Bibliography

[1] David Aldous. Random walks on finite groups and rapidly mixing Markov chains. In *Seminar on probability, XVII*, pages 243–297. Springer, Berlin, 1983.

[2] David Aldous and James Fill. Reversible Markov chains and random walks on graphs.
`http://www.stat.berkeley.edu/~aldous/book.html`.

[3] V. S. Anil Kumar and H. Ramesh. Coupling vs. conductance for the Jerrum-Sinclair chain. *Random Structures Algorithms*, 18(1):1–17, 2001.

[4] Catherine Bandle. *Isoperimetric Inequalities and Applications*. Pitman (Advanced Publishing Program), Boston, Mass., 1980.

[5] Edward A. Bender. The asymptotic number of non-negative integer matrices with given row and column sums. *Discrete Math.*, 10:217–223, 1974.

[6] Piotr Berman and Marek Karpinski. On some tighter inapproximability results (extended abstract). In *Automata, languages and programming (Prague, 1999)*, pages 200–209. Springer, Berlin, 1999.

[7] Béla Bollobás. *Modern Graph Theory*. Springer-Verlag, New York, 1998.

[8] Andrei Z. Broder. How hard is it to marry at random? (on the approximation of the permanent). In *Proceedings of the 18th Annual ACM Symposium on Theory of Computing (STOC)*, pages 50–58. ACM Press, 1986. Erratum in *Proceedings of the 20th Annual ACM Symposium on Theory of Computing*, 1988, p. 551.

[9] R. L. Brooks. On colouring the nodes of a network. *Proc. Cambridge Philos. Soc.*, 37:194–197, 1941.

[10] Russ Bubley and Martin Dyer. Graph orientations with no sink and an approximation for a hard case of #SAT. In *Proceedings of the Eighth Annual ACM-SIAM Symposium on Discrete Algorithms (New Orleans, LA, 1997)*, pages 248–257, New York, 1997. ACM.

[11] Russ Bubley and Martin Dyer. Path coupling: a technique for proving rapid mixing in Markov chains. In *Proceedings of the 38th Symposium on Foundations of Computer Science (FOCS)*, pages 223–231. IEEE Computer Society Press, 1997.

[12] Russ Bubley and Martin Dyer. Path coupling, Dobrushin uniqueness, and approximate counting. Technical Report 97.04, School of Computer Studies, University of Leeds, January 1997.

[13] Russ Bubley and Martin Dyer. Faster random generation of linear extensions. *Discrete Math.*, 201(1-3):81–88, 1999.

[14] Russ Bubley, Martin Dyer, and Catherine Greenhill. Beating the 2Δ bound for approximately counting colourings: a computer-assisted proof of rapid mixing. In *Proceedings of the Ninth Annual ACM-SIAM Symposium on Discrete Algorithms (San Francisco, CA, 1998)*, pages 355–363, New York, 1998. ACM Press.

[15] Russ Bubley, Martin Dyer, and Mark Jerrum. An elementary analysis of a procedure for sampling points in a convex body. *Random Structures Algorithms*, 12(3):213–235, 1998.

[16] Charles J. Colbourn, J. Scott Provan, and Dirk Vertigan. A new approach to solving three combinatorial enumeration problems on planar graphs. *Discrete Appl. Math.*, 60(1-3):119–129, 1995.

[17] Colin Cooper and Alan M. Frieze. Mixing properties of the Swendsen-Wang process on classes of graphs. *Random Structures Algorithms*, 15(3-4):242–261, 1999.

[18] Persi Diaconis. *Group representations in probability and statistics*. Institute of Mathematical Statistics, Hayward, CA, 1988.

[19] Persi Diaconis and Laurent Saloff-Coste. Comparison theorems for reversible Markov chains. *Ann. Appl. Probab.*, 3(3):696–730, 1993.

[20] Persi Diaconis and Daniel Stroock. Geometric bounds for eigenvalues of Markov chains. *Ann. Appl. Probab.*, 1(1):36–61, 1991.

[21] Alexander Dinghas. Über eine Klasse superadditiver Mengenfunktionale von Brunn-Minkowski-Lustenikschem typus. *Math. Zeitschr.*, 68:111–125, 1957.

