1. Record Nr. UNISA996490344103316

Autore	Kharazishvili Alexander
Titolo	Notes on Real Analysis and Measure Theory [[electronic resource]] : Fine Properties of Real Sets and Functions / / by Alexander Kharazishvili
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2022
ISBN	3-031-17033-4
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (256 pages)
Collana	Springer Monographs in Mathematics, , 2196-9922
Disciplina	515.8
Soggetti	Mathematics Funcions de variables reals Teoria de la mesura Llibres electrònics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Preface -- 1. Real-Valued Semicontinuous Functions -- 2. The Oscillations of Real-Valued Functions -- 3. Monotone and Continuous Restrictions of Real-Valued Functions -- 4. Bijective Continuous Images of Absolute Null Sets -- 5. Projective Absolutely Nonmeasurable Functions -- 6. Borel Isomorphisms of Analytic Sets -- 7. Iterated Integrals of Real-Valued Functions of Two Real Variables -- 8. The Steinhaus Property, Ergocidity, and Density Points -- 9. Measurability Properties of H-Selectors and Partial H-Selectors -- 10. A Decomposition of an Uncountable Solvable Group into Three Negligible Sets -- 11. Negligible Sets Versus Absolutely Nonmeasurable Sets -- 12. Measurability Properties of Mazurkiewicz Sets -- 13. Extensions of Invariant Measures on R -- A. A Characterization of Uncountable Sets in Terms of their Self-Mappings -- B. Some Applications of Peano Type Functions -- C. Almost Rigid Mathematical Structures -- D. Some Unsolved Problems in Measure Theory -- Bibliography -- Index.
Sommario/riassunto	This monograph gives the reader an up-to-date account of the fine properties of real-valued functions and measures. The unifying theme of the book is the notion of nonmeasurability, from which one gets a full understanding of the structure of the subsets of the real line and

the maps between them. The material covered in this book will be of interest to a wide audience of mathematicians, particularly to those working in the realm of real analysis, general topology, and probability theory. Set theorists interested in the foundations of real analysis will find a detailed discussion about the relationship between certain properties of the real numbers and the ZFC axioms, Martin's axiom, and the continuum hypothesis.