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   Nota di contenuto   Preface -- Introduction -- Stability of Finite Algorithms -- Quadrature -- Interpolation -- Ordinary Differential Equations -- Instationary Partial Difference Equations -- Stability for Discretisations of Elliptic Problems -- Stability for Discretisations of Integral Equations -- Index.

   Sommario/riassunto In this book, the author compares the meaning of stability in different subfields of numerical mathematics. Concept of Stability in numerical mathematics opens by examining the stability of finite algorithms. A more precise definition of stability holds for quadrature and interpolation methods, which the following chapters focus on. The discussion then progresses to the numerical treatment of ordinary differential equations (ODEs). While one-step methods for ODEs are always stable, this is not the case for hyperbolic or parabolic differential equations, which are investigated next. The final chapters discuss stability for discretisations of elliptic differential equations and integral equations. In comparison among the subfields we discuss the practical importance of stability and the possible conflict between