

Librería
Bonilla y Asociados
desde 1950



Título: Mutually Beneficial Relationship Of Graphs And Matrices
(Vol. 115)

Autor: Brualdi, Richard A.

Precio: \$473.00

Editorial:

Año: 2011

Tema:

Edición: 1^a

Sinopsis

ISBN: 9780821853153

Graphs and matrices enjoy a fascinating and mutually beneficial relationship. This interplay has benefited both graph theory and linear algebra. In one direction, knowledge about one of the graphs that can be associated with a matrix can be used to illuminate matrix properties and to get better information about the matrix. Examples include the use of digraphs to obtain strong results on diagonal dominance and eigenvalue inclusion regions and the use of the Rado-Hall theorem to deduce properties of special classes of matrices. Going the other way, linear algebraic properties of one of the matrices associated with a graph can be used to obtain useful combinatorial information about the graph. The adjacency matrix and the Laplacian matrix are two well-known matrices associated to a graph, and their eigenvalues encode important information about the graph. Another important linear algebraic invariant associated with a graph is the Colin de Verdière number, which, for instance, characterizes certain topological properties of the graph.

This book is not a comprehensive study of graphs and matrices. The particular content of the lectures was chosen for its accessibility, beauty, and current relevance, and for the possibility of enticing the audience to want to learn more.

A co-publication of the AMS and CBMS.