Seminar on Combinatorial Computing
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Room 6495, Graduate Center
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Models of random regular graphs

Nick Wormald
Melbourne University, Australia

Abstract

This is a survey of results on properties of random regular graphs, together with an exposition of some of the main methods of obtaining these results. A major feature in this area is the small subgraph conditioning method. This establishes a relationship between random regular graphs with uniform distribution, and other non-uniform models of random regular graphs in which the probability of a graph occurring is weighted according to some random variable. Information can be obtained in this way on the probability of existence of various types of spanning subgraphs, such as Hamilton cycles and decompositions into perfect matchings, as well as other properties such as smallest dominating set. Some results about interesting non-uniform models appear as spin-offs from the same method.

For further information contact Janos Pach at pach@cims.nyu.edu, or visit our website: http://www.math.nyu.edu/ pach/combinatorics_seminar.html