

PUBLICATIONS

Theses

1. Three combinatorial approaches to the theory of non-negative matrices, M.Sc. Thesis, Queen's University, Canada, 1975.
2. Cycles in Graphs, Ph.D. Thesis, University of Waterloo, Canada, 1978.

Journal Articles

1. Edge-disjoint Hamilton cycles in regular graphs of large degree, J. London Mathematical Society (2), 19, 1978 13-16.
2. Hamilton cycles in regular graphs, J. Graph Theory 2, 1978 363-365.
3. Hamilton cycles in regular 2-connected graphs, J. Combinatorial Theory (B), 29, 1980 27-46.
4. Removable cycles in 2-connected graphs of minimum degree at least four, J. London Mathematical Society (2), 21, 1980 358-392.
5. Cycles in bipartite graphs, J. Combinatorial Theory (B), 30, 1981 332-342.
6. Long paths and cycles in oriented graphs, J. Graph Theory 5, 1981 145-157.
7. (With J A Edwards, G H Hamilton, A J W Hilton) Domino squares, Annals of Discrete Mathematics 12, 1982 95-111.
8. (With F Jaeger and J C Bermond) Minimal coverings of graphs with cycles, J. Combinatorial Theory (B), 35, 1983 297-308.
9. Maximal cycles in bipartite graphs, Annals of Discrete Math. 17, 1983 361-363.
10. Long cycles in bipartite graphs, J. Combinatorial Theory (B), 38, 1985 118-131.
11. (With J A Bondy) Long paths between specified vertices of a block, Annals of Discrete Mathematics 27, 1985 195-201.
12. (With H Fleischner) Removable cycles in planar multi-graphs, J. London Mathematical Society 31, 1985 193-199.

13. (With R Haggkvist) A note concerning a conjecture of D R Woodall, *Annals of Discrete Mathematics* 27, 1985 205-208.
14. (With H Enomoto, P Katerinis and A Saito) K -factors in k -tough graphs, *J. Graph Theory*, 9, 1985 87-95.
15. (With O Ordaz) A Chvatal-Erdos condition for $(1,1)$ -factors in digraphs, *Discrete Mathematics*, 57, 1985 199-201.
16. Long cycles in 3-connected cubic graphs, *J. Combinatorial Theory (B)*, 41, 1986 17-26.
17. (With H Fleischner) Compatible path/cycle decompositions of planar multigraphs, *J. Combinatorial Theory (B)*, 42, 1987 94-121.
18. (With A J W Hilton) A note concerning the chromatic index of multigraphs, *J. Graph Theory*, 11, 1987 267-272.
19. Compatible Euler tours for transition systems in Eulerian graphs, *Discrete Math.*, 66, 1987 127-131.
20. (With A M Frieze) Large induced trees in sparse random graphs, *J. Combinatorial Theory (B)*, 42, 1987 181-195.
21. (With A M Frieze) Large holes in sparse random graphs, *Combinatorica*, 7, 1987 265-274.
22. A Chvatal-Erdos condition for Hamilton cycles in digraphs, *J. Combinatorial Theory (B)*, 43, 1987 245-252.
23. (with O Ordaz) On some conjectures on Hamiltonicity in digraphs, *Acta Cient Venezolana* 38, 1987 629-632.
24. Some remarks on connectivity, vertex splitting and orientation in digraphs, *J. Graph Theory*, 12, 1988 429-436.
25. (With O Ordaz) A Chvatal-Erdos condition for 2-cyclability in digraphs, *Ars Combinatoria*, 25, 1988 29-49.
26. (With L D Anderson and H Fleischner) Removable edges in cyclically 4-connected cubic graphs, *Graphs and Combinatorics* 4, 1988 1-21.
27. (With A M Frieze, C J H McDiarmid and B Reed) Edge-colouring random graphs, *J. Combinatorial Theory (B)*, 45, 1988 135-149.

