-219.
16. A note on Line Colorings of Cubic Graphs, Arch. Math. (Brno) 4 (1974), 195-198.
17. Gedanken zur Vier-Farben-Vermutung, Monatshefte f. Mathematik, 79 (1975), 201-211.

18. A Necessary Condition for the Square of a Graph to be Hamiltonian (with A.M. Hobbs), *Journal of Combinatorial Theory* 19, No. 2 (Oct. 1975), 97-118.
19. Hamiltonian Total Graphs (with A.M. Hobbs), *Mathematische Nachrichten*, Bd. 68 (1975), 59-82.
20. Hamiltonsche totale Graphen von ebenen Graphen, *Mathematische Nachrichten*, Bd. 68 (1975), 83-91.
21. Hamiltonian Squares of Graphs; in: *Recent Advances in Graph Theory, Proceedings of the Symposium held in Prague, June 1974, Academia Praha 1975*, 197-206.
22. Eine gemeinsame Basis für die Theorie der Eulerschen Graphen und den Satz von Petersen, *Monatshefte f. Mathematik* 81 (1976), 267-278.
23. In the Square of Graphs, Hamiltonicity and Pancyclicity, hamiltonian Connectedness and Panconnectedness are Equivalent Concepts, *Monatshefte f. Mathematik* 82 (1976), 125-149.
24. Hamiltonian Cycles in Squares of Vertex-Unicyclic Graphs (with A.M. Hobbs), *Canad. Math. Bull.* 19 (2) (1976), 169-172.
25. On the Equivalence of Mealy-Type and Moore-Type Automata and a Relation Between Reducibility and Moore-Reducibility, *JCSS*, 14, No. 1 (1977), 1-16.
26. Value-true Walks in Finite, Connected, Valuated Graphs (with P.D. Vertergaard), *Monatshefte f. Mathematik* 83 (1977), 1-8.
27. Transitive Planar Graphs (with W. Imrich), *Mathematica Slovaca* 29, No. 2 (1979), 97-106.
28. Representations of Finite Partial Orderings by Binary Codes Combined with Sequential Decision Mechanisms with Applications to Digital Fault Diagnosis (with A.R. Bazelow), in: *Second International Conference on Combinatorial Mathematics (A. Gerwitz and L.V. Quintas, Eds.) ANYAA9*, 319 (1979), 188-206.
29. The Reconstruction of Line-Critical Blocks, *Ars Combinatoria* 7 (1979), 223-254.
30. Three-Regular Subgraphs of Four-Regular Graphs (with V. Chvatal, J. Sheehan, and C. Thomassen), *Journal of Graph Theory* 3 (1979), 371-386.
31. Eulersche Linien und Kreisüberdeckungen, die vorgegebene Durchgänge in den Kanten vermeiden, *Journal of Combinatorial Theory B* 29, No. 2 (1980), 145-167.
32. Three-Regular Subgraphs of Four Regular Graphs. The Case  $\lambda_c = 8$  (with J. Sheehan), unpublished.
33. Even Cycles with Prescribed Chords in Planar Cubic Graphs, *Discrete Mathematics* 44 (1983), 275-280.
34. Eulerian Graphs, in: *Selected Topics in Graph Theory 2* (L. Beineke and R. Wilson, Eds.), Academic Press Inc., London (1983), 17-53.

