

Publications of James G. Oxley

Books and edited books

1. *Matroid Theory*, Oxford University Press, New York, 1992 (532 pages).
2. *Matroid Theory* (edited with J.E. Bonin and B. Servatius), Proc. AMS-IMS-SIAM Joint Summer Research Conference on Matroid Theory, *Contemporary Mathematics* **197**, Amer. Math. Soc, Providence, 1996 (418 pages).
3. *Matroid Theory*, Second edition, Oxford University Press, New York, 2011 (704 pages).

Refereed papers, book chapters

1. (with L.R. Matthews) Infinite graphs and bicircular matroids, *Discrete Math.* **19** (1977), 61-65.
2. Colouring, packing and the critical problem, *Quart. J. Math. Oxford Ser. (2)* **29** (1978), 11-22.
3. Cocircuit coverings and packings for binary matroids, *Math. Proc. Camb. Phil. Soc.* **83** (1978) 347-351.
4. Infinite matroids, *Proc. London Math. Soc. (3)* **37** (1978) 259-272.
5. On a packing problem for infinite graphs and independence spaces, *J. Combin. Theory Ser. B* **26** (1978), 123-130.
6. (with D.J.A. Welsh) On some percolation results of J.M. Hammersley, *J. Appl. Probability* **16** (1979), 526-540.
7. On cographic regular matroids, *Discrete Math.* **25** (1979), 89-90.
8. A generalization of a covering problem of Mullin and Stanton for matroids, *Combinatorial Mathematics VI* (A.F. Horadam and W.D. Wallis eds.) Lecture Notes in Math. **748**, Springer-Verlag, Berlin, 1979, pp. 92-97.
9. On a covering problem of Mullin and Stanton for matroids, *Aequationes Math.* **19** (1979), 118 and **20** (1980), 104-112.
10. (with J.H. Mason) A circuit covering result for matroids, *Math. Proc. Camb. Phil. Soc.* **87** (1980), 25-27.
11. (with T.H. Brylawski) Several identities for the characteristic polynomial of a combinatorial geometry, *Discrete Math.* **31** (1980), 161-170.
12. On Hartfiel and Maxson's definition of connected sets of a matroid, *J. Combin. Theory Ser. B* **28** (1980), 249-250.
13. On 3-connected matroids, *Canad. J. Math.* **33** (1981), 20-27.
14. On connectivity in matroids and graphs, *Trans. Amer. Math. Soc.* **265** (1981), 47-58.
15. On matroid connectivity, *Quart. J. Math. Oxford Ser. (2)* **32** (1981), 193-208.
16. (with T.H. Brylawski) The broken-circuit complex: its structure and factorizations, *Europ. J. Combin.* **2** (1981), 107-121.
17. On a matroid generalization of graph connectivity, *Math. Proc. Camb. Phil. Soc.* **90** (1981), 207-214.
18. (with D.G. Kelly) Asymptotic properties of random subsets of projective spaces, *Math. Proc. Camb. Phil. Soc.* **91** (1982), 119-130.
19. On Crapo's beta invariant for matroids, *Studies in Appl. Math.* **66** (1982), 267-277.