28. (With H Fleischner) A note concerning some conjectures on cyclically 4-connected cubic graphs, *Annals of Discrete Math.* 41, 1989 171-178.
29. (With R W Whitty) A note concerning graphs with unique f-factors, *J. Graph Theory*, 13, 1989 577-580.
30. (With H Fleischner and A J W Hilton) On the maximum number of pairwise compatible Euler tours, *J. Graph Theory*, 14, 1990 51-63.
31. (With N C Wormald) Cycles containing matchings and pairwise compatible Euler tours, *J. Graph Theory*, 14, 1990 127-138.
32. (With G Hahn) A note concerning paths and independence number in digraphs, *Discrete Math.* 82, 1990 327-329.
33. (With O Ordaz) The Chvatal-Erdos condition for paths and cycles in graphs and digraphs: a survey, *Discrete Math.* 84, 1990 241-254.
34. Shortest circuit covers and postman tours in graphs with a nowhere zero 4-flow, *S.I.A.M. J. Computing.* 19, 1990 659-665.
35. (With N C Wormald) K-walks, *Australasian J. of Combinatorics* 2, 1990 135-146.
36. (With D A Holton, A Saito and N C Wormald) Removable edges in 3-connected graphs, *J. Graph Theory*, 14, 1990 465-473.
37. (With R E L Aldred, D Lou and A Saito) Partitioning regular graphs into equicardinal linear forests, *Discrete Math.*, 88, 1991 1-9.
38. A characterization of graphs having three pairwise compatible Euler tours, *J. Combinatorial Theory (B)*, 53, 1991 80-92.
39. Supplementary Eulerian vectors in isotropic systems, *J. Combinatorial Theory (B)*, 53, 1991 93-105.
40. Neighbourhood unions and Hamilton cycles, *J. Graph Theory*, 15, 1991 443-451.
41. (With R E L Aldred and D A Holton) Uniform cyclic connectivity in cubic graphs, *Combinatorica*, 11, 1991 81-96.
42. (With H Li and Y Zhu) Dominating cycles in 3-connected regular graphs, *Discrete Math.* 102, 1991 163-176.

43. (With C Guia, O Ordaz) Chvatal-Erdos condition for Hamilton cycles in digraphs with stability at most three, *Acta Cient Venezolana* 42, 1991 313-318.
44. (With N C Wormald) Longest cycles in 3-connected planar graphs, *J. Combinatorial Theory (B)*, 54, 1992 291-321.
45. (With N C Wormald) Longest cycles in 3-connected graphs of bounded maximum degree, in *Graphs, Matrices and Designs* (ed. R S Rees), Marcel Dekker, New York, 1993 237-254.
46. Hamilton cycles in almost regular 2-connected graphs, *J. Combinatorial Theory (B)*, 1993 57, 77-87.
47. A zero-free interval for chromatic polynomials of graphs, *Combinatorics, Probability and Computing*, 2, 1993 325-336.
48. Shortest circuit covers of cubic graphs, *J. Combinatorial Theory (B)*, 60, 1994 299-307.
49. (with H Li) Hamilton cycles in 2-connected regular bipartite graphs, *J. Combinatorial Theory (B)*, 62, 1994 236-258.
50. (With P Katerinis) A Characterisation of 3/2-tough cubic graphs, *Ars Comb.*, 38, 1994 145-148.
51. Cycles through vertices of large maximum degree, *J. Graph Theory*, 19, 1995 157-168.
52. (With J Bang-Jensen and A Frank) Preserving and increasing local edge-connectivity in mixed graphs, *S.I.A.M. J. Discrete Math.*, 8, 1995 155-178.
53. (with N C Wormald) Long cycles and 3-connected spanning subgraphs of bounded degree in 3-connected $K_{1,d}$ -free graphs, *J. Combinatorial Theory (B)*, 63, 1995 163-169.
54. (with L D Andersen and A Bouchet) Orthogonal A-trails in 4-regular graphs imbedded in surfaces of low genus, *J. Combinatorial Theory (B)*, 66, 1996 232-246.
55. (with H Broesmar, J Van den Heuvel and H J Veldman) Hamiltonicity of Regular 2-connected graphs, *J. Graph Theory*, 22 1996 105-124.