35. A Way of Enumerating Eulerian Trails in a Connected Eulerian Graph, *Ars Combinatoria* 16B (1983), 177-193.
36. From the Bridges of Königsberg to the Chinese Postman, *Proceedings of the Second Symposium of the Southern Africa Mathematical Sciences Association* (1983), 8-32.
37. Cycle Decompositions, 2-Coverings, Removable Cycles, and the 4CD, in: *Progress in Graph Theory* (J.A. Bondy, U.S.R. Murty, Eds.), Academic Press (1984), 233-246.
38. Removable Cycles in Planar Graphs (with B. Jackson), *Journal of the London Math. Soc.* (2), 31 (1985), 193-199.
39. On the Minimum Weighted Cycle Covering Problem for Planar Graphs (with G. Meigu), *Ars Combinatoria* 20 (1985), 61-67.
40. Proof of the Strong 2-Cover Conjecture for Planar Graphs, *Journal of Combinatorial Theory B* 40, No. 2 (1986), 229-230.
41. Compatible Path-Cycle-Decompositions of Plane Graphs (with B. Jackson), *Journal of Combinatorial Theory B* 42, No. 1 (1987), 94-121.
42. Removable Edges in Cyclically 4-Edge-Connected Cubic Graphs (with L.D. Andersen and B. Jackson), *Graphs and Combinatorics* 4 (1988), 1-21.
43. Some Blood, Sweat, but no Tears in Eulerian Graph Theory, *Congressus Numer.* 63 (1988), 8-48.
44. The Prism of a 2-Connected Planar Cubic Graphs is Hamiltonian (a Proof Independent of the Four Colour Theorem), *Annals Discrete Math.* 41 (1989), 141-170.
45. Elementary Proofs of (Relatively) Recent Characterization of Eulerian Graphs, *Discrete Appl. Math.* 24 (1989), 115-119.
46.  $D_0$ -Favouring Eulerian Trails in Digraphs (with E. Wenger), *Arch. Math. (Brno)* 25 (1989), 55-60.
47. A note concerning some conjectures on cyclically 4-edge connected 3-regular graphs (with B. Jackson), *Graph theory in memory of G. A. Dirac (Sandbjerg, 1985)*, 171-177, *Ann. Discrete Math.*, 41, North-Holland, Amsterdam, 1989.
48. On the Maximum Number of Pairwise Compatible Euler Cycles (with A.J.W. Hilton and B. Jackson), *J. Graph Theory* 14 (1990), 51-63.
49. On Circuit Decomposition of Planar Eulerian Graphs (with A. Frank), *Journal of Combinatorial Theory B* 50 (1990), 245-253.
50. Compatible Euler Tours in Digraphs (with B. Jackson), in: *Cycles and Rays* (G. Hahn et al., Eds.), NATO ASI Ser. C, Kluwer Academic Publishers, Dordrecht (1990), 95-100.
51. Characterizing Directed Postman Tours (with E. Wenger), in: *Topics in Combinatorics and Graph Theory* (R. Bodendiek and R. Henn, Eds.), Physica-Verlag Heidelberg 1990, 257-262.

52.  $P(D)$ -Compatible Eulerian Trails in Digraphs and a New Splitting Lemma (with M. Fulmek), in: Contemporary Methods in Graph Theory (R. Bodendiek, Ed.), B.I. Wissenschaftsverlag 1990, 291-303.
53. Eulerian Graphs and Related Topics, Part 1, Vol. 1, Annals of Discrete Mathematics 45, Elsevier Science Publishers B.V., Amsterdam-New York, 1990.
54. Eulerian Graphs and Related Topics, Part 1, Vol. 2, Annals of Discrete Mathematics 50, Elsevier Science Publishers B.V., Amsterdam-New York, 1991.
55. A Maze Search Algorithm which also Produces Eulerian Trails, in: Advances in Graph Theory (V.R. Kulli, Ed.), Vishwa International Publications 1991, 195-201.
56. Transforming Eulerian Trails (with G. Sabidussi and E. Wenger), Discrete Math. 109 (1992), 103-116.
57. A Solution to a Colouring Problem of P. Erdős (with M. Stiebitz), Discrete Math. 101 (1992), 39-48.
58. Spanning Eulerian Subgraphs, The Splitting Lemma, and Petersen's Theorem, Discrete Math. 101 (1992), 33-37.
59. Detecting Cycles through Three Fixed Vertices in a Graph (with G.J. Woeginger), Information Processing Letters 41 (1992), 29-33.
60. Generating Hamiltonian Cycles in Complete Graphs (with P. Horák and J. Širáň), Acta Math. Univ. Comenianae 62 (1993), 155-159.
61. Uniqueness of Maximal Dominating Cycles in 3-regular Graphs and of Hamiltonian Cycles in 4-regular Graphs, Journal of Graph Theory 18 (1994), 449-459.
62. The  $NP$ -Completeness of Finding A-trails in Eulerian Graphs and Finding Spanning Trees in Hypergraphs (with L.D. Andersen), Discrete Appl. Math. 59 (1995), 203-214.
63. An Eulerian Trail Traversing Specified Edges in Given Order (with M. Cai), Journal of Graph Theory 19 (1995), 137-144.
64. Equalizing Graphs, unpublished.
65. A Numbering of the Vertices of Special Networks, Discrete Math. 165/166 (1997), 263-276.
66. Some remarks on the cycle plus triangles problem (with M. Stiebitz), in: The Mathematics of Paul Erdős, vol. II, Algorithms Combin. 14, Springer, Berlin, 1997, 136-142.
67.  $r$ -regular,  $r$ -connected decompositions of complete graphs (with W.R. Johnstone and A.J.W. Hilton), J. of Comb. Designs 8; 15-21, 2000.
68. Algorithms and Outerplanar Conditions for A-Trails in Plane Eulerian Graphs (with L.D. Andersen and S. Regner), Discrete Applied Mathematics 85 (1998), 99-112.

