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	Titolo	Solving Ordinary Differential Equations II [[electronic resource]] : Stiff and Differential - Algebraic Problems / / by Ernst Hairer, Gerhard Wanner
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	ISBN	3-662-09947-0
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	Nota di contenuto	IV. Stiff Problems — One-Step Methods -- V. Multistep Methods for Stiff Problems -- VI. Singular Perturbation Problems and Differential-Algebraic Equations -- Appendix Fortran Codes -- Driver for the Code RADAU5 -- Subroutine RADAU5 -- Subroutine SDIRK4 -- Subroutine ROS4 -- Subroutine RODAS -- Subroutine SEULEX -- Subroutine SODEX -- Symbol Index.
	Sommario/riassunto	"Whatever regrets may be, we have done our best." (Sir Ernest Shackleton, turning back on 9 January 1909 at 88°23' South.) Brahms struggled for 20 years to write his first symphony. Compared to this, the 10 years we have been working on these two volumes may even appear short. This second volume treats stiff differential equations and differential alge- braic equations. It contains three chapters: Chapter IV on one-step (Runge- Kutta) methods for stiff problems, Chapter Von multistep methods for stiff problems, and Chapter VI on singular perturbation and differential-algebraic equations. Each chapter is divided into sections. Usually the first sections of a chapter are of an introductory nature, explain numerical phenomena and exhibit

numerical results. Investigations of a more theoretieal nature are presented in the later sections of each chapter. As in Volume I, the formulas, theorems, tables and figures are numbered consecutively in each section and indicate, in addition, the section num- ber. In cross references to other chapters the (latin) chapter number is put first. References to the bibliography are again by "author" plus "year" in parentheses. The bibliography again contains only those papers which are discussed in the text and is in no way meant to be complete.