

Packing and Covering

The papers mentioned in class on packing and covering are:

- [1] G. R. Grimmett and C. J. H. McDiarmid, “On Colouring Random Graphs”, *Math. Proc. Cambridge Phil. Soc.*, 77 (1975) 313–324.
- [2] D. W. Matula, “Expose-and-Merge Exploration and the Chromatic Number of a Random Graph”, *Combinatorica*, 7:3 (1987) 275–284.
- [3] K. Azuma, “Weighted Sums of Certain Dependent Random Variables”, *Tôhoku Math. J.*, 3 (1967) 357–367.
- [4] E. Shamir and J. H. Spencer, “Sharp Concentration of the Chromatic Number of Random Graphs”, *Combinatorica*, 7 (1987) 121–129.
- [5] B. Bollobás, “The Chromatic Number of Random Graphs”, *Combinatorica*, 8:1 (1988) 49–55.
- [6] S. K. Stein, “Two Combinatorial Covering Theorems”, *J. Combinatorial Theory (A)*, 16 (1974) 391–397.
- [7] V. Rödl, “On a Packing and Covering Problem”, *European J. Combinatorics*, 5 (1985) 69–78.
- [8] N. Pippenger and J. H. Spencer, “Asymptotic Behavior of the Chromatic Index for Hypergraphs”, *J. Combinatorial Theory (A)*, 51:1 (1989) 24–42.
- [9] J. H. Spencer, “Asymptotic Packing via a Branching Process”, *Random Structures and Algorithms*, 7:2 (1995) 167–172.

Many of the problems discussed in the following books concern packing and covering:

- [10] P. Erdős and J. Spencer, *Probabilistic Methods in Combinatorics*, Academic Press, 1974.
- [11] J. Spencer, *Ten Lectures on the Probabilistic Method*, Society for Industrial and Applied Mathematics, 1987.
- [12] N. Alon and J. H. Spencer, *The Probabilistic Method*, Wiley-Interscience, 2000.