20. (with K. Prendergast and D. Row) Matroids whose ground sets are domains of functions, *J. Austral. Math. Soc. Ser. A* **32** (1982), 380-387.
21. A note on half-planar geometries, *Period. Math. Hungar.* **13** (1982), 137-139.
22. (with D.G. Kelly) Threshold functions for some properties of random subsets of projective spaces, *Quart. J. Math. Oxford Ser. (2)* **33** (1982), 463-469.
23. On some extremal connectivity results for graphs and matroids, *Discrete Math.* **41** (1982), 181-198.
24. On the numbers of bases and circuits in simple binary matroids, *Europ. J. Combin.* **4** (1983), 169-178.
25. On a matroid identity, *Discrete Math.* **44** (1983), 55-60.
26. Threshold distribution functions for some random representable matroids, *Math. Proc. Camb. Phil. Soc.* **95** (1984), 335-347.
27. On minor-minimally-connected matroids, *Discrete Math.* **51** (1984), 63-72.
28. (with T. Asano, T. Nishizeki, and N. Saito) A note on the critical problem for matroids, *Europ. J. Combin.* **5** (1984), 93-97.
29. On the intersections of circuits and cocircuits in matroids, *Combinatorica* **4** (1984), 187-195.
30. (with D.G. Kelly) On random representable matroids, *Studies in Appl. Math.* **71** (1984), 181-205.
31. On singleton 1-rounded sets of matroids, *J. Combin. Theory Ser. B* **37** (1984), 189-197.
32. Proof of a conjecture of Kahn for non-binary matroids, *Combinatorica* **5** (1985), 343-345.
33. On ternary transversal matroids, *Discrete Math.* **62** (1986), 71-83.
34. On the matroids representable over $\text{GF}(4)$, *J. Combin. Theory Ser. B* **41** (1986), 250-252.
35. Graphs and series-parallel networks, *Theory of Matroids* (N. White ed.), Cambridge University Press, Cambridge, 1986, pp. 97-126.
36. (with Ying Cheng) On weakly symmetric graphs of order twice a prime, *J. Combin. Theory Ser. B* **42** (1987), 196-211.
37. A characterization of the ternary matroids with no $M(K_4)$ -minor, *J. Combin. Theory Ser. B* **42** (1987), 212-249.
38. On nonbinary 3-connected matroids, *Trans. Amer. Math. Soc.* **300** (1987), 663-679.
39. The binary matroids with no 4-wheel minor, *Trans. Amer. Math. Soc.* **301** (1987), 63-75.
40. On circuit exchange properties for matroids, *Europ. J. Combin.* **9** (1988), 331-336.
41. (with J.P.S. Kung) Combinatorial geometries representable over $\text{GF}(3)$ and $\text{GF}(q)$, *Graphs and Combin.* **4** (1988), 323-332.
42. A characterization of certain excluded-minor classes of matroids, *Europ. J. Combin.* **10** (1989), 275-279.
43. The regular matroids with no 5-wheel minor, *J. Combin. Theory Ser. B* **46** (1989), 292-305.
44. A note on Negami's polynomial invariants for graphs, *Discrete Math.* **76** (1989), 279-281.
45. (with D. Row) On fixing elements in matroid minors, *Combinatorica* **9** (1989), 69-74.

46. (with T.J. Reid) The smallest rounded sets of binary matroids, *European J. Combin.* **11** (1990), 47-56.
47. A characterization of a class of non-binary matroids, *J. Combin. Theory Ser. B* **49** (1990), 181-189.
48. On an excluded-minor class of matroids, *Discrete Math.* **82** (1990), 35-52.
49. (with S. Akkari) Some extremal connectivity results for matroids, *J. Combin. Theory Ser. B* **52** (1991), 301-320.
50. Ternary paving matroids, *Discrete Math.* **91** (1991), 77-86.
51. (with G. Whittle) A note on the non-spanning circuits of a matroid. *Europ. J. Combin.* **12** (1991), 259-261.
52. On minors avoiding elements in matroids, *Europ. J. Combin.* **12** (1991), 531-539.
53. Infinite matroids, *Matroid Applications* (N. White ed), Cambridge University Press, New York, 1991, pp. 73-90.
54. (with T.H. Brylawski) The Tutte polynomial and its applications, *Matroid Applications* (N. White ed), Cambridge University Press, New York, 1992, pp. 123-225.
55. (with C.R. Coullard), Extensions of Tutte's wheels-and-whirls theorem, *J. Combin. Theory Ser. B* **56** (1992), 130-140.
56. (with G.P. Whittle) Connectivity of submodular functions, *Discrete Math.* **105** (1992), 173-184.
57. (with D.J.A. Welsh) Tutte polynomials computable in polynomial time, *Discrete Math.* **109** (1992), 185-192.
58. (with B. Oporowski and R. Thomas), Typical subgraphs of 3- and 4-connected graphs, *J. Combin. Theory Ser. B* **57** (1993), 239-257.
59. (with G.P. Whittle), On sign-representable matroids, *Math. Proc. Camb. Phil. Soc.* **113** (1993), 499-506.
60. (with G.P. Whittle), Tutte invariants of 2-polymatroids, *Graph Structure Theory* (N. Robertson and P. Seymour eds.), Contemporary Mathematics **147** (Amer. Math. Soc., Providence, 1993), pp. 9-19.
61. (with G.P. Whittle), A characterization of Tutte invariants of 2-polymatroids, *J. Combin. Theory Ser. B* **59** (1993), 210-244.
62. (with G.P. Whittle), Some excluded-minor theorems for a class of polymatroids, *Combinatorica* **13** (1993), 467-476.
63. (with S. Akkari), Some local extremal connectivity results for matroids, *Combinatorics, Probability and Computing* **2** (1993), 367-384.
64. (with G. Ding and B. Oporowski), On infinite antichains of matroids, *J. Combin. Theory Ser. B* **63** (1995), 21-40.
65. (with H. Wu), On matroid connectivity, *Discrete Math.* **146** (1995), 321-324.
66. (with G. Ding, B. Oporowski, and D. Vertigan), Unavoidable minors of large 3-connected binary matroids, *J. Combin. Theory Ser. B* **66** (1996), 334-360.
67. (with D. Vertigan and G. Whittle), On inequivalent representations of matroids over finite fields, *J. Combin. Theory Ser. B* **67** (1996), 325-343.
68. Structure theory and connectivity for matroids, *Matroid Theory* (J. Bonin, J. Oxley and B. Servatius eds.) Contemporary Mathematics **197** (Amer. Math. Soc., Providence), 1996, pp. 129-170.
69. (with S.R. Kingan), On the matroids in which all hyperplanes are binary, *Discrete Math.* **160** (1996), 265-271.

