Record Nr. UNINA9910627250403321 Autore Gavrilut Alina Titolo Regular Non-Additive Multimeasures. Fundaments and Applications // by Alina Gavrilu, Endre Pap Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2023 **ISBN** 3-031-11100-1 Edizione [1st ed. 2023.] Descrizione fisica 1 online resource (166 pages) Collana Studies in Systems, Decision and Control, , 2198-4190; ; 448 Disciplina 515.42 Soggetti Engineering mathematics Engineering - Data processing Automatic control **Engineering Mathematics** Mathematical and Computational Engineering Applications Control and Systems Theory Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Types of multimeasures -- Approximation theorems for multimeasures in the Vietoris topology -- Regularity of the Gould and Choquet integrals -- Appendix. Sommario/riassunto This book is intended to be an exhaustive study on regularity and other properties of continuity for different types of non-additive multimeasures and with respect to different types of topologies. The book is addressed to graduate and postgraduate students, teachers and all researchers in mathematics, but not only. Since the notions and results offered by this book are closely related to various notions of the theory of probability, this book will be useful to a wider category of readers, using multivalued analysis techniques in areas such as control theory and optimization, economic mathematics, game theory, decision theory, etc. Measure and integration theory developed during the early years of the 20th century is one of the most important contributions to modern mathematical analysis, with important applications in many fields. In the last years, many classical problems from measure theory

have been treated in the non-additive case and also extended in the

set-valued case. The property of regularity is involved in many results of mathematical analysis, due to its applications in probability theory, stochastic processes, optimal control problems, dynamical systems, Markov chains, potential theory etc.