56. (with N C Wormald) On the linear k -arboricity of cubic graphs, *Discrete Mathematics*, 162, 1996 293-297.
57. (with J Sheehan) The structure of transform graphs, *Discrete Mathematics*, 177, 1997 123-144.
58. (with H Edwards and R Hierons) The zero-free intervals for characteristic polynomials of matroids, *Combinatorics, Probability and Computing*, 7, 1998 153-165.
59. (with W. Hochstättler) Large circuits in binary matroids of large co-girth I, *J. Combinatorial Theory (B)*, 74, 1998 35-52.
60. (with W. Hochstättler) Large circuits in binary matroids of large co-girth II, *J. Combinatorial Theory (B)*, 74, 1998 53-63.
61. (with J.A. Bondy) Vertices of small degree in uniquely hamiltonian graphs, *J. Combinatorial Theory (B)*, 74, 1998 265-275.
62. (with J Bang-Jensen) Augmenting hypergraphs by edges of size two, *Mathematical Programming*, 84, 1999 467-481.
63. (with J van den Heuvel) On the edge connectivity, hamiltonicity and toughness of vertex transitive graphs, *J. Combinatorial Theory (B)*, 77, 1999, 138-149.
64. (with L A Goddyn) Removable circuits in binary matroids, *Combinatorics, Probability and Computing*, 8 (1999) 539-545.
65. (with C A Whitehead), Some Remarks on Jaeger's Dual-Hamiltonian Conjecture, *Annales de l'institut Fourier*, 49, (1999) 921-926.
66. (with A Bouchet) Parity systems and the delta matroid intersection problem, *Electronic Journal of Combinatorics*, 7(1) (2000), R14.
67. (with X Yu) Hamilton cycles in plane triangulations, *Journal of Graph Theory*, 41 (2002) 138-150.
68. (with M Funk, D. Labbate, and J Sheehan) 2-Factor Hamiltonian Graphs, *J Combinatorial Theory (B)*, 87 (2003) 138-144.
69. (with T Jordán) Non-separable detachments of graphs, *J Combinatorial Theory(B)*, 87 (2003) 17-37.

70. (with A Berg and T Jordán) Highly edge-connected detachments of graphs and digraphs, *J Graph Theory*, 43 (2003) 68-77.
71. (with M Funk, D. Labbate, and J Sheehan) Det-extremal cubic bipartite graphs, *J Graph Theory*, 44 (2003) 50-64.
72. (with A Berg and T Jordán) Edge splitting and connectivity augmentation in directed hypergraphs, *Discrete Math.*, 273 (2003) 71-84.
73. Zeros of Chromatic and Flow Polynomials of Graphs, *J. Geom.*, 76 (2003) 95-109.
74. (with R A Aldred, M Funk, D. Labbate, and J Sheehan), Regular bipartite graphs with all 2-factors isomorphic, *J Combinatorial Theory(B)*, 92 (2004) 151-161
75. (with M Abreu, R A Aldred, M Funk, D. Labbate, and J Sheehan), Graphs and digraphs with all 2-factors isomorphic, *J Combinatorial Theory(B)*, 92 (2004) 395-404.
76. (with T Jordán) Connected rigidity matroids and unique realizations of graphs, *J Combinatorial Theory(B)*, 94, (2005), 1-29.
77. (with T Jordán) Independence free graphs and vertex-connectivity augmentation, *J Combinatorial Theory(B)*, 94 (2005) 31-77.
78. (with T Jordán) The Dress Conjecture on Rank in the 3-Dimensional Rigidity Matroid, *Advances in Applied Math.*, 35, (2005) 355-367.
79. (with T Jordán) The d-Dimensional Rigidity Matroid of Sparse Graphs, *J Combinatorial Theory(B)*, 95, (2005) 118-133.
80. (with T Jordán) Rigid two-dimensional frameworks with three collinear points, *Graphs and Combinatorics*, 21, (2005), 427 - 444.
81. (with T. Jordán and Z. Szabadka) Globally Linked Pairs of Vertices in Equivalent Realizations of Graphs, *Discrete and Computational Geometry*, 35 (2006) 493-512.
82. (with T Jordán) On the Rank Function of the 3-Dimensional Rigidity Matroid, *International Journal of Computational Geometry and Applications*, 16 (2006) 415-429.
83. A Zero-Free Interval for Flow Polynomials of Cubic Graphs, *J Combinatorial Theory (B)*, 97 (2007) 127-143.