70. Matroids, *Graph Connections* (L.W. Beineke and R.J. Wilson eds.), Oxford University Press, Oxford, 1997, pp. 100-115.
71. (with G. Ding, B. Oporowski, and D. Vertigan), Unavoidable minors of large 3-connected matroids, *J. Combin. Theory Ser. B* **71** (1997), 244-293.
72. A matroid generalization of a result of Dirac, *Combinatorica* **17** (1997), 267-273.
73. On packing 3-connected restrictions into 3-connected matroids, *Discrete Math.* **178** (1998), 181-198.
74. (with G. Whittle), On weak maps of ternary matroids, *Europ. J. Combin.* **19** (1998), 377-389.
75. (with D. Vertigan and G. Whittle), On maximum-sized near-regular and $\sqrt[3]{1}$ -matroids, *Graphs and Combin.* **14** (1998), 163-179.
76. (with D. Row), On panelling planar graphs, *Discrete Appl. Math.* **81** (1998), 109-122.
77. (with J. Geelen, D. Vertigan and G. Whittle), Weak maps and stabilizers of classes of matroids, *Adv. Appl. Math.* **21** (1998), 305-341.
78. (with M. Lemos), On packing minors into connected matroids, *Discrete Math.* **189** (1998), 283-289.
79. (with M. Lemos), On removable circuits in graphs and matroids, *J. Graph Theory* **30** (1999), 51-66.
80. Unavoidable minors in graphs and matroids, *Graph Theory and Computational Biology (Balatonlelle, 1996)*, Bolyai Soc. Math. Stud. 7, János Bolyai Math. Soc., Budapest, 1999, pp. 279-305.
81. (with A.D. Mills), A class of non-binary matroids with many binary minors, *Discrete Math.* **207** (1999), 173-187.
82. (with M. Lemos), On the 3-connected matroids that are minimal having a fixed spanning restriction, *Discrete Math.* **218** (2000), 131-165.
83. (with G. Whittle), On the non-uniqueness of q -cones of matroids, *Discrete Math.* **218** (2000), 271-275.
84. (with C. Semple and D. Vertigan), Generalized $\Delta - Y$ exchange and k -regular matroids, *J. Combin. Theory Ser. B* **79** (2000), 1-65.
85. (with H. Wu), Matroids and graphs with few non-essential elements, *Graphs and Combin.* **16** (2000), 199-229.
86. (with M. Lemos), On size, circumference and circuit removal in 3-connected matroids, *Discrete Math.* **220** (2000), 145-157.
87. (with M. Lemos and T.J. Reid), On the 3-connected matroids that are minimal having a fixed restriction, *Graphs and Combin.* **16** (2000), 285-318.
88. (with H. Wu), On the structure of 3-connected matroids and graphs, *Europ. J. Combin.* **21** (2000), 667-688.
89. (with J.F. Geelen, D.L. Vertigan, and G.P. Whittle), On the excluded minors for quaternary matroids, *J. Combin. Theory Ser. B* **80** (2000), 57-68.
90. (with M. Lemos), A sharp bound on the size of a connected matroid, *Trans. Amer. Math. Soc.* **353** (2001), 4039-4056.
91. On the interplay between graphs and matroids, *Surveys in Combinatorics, 2001 (Sussex)* (J.W.P. Hirschfeld ed.) London Math. Soc. Lecture Notes **288**, Cambridge Univ. Press, Cambridge, 2001, pp. 199-239.
92. (with C. Semple, D. Vertigan, and G. Whittle), Infinite antichains of matroids with characteristic set $\{p\}$, *Discrete Math.* **242** (2002), 175-185.
93. (with J.F. Geelen, D.L. Vertigan, and G.P. Whittle), Totally free expansions of matroids, *J. Combin. Theory Ser. B* **84** (2002), 130-179.

