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Autore	Wu Xinyuan
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Runge-Kutta (-Nyström) Methods for Oscillatory Differential Equations -- ARKN Methods -- ERKN Methods -- Symplectic and Symmetric Multidimensional ERKN Methods -- Two-Step Multidimensional ERKN Methods -- Adapted Falkner-Type Methods -- Energy-Preserving ERKN Methods -- Effective Methods for Highly Oscillatory Second-Order Nonlinear Differential Equations -- Extended Leap-Frog Methods for Hamiltonian Wave Equations.
Sommario/riassunto	Structure-Preserving Algorithms for Oscillatory Differential Equations describes a large number of highly effective and efficient structure-preserving algorithms for second-order oscillatory differential equations by using theoretical analysis and numerical validation. Structure-preserving algorithms for differential equations, especially for oscillatory differential equations, play an important role in the accurate simulation of oscillatory problems in applied sciences and engineering. The book discusses novel advances in the ARKN, ERKN, two-step ERKN, Falkner-type and energy-preserving methods, etc. for oscillatory differential equations. The work is intended for scientists, engineers, teachers and students who are interested in structure-preserving algorithms for differential equations. Xinyuan Wu is a

professor at Nanjing University; Xiong You is an associate professor at Nanjing Agricultural University; Bin Wang is a joint Ph.D student of Nanjing University and University of Cambridge.
