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Nota di contenuto	Cover; Half-title; Title; Copyright; Contents; Preface to the first edition; Preface to the second edition; Dedication; 1 Some basic concepts and an overview of cosmology; 2 Introduction to general relativity; 3 The Robertson...Walker metric; 4 The Friedmann models; 5 The Hubble constant and the deceleration parameter; 6 Models with a cosmological constant; 7 Singularities in cosmology; 8 The early universe; 9 The very early universe and inflation; 10 Quantum cosmology; 11 The distant future of the universe; Appendix; Bibliography; Index
Sommario/riassunto	This book provides a concise introduction to the mathematical aspects of the origin, structure and evolution of the universe. The book begins with a brief overview of observational and theoretical cosmology, along with a short introduction to general relativity. It then goes on to discuss Friedmann models, the Hubble constant and deceleration parameter, singularities, the early universe, inflation, quantum cosmology and the distant future of the universe. This edition contains a rigorous derivation of the Robertson-Walker metric. It also discusses the limits to the parameter space through various theoretical and observational constraints, and presents a new inflationary solution for a sixth degree

potential. This book is suitable as a textbook for advanced undergraduates and beginning graduate students. It will also be of interest to cosmologists, astrophysicists, applied mathematicians and mathematical physicists.