84. Zero-Free Intervals for Flow Polynomials of Near Cubic Graphs, *Combinatorics, Probability and Computing*, 16 (2007) 85-108.
85. (with G. Sethuraman and C.A. Whitehead) A note on the Erdős-Faber-Lovász Conjecture, *Discrete Math.*, 307 (2007) 911-915.
86. (with B. Servatius and H. Servatius) The 2-dimensional rigidity of certain families of graphs, *J. Graph Theory*, 54, (2007) 154-166.
87. (with R.A. Aldred) Edge-proximity conditions for extendability in cubic bipartite graphs, *J. Graph Theory*, 55, (2007) 112-120.
88. (with T Jordán) Rigid components in molecular graphs, *Algorithmica*, 48, (2007) 399-412.
89. (with H. Fleischner and F. Genest) Compatible Circuit Decompositions of Eulerian Graphs, *J. Graph Theory*, 56 (2007) 227-240.
90. (with K Yoshimoto) Even Subgraphs of Bridgeless Graphs and 2-Factors of Line Graphs, *Discrete Math.* 307 (2007) 2775-2785.
91. (with P.J. Cameron and J.D. Rudd) Orbit-counting polynomials for graphs and codes, *Discrete Math.*, 308 (2008), 920-930.
92. (with T. Jordán) Pin-collinear Body-and-Pin Frameworks and the Molecular Conjecture, *Discrete and Computational Geometry*, 40 (2008), 258-278.
93. (with T Jordán) On the rigidity of molecular graphs, *Combinatorica*, 28 (2008), 645-658.
94. (with M. Abreu, A. A. Diwan D. Labbate, and J Sheehan), Pseudo 2-Factor Isomorphic Regular Bipartite Graphs, *J Combinatorial Theory(B)*, 98 (2008), 432-442.
95. (with K Yoshimoto) Spanning Even Subgraphs of 3-edge-connected Graphs, *J. Graph Theory*, 62 (2009) 37-47.
96. (with M Abreu, R A Aldred, M Funk, D. Labbate, and J Sheehan), Corrigendum to ‘Graphs and digraphs with all 2-factors isomorphic’ [*J Combin. Theory Ser. B*, 92 (2) (2004) 395-404]. *J Combinatorial Theory(B)*, 99 (2009), 271-273.
97. (with T. Jordán) A sufficient connectivity condition for generic rigidity in the plane, *Discrete Applied Math*, 157 (2009), 1965-1968.

98. (with A D Sokal) Zero-free Regions for Multivariate Tutte Polynomials (alias Potts-model Partition Functions) of Graphs and Matroids, *J. Combinatorial Theory(B)*, 99 (2009) 869-903
99. (with T Jordán) The generic rank of body-bar-and-hinge frameworks, *European J. Combinatorics* 31 (2010), 574-588.
100. (with T. Jordán) Globally Rigid Circuits of the Direction-Length Rigidity Matroid, *J. Combinatorial Theory(B)*, 100 (2010), 1-23.
101. (with T Jordán) Brick partitions of graphs, *Discrete Math.*, 310 (2010), 270-275.
102. (with Z. Király and B. Cosh) Local Connectivity Augmentation in Hypergraphs is NP-Complete, *Discrete Applied Math.*, 158 (2010), 723-727.
103. An Inequality for Tutte Polynomials, *Combinatorica*, 30 (2010), 69-81.
104. (with T. Jordán) Operations Preserving Global Rigidity of Generic Direction-Length Frameworks, *International Journal of Computational Geometry and Applications*, 20 (2010), 685-708.
105. (with A D Sokal) Maxmaxflow and Counting subgraphs, *Electronic J. Combinatorics*, 17 (2010), # R99
106. (with P. Keevash) Bounded direction-length frameworks, *Discrete and Computational Geometry*, 46 (2011), 46-71.
107. (with P. Keevash) Necessary Conditions for the Global Rigidity of Direction-Length Frameworks, *Discrete and Computational Geometry*, 46 (2011), 72-85.
108. (with M. Bilinski, J. Ma and X. Yu) Circumference of 3-connected claw-free graphs and large Eulerian subgraphs of 3-edge-connected graphs, *J. Combinatorial Theory(B)*, 101 (2011), 214-236.
109. (with F.M. Dong) A zero-free interval for chromatic polynomials of nearly 3-connected plane graphs, *SIDMA*, 25 (2011), 1103-1118.
110. Boundedness, rigidity and global rigidity of direction-length frameworks, *Journal of Geometry*, 101, (2011), 131-135.
111. Counting 2-connected deletion minors of binary matroids, *Discrete Math.*, 313 (2013), 1262-1266.