[22] Martin Dyer, Alan Frieze, and Mark Jerrum. On counting independent sets in sparse graphs. In *Proceedings of the 40th Symposium on Foundations of Computer Science (FOCS)*, pages 210–217. IEEE Computer Society Press, 1999.

[23] Martin Dyer, Alan Frieze, and Ravi Kannan. A random polynomial-time algorithm for approximating the volume of convex bodies. *J. Assoc. Comput. Mach.*, 38(1):1–17, 1991.

[24] Martin Dyer and Catherine Greenhill. A more rapidly mixing Markov chain for graph colorings. *Random Structures Algorithms*, 13(3-4):285–317, 1998.

[25] Martin Dyer and Catherine Greenhill. On Markov chains for independent sets. *J. Algorithms*, 35(1):17–49, 2000.

[26] H. G. Eggleston. *Convexity.* Cambridge University Press, New York, 1958.

[27] Tomás Feder and Milena Mihail. Balanced matroids. In *Proceedings of the 24th Annual ACM Symposium on Theory of Computing (STOC)*, pages 26–38. ACM Press, 1992.

[28] Uriel Feige and Carsten Lund. On the hardness of computing the permanent of random matrices. *Comput. Complexity*, 6(2):101–132, 1996/97.

[29] Joan Feigenbaum and Lance Fortnow. Random-self-reducibility of complete sets. *SIAM J. Comput.*, 22(5):994–1005, 1993.

[30] Michael R. Garey and David S. Johnson. *Computers and Intractability: a Guide to the Theory of NP-Completeness.* W. H. Freeman and Co., San Francisco, Calif., 1979.

[31] Leslie Ann Goldberg. Computation in permutation groups: counting and randomly sampling orbits. In *Surveys in combinatorics, 2001 (Sussex)*, pages 109–143. Cambridge Univ. Press, Cambridge, 2001.

[32] Oded Goldreich. *Introduction to Complexity Theory*. Lecture Notes Series of the Electronic Colloquium on Computational Complexity. `http://www.eccc.uni-trier.de/eccc/`, 1999.

[33] G. R. Grimmett and D. R. Stirzaker. *Probability and Random Processes*. The Clarendon Press Oxford University Press, New York, second edition, 1992.

[34] Mark Jerrum. Computational Pólya theory. In *Surveys in combinatorics, 1995 (Stirling)*, pages 103–118. Cambridge Univ. Press, Cambridge, 1995.

[35] Mark Jerrum and Alistair Sinclair. Polynomial-time approximation algorithms for the Ising model. *SIAM J. Comput.*, 22(5):1087–1116, 1993.

[36] Mark Jerrum and Alistair Sinclair. The Markov chain Monte Carlo method: an approach to approximate counting and integration. In Dorit S. Hochbaum, editor, *Approximation Algorithms for NP-hard Problems*, pages 482–520. PWS, 1996.

[37] Mark Jerrum, Alistair Sinclair, and Eric Vigoda. A polynomial-time approximation algorithm for the permanent of a matrix with non-negative entries. *Electronic Colloquium on Computational Complexity*, TR00-079, 2000.

[38] Mark R. Jerrum, Leslie G. Valiant, and Vijay V. Vazirani. Random generation of combinatorial structures from a uniform distribution. *Theoret. Comput. Sci.*, 43(2-3):169–188, 1986.

[39] Ravi Kannan, László Lovász, and Miklós Simonovits. Random walks and an $O^*(n^5)$ volume algorithm for convex bodies. *Random Structures Algorithms*, 11(1):1–50, 1997.

[40] Richard M. Karp, Michael Luby, and Neal Madras. Monte Carlo approximation algorithms for enumeration problems. *J. Algorithms*, 10(3):429–448, 1989.

[41] P. W. Kasteleyn. Graph theory and crystal physics. In Frank Harary, editor, *Graph Theory and Theoretical Physics*, pages 43–110. Academic Press, 1967.

[42] Torgny Lindvall. *Lectures on the coupling method*. John Wiley & Sons Inc., New York, 1992. A Wiley-Interscience Publication.

