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Sommario/riassunto	Eigenvectors of graph Laplacians have not, to date, been the subject of expository articles and thus they may seem a surprising topic for a book. The authors propose two motivations for this new LNM volume: (1) There are fascinating subtle differences between the properties of solutions of Schrödinger equations on manifolds on the one hand, and their discrete analogs on graphs. (2) "Geometric" properties of (cost) functions defined on the vertex sets of graphs are of practical interest for heuristic optimization algorithms. The observation that the cost functions of quite a few of the well-studied combinatorial optimization problems are eigenvectors of associated graph Laplacians has prompted the investigation of such eigenvectors. The volume investigates the structure of eigenvectors and looks at the number of their sign graphs ("nodal domains"), Perron components, graphs with extremal properties with respect to eigenvectors. The Rayleigh quotient and rearrangement of graphs form the main methodology.