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Sommario/riassunto	This book concerns matrix nearness problems in the framework of spectral optimization. It addresses some current research directions in spectral-based stability studies for differential equations, with material on ordinary differential equations (ODEs), differential algebraic equations and dynamical systems. Here, ‘stability’ is interpreted in a

broad sense which covers the need to develop stable and reliable algorithms preserving some qualitative properties of the computed solutions, methodologies which are helpful to assess the onset of potential instabilities or loss of robustness, and tools to determine the asymptotic properties of the solution or its discretization. The topics considered include the computation of robustness measures for linear problems, the use of low-rank ODEs to approximate such measures via gradient systems, the regularity, stability, passivity and controllability analysis of structured linear descriptor systems, and the use of acceleration techniques to deal with some of the presented computational problems. Although the emphasis is on the numerical study of differential equations and dynamical systems, the book will also be of interest to researchers in matrix theory, spectral optimization and spectral graph theory, as well as in dynamical systems and systems theory.