[43] Torgny Lindvall and L. C. G. Rogers. Coupling of multidimensional diffusions by reflection. *Ann. Probab.*, 14(3):860–872, 1986.

[44] L. Lovász and M. Simonovits. Random walks in a convex body and an improved volume algorithm. *Random Structures Algorithms*, 4(4):359–412, 1993.

[45] László Lovász and M. D. Plummer. *Matching Theory.* North-Holland, 1986.

[46] Michael Luby and Eric Vigoda. Approximately counting up to four (extended abstract). In *Proceedings of the 29th Annual ACM Symposium on Theory of Computing (STOC)*, pages 682–687. ACM Press, 1997.

[47] Michael Luby and Eric Vigoda. Fast convergence of the Glauber dynamics for sampling independent sets. *Random Structures Algorithms*, 15(3-4):229–241, 1999.

[48] Neal Madras and Dana Randall. Markov chain decomposition for convergence rate analysis. To appear in the *Annals of Applied Probability.*

[49] Meena Mahajan and V. Vinay. A combinatorial algorithm for the determinant. In *Proceedings of the 8th Annual ACM-SIAM Symposium on Discrete Algorithms*, pages 730–738. ACM/SIAM, 1997.

[50] Lisa McShine. Random sampling of labeled tournaments. *Electron. J. Combin.*, 7(1):Research Paper 8, 9 pp. (electronic), 2000.

[51] Milena Mihail. Conductance and convergence of Markov chains: a combinatorial treatment of expanders. In *Proceedings of the 30th Symposium on Foundations of Computer Science (FOCS)*, pages 526–531. IEEE Computer Society Press, 1989.

[52] Ben Morris and Alistair Sinclair. Random walks on truncated cubes and sampling 0-1 knapsack solutions. In *Proceedings of the 40th Symposium on Foundations of Computer Science (FOCS)*, pages 230–240. IEEE Computer Society Press, 1999.

[53] J. R. Norris. *Markov chains.* Cambridge University Press, Cambridge, 1997.

[54] Christos H. Papadimitriou. *Computational Complexity.* Addison-Wesley Publishing Company, Reading, MA, 1994.

[55] Neil Robertson, P. D. Seymour, and Robin Thomas. Permanents, Pfaffian orientations, and even directed circuits. *Ann. of Math. (2)*, 150(3):929–975, 1999.

[56] Janos Simon. On the difference between one and many. In *Automata, Languages and Programming (Fourth Colloq., Univ. Turku, Turku, 1977), Lecture Notes in Computer Science, Vol. 52*, pages 480–491. Springer, Berlin, 1977.

[57] Alistair Sinclair. Improved bounds for mixing rates of Markov chains and multicommodity flow. *Combin. Probab. Comput.*, 1(4):351–370, 1992.

[58] Alistair Sinclair. *Algorithms for Random Generation and Counting: a Markov Chain Approach*. Birkhäuser Boston Inc., Boston, MA, 1993.

[59] Seinosuke Toda and Mitsunori Ogiwara. Counting classes are at least as hard as the polynomial-time hierarchy. *SIAM J. Comput.*, 21(2):316–328, 1992.

[60] W. T. Tutte. *Graph Theory*, volume 21 of *Encyclopedia of Mathematics: Combinatorics*. Addison-Wesley, 1984.

[61] L. G. Valiant. Completeness classes in algebra. In *Proceedings of the 11th annual ACM Symposium on Theory of Computing (STOC)*, pages 249–261. ACM, 1979.

[62] L. G. Valiant. The complexity of computing the permanent. *Theoret. Comput. Sci.*, 8(2):189–201, 1979.

[63] L. G. Valiant and V. V. Vazirani. NP is as easy as detecting unique solutions. *Theoret. Comput. Sci.*, 47(1):85–93, 1986.

[64] Leslie G. Valiant. The complexity of enumeration and reliability problems. *SIAM J. Comput.*, 8(3):410–421, 1979.

[65] J. H. van Lint and R. M. Wilson. *A course in combinatorics*. Cambridge University Press, Cambridge, 1992.

[66] Eric Vigoda. Improved bounds for sampling colorings. *J. Math. Phys.*, 41(3):1555–1569, 2000.