94. (with D. Welsh), Chromatic, flow, and reliability polynomials: the complexity of their coefficients, *Combinatorics, Probability and Computing* **11** (2002), 403–426.
95. (with R. Hall, C. Semple, and G. Whittle), On matroids of branch-width three, *J. Combin. Theory Ser. B* **86** (2002), 148–171.
96. (with M. Lemos), On removable cycles through every edge, *J. Graph Theory* **42** (2003), 155–164.
97. The structure of a 3-connected matroid with a 3-separating set of essential elements, *Discrete Math.* **265** (2003), 173–187.
98. (with B. Chaourar) On series-parallel extensions of uniform matroids *Eur. J. Combin.* **24** (2003), 877–879.
99. (with M. Lemos), On the minor-minimal 3-connected matroids having a fixed minor, *Eur. J. Combin.* **24** (2003), 1097–1123.
100. (with Y.-B. Choe, A.D. Sokal, and D.G. Wagner), Homogeneous multivariate polynomials with the half-plane property, *Adv. in Appl. Math.* **32** (2004), 88–187.
101. (with A.B. Hobbs), William T. Tutte, 1917–2002, *Notices Amer. Math. Soc.* **51** (2004), 320–330.
102. (with M. Lemos), On the minor-minimal 2-connected graphs having a fixed minor, *Discrete Math.* **280** (2004), 77–118.
103. (with R. Hall, C. Semple, and G. Whittle), Fork-decompositions of matroids, *Adv. in Appl. Math.* **32** (2004), 523–575.
104. Matroidal methods in graph theory, *Handbook of Graph Theory* (eds. J.L. Gross and J. Yellen), CRC Press, Boca Raton, 2004, pp. 574–598.
105. (with J.F. Geelen, D.L. Vertigan, and G.P. Whittle), A short proof of non- $GF(5)$ -representability of matroids, *J. Combin. Theory Ser. B* **91** (2004), 105–121.
106. (with C. Semple and G. Whittle), The structure of the 3-separations of 3-connected matroids, *J. Combin. Theory Ser. B* **92** (2004), 257–293.
107. (with H. Wu), The 3-connected graphs with exactly three non-essential edges, *Graphs Combin.* **20** (2004), 233–246.
108. (with R. Hall and C. Semple), The structure of equivalent 3-separations in a 3-connected matroid, *Adv. in Appl. Math.* **35** (2005), 123–181.
109. (with B. Beavers), On pancyclic representable matroids, *Discrete Math.* **305** (2005), 337–343.
110. (with M. Lemos), Matroid covering and packing with circuits through an element, *J. Combin. Theory Ser. B* **96** (2006), 135–158.
111. (with R. Hall and C. Semple), The structure of 3-connected matroids of path width three, *Eur. J. Combin.* **28** (2007), 964–989.
112. The contributions of Dominic Welsh to matroid theory, *Combinatorics, Complexity, and Chance* (G. Grimmett and C. McDiarmid eds.), Oxford Univ. Press, Oxford, 2007, pp.234–259.
113. (with C. Semple and G. Whittle), The structure of the 3-separations of 3-connected matroids II, *Eur. J. Combin.* **28** (2007), 1239–1261.
114. (with C. Semple and G. Whittle), Wild triangles in 3-connected matroids, *J. Combin. Theory Ser. B* **98** (2008), 291–321.
115. (with C. Semple and G. Whittle), Maintaining 3-connectivity relative to a fixed basis, *Adv. in Appl. Math.* **41** (2008), 1–9.
116. (with J. Aikin), The structure of crossing separations in matroids, *Adv. in Appl. Math.* **41** (2008), 10–26.