69. Traversing Graphs: The Eulerian and Hamiltonian Theme, in *Arc Routing: Theory, Solutions, and Applications* (ed. M. Dror), pp. 19-87, Kluwer Academic Publishers, 2000.
70. Polynomial-time recognition of minimal unsatisfiable formulas with fixed clause-variable difference (with S. Szeider), *Electronic Colloquium on Computational Complexity (ECCC)*, TR-00-049, 2000.
71. Remarks on the Concept of Robust Algorithm (with S. Földes, S. Szeider), RUTCOR Research. Report RRR-26-2001, April 2001.
72. (Some of) The Many Uses of Eulerian Graphs in Graph Theory (plus Some Applications), *Discrete Mathematics* 230 (2001), 23-43.
73. A Note about the Dominating Circuit Conjecture (with M. Kochol), *Discrete Math.* 259 (2002), no. 1-3, 307-309.
74. Polynomial-time recognition of minimal unsatisfiable formulas with fixed clause-variable difference (with O. Kullmann, S. Szeider), *Theoret. Comput. Sci.* 289 (2002), no. 1, 503-516.
75. Completing Latin Squares: Critical Sets (with R.E.L. Aldred, P. Horak), *J. Combin. Des.* 10 (2002), no. 6, 419-432.
76. Bipartizing Matchings and Sabidussi's Compatibility Conjecture. *Algebraic and Topological Methods in Graph Theory* (Lake Bled, 1999), *Discrete Math.* 244 (2002), no. 1-3, 77-82.
77. A Proof of the two-path Conjecture (with R.R. Molina, K.W. Smith, D.B. West), *Electron. J. Combin.* 9 (2002), no. 1, Note 4, 4pp (electronic).
78. 3-colorability of 4-regular Hamiltonian graphs (with G. Sabidussi), *J. Graph Theory* 42 (2003), no. 2, 125-140.
79. Colorability of Planar Graphs with Isolated Nontriangular Faces (with M.N. Ellingham, M. Kochol, E. Wenger), *Graphs Combin.* 20 (2004), no. 4, 443-446.
80. Eulerian Graphs, in *Handbook of Graph Theory. First Edition.* Eds. Jonathan L. Gross and Jay Yellen. *Discrete Mathematics and its Applications* (Boca Raton). CRC Press, Boca Raton, FL, 2004, 214-236.
81. On edge-colored Graphs Covered by Properly Colored Cycles (with S. Szeider), *Graphs Combin.* 21 (2005), no. 3, 301-306.
82. Compatible Circuit Decompositions of 4-regular Graphs (with F. Genest, B. Jackson), *J. Graph Theory* 56 (2007), no. 3, 227-240.
83. Covering Graphs with few Complete Bipartite Subgraphs (with E. Mujuni, D. Paulusma, S. Szeider), *FSTTCS 2007: Foundations of software technology and theoretical computer science*, 340-351, *Lecture Notes in Comput. Sci.*, 4855, Springer, Berlin, 2007.

84. A universal set of growth operations for fullerenes (with M. Hasheminezhad and B. D. McKay), *Chem. Phys. Lett.*, 464 (2008) 118-121.
85. Covering Graphs with few Complete Bipartite Subgraphs (with E. Mujuni, D. Paulusma, S. Szeider), *Theoret. Comput. Sci.* 410 (2009), no. 21-23, 2045-2053.
86. Hamiltonicity in Vertex Envelopes of Plane Cubic Graphs (with A.M. Hobbs, M.M. Tapfuma), *Discrete Math.* 309 (2009), no. 14, 4793-4809.
87. Circuit Double Covers in Special Types of Cubic Graphs (with R. Häggkvist), *Discrete Math.* 309 (2009), no. 18, 724-728.
88. Maximum Independent Sets in 3- and 4-regular Hamiltonian graphs (with. G. Sabidussi, V.I. Sarvanov), *Discrete Math.* 310 (2010), no. 20, 2742-2749.
89. Uniquely Hamiltonian Graphs of Minimum Degree Four, *J. Graph Theory* 75 (2014), no. 2, 167-177.
90. Eulerian Graphs, in *Handbook of Graph Theory*. Second edition. Eds. Jonathan L. Gross, Jay Yellen and Ping Zhang. *Discrete Mathematics and its Applications* (Boca Raton). CRC Press, Boca Raton, FL, 2014, 258-283.
91. Cycle Double Covers in Cubic Graphs Having Special Structures (with R. Häggkvist), *J. Graph Theory* 77 (2014), no. 2, 158-170.
92. Cycle Double Covers Containing Certain Circuits in Cubic Graphs Having Special Structures (with R. Häggkvist), *Discrete Math.* 338 (2015), no. 10, 1750-1754.
93. Polynomial-Time Recognition of 3-Colorability of Planar Locally Connected Graphs (with M. Kochol), Preprint.