

1. Record Nr.	UNINA9910437897803321
Autore	Aliev Rafik Aziz
Titolo	Fundamentals of the Fuzzy Logic-Based Generalized Theory of Decisions // by Rafik Aziz Aliev
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2013
ISBN	9783642348952 3642348955
Edizione	[1st ed. 2013.]
Descrizione fisica	1 online resource (XVI, 324 p.)
Collana	Studies in Fuzziness and Soft Computing, , 1434-9922
Disciplina	519.5/42
Soggetti	Computational intelligence Operations research Decision making Game theory Computational Intelligence Operations Research/Decision Theory Game Theory, Economics, Social and Behav. Sciences
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Fuzzy Sets and Fuzzy Logic -- Brief Review of Theories of Decision Making -- Uncertain Preferences and Imperfect information in Decision Making -- A Generalized Fuzzy Logic-Based Decision theory -- Extension to Behavioral Decision Making -- Decision Making on the Basis of Fuzzy Geometry -- Fuzzy Logic Based Generalized Theory of Stability -- Experiments and Applications.
Sommario/riassunto	Every day decision making and decision making in complex human-centric systems are characterized by imperfect decision-relevant information. Main drawback of the existing decision theories is namely incapability to deal with imperfect information and modeling vague preferences. Actually, a paradigm of non-numerical probabilities in decision making has a long history and arose also in Keynes's analysis of uncertainty. There is a need for further generalization – a move to decision theories with perception-based imperfect information described in NL. The languages of new decision models for human-

centric systems should be not languages based on binary logic but human-centric computational schemes able to operate on NL-described information. Development of new theories is now possible due to an increased computational power of information processing systems which allows for computations with imperfect information, particularly, imprecise and partially true information, which are much more complex than computations over numbers and probabilities. The monograph exposes the foundations of a new decision theory with imperfect decision-relevant information on environment and a decision maker's behavior. This theory is based on the synthesis of the fuzzy sets theory with perception-based information and the probability theory. The book is self containing and represents in a systematic way the decision theory with imperfect information into the educational systems. The book will be helpful for teachers and students of universities and colleges, for managers and specialists from various fields of business and economics, production and social sphere. .