112. (with T. Jordán and C. Király) Strongly rigid tensegrity graphs on the line, *Discrete Applied Math.*, 161 (2013) 1147-1149.
113. (with A Procacci and A D Sokal) Complex zero-free regions at large $|q|$ for multivariate Tutte polynomials (alias Potts-model partition functions) with general complex edge weights, *J. Combinatorial Theory(B)*, 103 (2013), 21-45.
114. (with T. Jordán and S.-I. Tanigawa) Combinatorial Conditions for the Unique Completability of Low Rank Matrices, *SIDMA* 28 (2014) 1797-1819.
115. (with T. A. McCourt and A. Nixon) Necessary Conditions for the Generic Global Rigidity of Frameworks on Surfaces, *Disc. Comput. Geom.*, 52 (2014) 344-360.
116. (with V. H. Nguyen) Graded Sparse Graphs and Body-Length-Direction Frameworks, *European J. Comb.* 46 (2015) 51-67.
117. (with A. Nixon) Stress matrices and global rigidity of frameworks on surfaces, *Disc. Comput. Geom.*, 54 (2015) 586-609.
118. (with T. Jordán, B. Servatius and H. Servatius) Henneberg moves on mechanisms, *Beiträge zur Algebra und Geometrie*, 56 (2015) 587-591.
119. (with J C Owen) A characterisation of the generic rigidity of 2-dimensional point-line frameworks, *JCTB* 119 (2016) 96-121.
120. (with T. Jordán and S.-I. Tanigawa) Unique Low Rank Completability of Partially Filled Matrices, *JCTB* 121 (2016) 432-462.
121. (with T. Bang-Jensen, S. Bessy and M. Kriesell) Antistrong Digraphs, *JCTB* 119 (2016) 96-121.
122. (with J. Cruickshank, H. Guler, A. Nixon) Rigidity of Linearly Constrained Frameworks, *International Mathematics Research Notices*, vol 2020 issue 12 (2020) 3824-3840.
123. (with J C Owen) The number of equivalent realisations of a rigid graph, *Disc. App. Math.*, 256 (2019) 42-58
124. (with J C Owen) Radically solvable graphs, *JCTB* 136 (2019) 135-153.
125. (with V. Kaszanitzky and A. Nixon) Rigid cylindrical frameworks with two coincident points, *Graphs and Combinatorics* (2019) 35, 141-168.

126. (with Y. Eftekhari, A. Nixon, B. Schulze, S.-I. Tanigawa and W. Whiteley) Point-hyperplane frameworks, slider joints and rigidity preserving transformations, *JCTB*, 135 (2019) 44-74
127. (with A. Nixon) Global rigidity of generic frameworks on the cylinder, *JCTB*, 139 (2019), 193-229.
128. (with J. Cruickshank, H. Guler, A. Nixon) Rigidity of Linearly Constrained Frameworks, *International Mathematics Research Notices*, vol 2020 issue 12 (2020) 3824-3840.
129. (with K. Clinch and P. Keevash) Global rigidity of 2-dimensional direction-length frameworks, *JCTB* 145 (2020) 145-168.
130. (with H. Guler, A. Nixon) Global Rigidity of 2-Dimensional linearly constrained frameworks, to appear *International Mathematics Research Notices*.
131. (with H. Guler) A necessary condition for generic rigidity of bar-and-joint frameworks in d -space, to appear *JGT*
132. (with K. Clinch and S.-I. Tanigawa) Abstract 3-Rigidity and Bivariate C_2^1 -Splines I: Whiteley's Maximality Conjecture, to appear *Discrete Analysis*.
133. (with K. Clinch and S.-I. Tanigawa) Abstract 3-Rigidity and Bivariate C_2^1 -Splines II: Combinatorial Characterisation, to appear *Discrete Analysis*.
134. (with J. Cruickshank and S.-I. Tanigawa) Vertex Splitting, Coincident Realisations and Global Rigidity of Braced Triangulations, submitted
135. (with G. Grasegger, H. Guler and A. Nixon) Flexible Circuits, submitted
136. (with A. Nixon and S.-I. Tanigawa) An improved bound for the rigidity of linearly constrained frameworks, submitted
137. (with S.-I. Tanigawa) Maximal Matroids in Weak Order Posets, submitted

