

عنوان مقاله:

GRAPH PRODUCTS FOR DOMAIN DECOMPOSITION OF REGULAR STRUCTURES

محل انتشار:

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خلاصه مقاله:

In this paper, efficient methods are presented for calculating the eigenvalues of regular structural models. The eigenvalues of the adjacency and Laplacian matrices for a regular graph model are easily obtained by evaluation of the eigenvalues of its generators. The second eigenvalue of the Laplacian of a graph is also obtained using a much faster and much simpler approach than the existing methods. Once the second eigenvector v_2 of the Laplacian matrix is calculated, the bisection of the model can be performed. This is achieved, by arranging the entries of v_2 in an ascending order and partitioning the nodes into two subsets according to their occurrence in v_2 .

کلمات کلیدی:

graph product, regular structures, second eigenvalue, decomposition, Cartesian product, strong Cartesian product, direct product

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