117. (with C. Semple and G. Whittle), A chain theorem for matroids, *J. Combin. Theory Ser. B* **98** (2008), 447–483.
118. (with B. Beavers), Constructive characterizations of 3-connected matroids of path width three, *Europ. J. Combin.* **29** (2008), 1643–1661.
119. (with N. Hine) When excluding one matroid prevents infinite antichains, *Adv. in Appl. Math.* **45** (2010), 74–76.
120. (with C. Chun and D. Mayhew) A chain theorem for internally 4-connected binary matroids, *J. Combin. Theory Ser. B* **101** (2011), 141–189.
121. (with C. Chun) Unavoidable parallel minors of regular matroids, *European J. Combin.* **32** (2011), 762–774.
122. (with D. Mayhew, B. Oporowski, and G. Whittle) On the excluded minors for the matroids that are either binary or ternary, *European J. Combin.* **32** (2011), 891–930.
123. (with C. Semple and G. Whittle) Exposing 3-separations in 3-connected matroids, *Adv. in Appl. Math.* **47** (2011), 463–508.
124. On bipartite restrictions of binary matroids, *European J. Combin.* **32** (2011), 1199–1202.
125. (with C. Semple and G. Whittle) An upgraded Wheels-and-Whirls Theorem for 3-connected matroids, *J. Combin. Theory Ser. B* **102** (2012), 610–637.
126. (with C. Chun and D. Mayhew) Towards a splitter theorem for internally 4-connected binary matroids, *J. Combin. Theory Ser. B* **102** (2012), 688–700.
127. (with J. Aikin) The structure of the 4-separations in 4-connected matroids, *Adv. in Appl. Math.* **48** (2012), 1–24.
128. (with D. Chun and G. Whittle) Capturing matroid elements in unavoidable 3-connected minors, *European J. Combin.* **33** (2012), 1100–1112.
129. (with C. Chun and D. Mayhew) Constructing internally 4-connected binary matroids, *Adv. in Appl. Math.* **50** (2013), 16–45.
130. (with L. Lowrance, C. Semple, and D. Welsh) On properties of almost all matroids, *Adv. in Appl. Math.* **50** (2013), 115–124.
131. (with D. Chun and D. Mayhew) Capturing two elements in unavoidable minors of 3-connected binary matroids, *Adv. in Appl. Math.* **50** (2013), 155–175.
132. (with C. Semple) Constructing a 3-tree for a 3-connected matroid, *Adv. in Appl. Math.* **50** (2013), 176–200.
133. (with C. Chun and D. Mayhew) Towards a Splitter Theorem for internally 4-connected binary matroids III, *Adv. in Appl. Math.* **51** (2013), 309–344.
134. (with C. Chun and D. Mayhew) Towards a Splitter Theorem for internally 4-connected binary matroids II, *Europ. J. Combin.* **36** (2014), 550–563.
135. (with J. Taylor) On two classes of nearly binary matroids, *Europ. J. Combin.* **36** (2014), 251–260.
136. (with C. Chun and D. Mayhew) Towards a Splitter Theorem for internally 4-connected binary matroids IV, *Adv. in Appl. Math.* **52** (2014), 1–59.
137. (with C. Chun and D. Mayhew) Towards a Splitter Theorem for internally 4-connected binary matroids V, *Adv. in Appl. Math.* **52** (2014), 60–81.
138. (with C. Semple and G. Whittle) A Wheels-and-Whirls Theorem for 3-connected 2-polymatroids, *SIAM J. Discrete Math.* **30** (2016), 493–524.
139. (with C. Chun, G. Ding, and D. Mayhew) Unavoidable connected matroids retaining a specified minor, *SIAM J. Discrete Math.* **30** (2016), 1590–1606.
140. (with K. Wetzler) The binary matroids whose only odd circuits are triangles, *Adv. in Appl. Math.* **76** (2016), 34–38.

141. (with C. Semple and G. Whittle) Determining a binary matroid from its small circuits, *Electron. J. Combin.* **23** (2016), Paper 1.26, 7pp.
142. A matroid analogue of a theorem of Brooks for graphs, *Europ. J. Combin.* **53** (2016), 45–49.
143. (with C. Chun and D. Mayhew) Towards a Splitter Theorem for internally 4-connected binary matroids IX: The theorem, *J. Combin. Theory Ser. B* **121** (2016), 2–67.
144. (with C. Chun and D. Mayhew) Towards a Splitter Theorem for internally 4-connected binary matroids VIII: small matroids, *Adv. in Appl. Math.* **85** (2017), 12–30.
145. (with T. Fife) Laminar matroids, *Europ. J. Combin.*, to appear.

Other publications

1. Infinite matroids and duality, *Problèmes combinatoires et théorie des graphes*, Colloq. Internat. C.N.R.S. **260**, C.N.R.S., Paris, 1978, pp. 325–326.
2. (with D.J.A. Welsh) The Tutte polynomial and percolation, *Graph Theory and Related Topics*, (J.A. Bondy and U.S.R. Murty eds.), Academic Press, New York, 1979, pp. 329–339.
3. On 3-connected matroids and graphs, *Matroid Theory and Its Applications*, (A. Barlotti ed.), Liguori Editore, Naples, 1982, pp. 277–288.
4. What is a matroid? *Cubo Mat. Educ.* **5** (2003), 179–218.