Book Chapters

1. On circuit covers, circuit decompositions and Euler tours of graphs, in 'Surveys in Combinatorics 1993', K Walker ed., Cambridge University Press, 1993 191-210.
2. (with T. Jordán) Graph theoretical techniques in the analysis of uniquely localizable sensor networks, in 'Localization Algorithms and Strategies for Wireless Sensor Networks', Guoqiang Mao and Baris Fidan eds., IGI Global, 2009, 146-173.
3. (with T. Jordán and Z. Szabadka) Globally linked pairs of vertices in rigid frameworks, in 'Rigidity and Symmetry', Connelly, Ivić Weiss, and Whiteley eds, Fields Institute Communications 70 2014 177-204.
4. Chromatic polynomials, in 'Topics in Chromatic Graph Theory' L Beineke and R J Wilson eds., CUP, 2015, 56-72.
5. (with T. Jordan and S.-I. Tanigawa) Global rigidity of two-dimensional frameworks, in 'Handbook of Geometric Constraint Systems Principles' M. Sitharam, A. St. John, J. Sidman eds., Chapman and Hall/CRC, 2018, 461-482.
6. (with J.C. Owen) Point-line frameworks, in 'Handbook of Geometric Constraint Systems Principles' M. Sitharam, A. St. John, J. Sidman eds., Chapman and Hall/CRC , 2018, 487-503.
7. Zeros of the Tutte polynomial, in Handbook of the Tutte Polynomial and Related Topics, J.A. Ellis-Monaghan and I. Moffat, eds., Chapman Hall/CRC Monographs and Research Notes in Mathematics, 2020.

Published Conference Papers

1. A characterization of the reducibility of non-negative matrices, Proc. 8th Southeastern Conference on Combinatorics, Graph Theory and Computing, 1977 381-384.
2. Decomposition of graphs into cycles, in 'Regards sur la theorie des graphes', (P Hansen, D de Wera, eds.) Presses Polytechniques Romandes, 1980 259-262.
3. (With P Ash) Dominating cycles in 2-connected bipartite graphs, in Progress in Graph Theory (J A Bondy, U S R Murty, eds.) Academic Press, 1984 81-87.

4. (With H Fleischner) Compatible Euler tours in Eulerian digraphs, in Cycles and Rays (G Hahn et al., eds.) NATO ASI Ser.C, Kluwer Academic Publishers, Dordrecht, 1990 95-100.
5. (with T Jordán) A near optimal algorithm for vertex-connectivity augmentation, 11th Annual International Symposium on Algorithms and Computation, ISAAC 2000, (D.T. Lee and S.-H. Teng, eds) Springer Lecture Notes in Computer Science 1969, 2000 313-325.
6. (with T Jordán) Independence free graphs and vertex-connectivity augmentation, 8th IPCO Conference, (K. Aardal and B. Gerards, eds) Springer Lecture Notes in Computer Science 2081, 2001 264-279.
7. (with T Jordán) Unique realizations of Graphs, Graph Theory meeting, Oberwolfach, January 2005.
8. (with T Jordán) On the Rank Function of the 3-Dimensional Rigidity Matroid, 4th Japanese-Hungarian Symposium on Discrete Mathematics and its Applications, Budapest, Hungary, 2005.