1. Record Nr. UNINA9910299873603321

Autore	Lorkowski Joe
Titolo	Bounded Rationality in Decision Making Under Uncertainty: Towards Optimal Granularity / / by Joe Lorkowski, Vladik Kreinovich
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
ISBN	3-319-62214-5
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (167 pages)
Collana	Studies in Systems, Decision and Control, , 2198-4182 ; ; 99
Disciplina	620
Soggetti	Computational intelligence Cognitive psychology Artificial intelligence Computational Intelligence Cognitive Psychology Artificial Intelligence
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Human Decisions Are Often Suboptimal: Phenomenon of Bounded Rationality -- Towards Explaining Other Aspects of Human Decision Making -- Towards Explaining Heuristic Techniques (Such as Fuzzy) in Expert Decision Making -- Decision Making Under Uncertainty and Restrictions on Computation Resources: From Heuristic to Optimal Techniques -- Conclusions and Future Work.
Sommario/riassunto	This book addresses an intriguing question: are our decisions rational? It explains seemingly irrational human decision-making behavior by taking into account our limited ability to process information. It also shows with several examples that optimization under granularity restriction leads to observed human decision-making. Drawing on the Nobel-prize-winning studies by Kahneman and Tversky, researchers have found many examples of seemingly irrational decisions: e.g., we overestimate the probability of rare events. Our explanation is that since human abilities to process information are limited, we operate not with the exact values of relevant quantities, but with “granules” that contain these values. We show that optimization under such granularity

indeed leads to observed human behavior. In particular, for the first time, we explain the mysterious empirical dependence of betting odds on actual probabilities. This book can be recommended to all students interested in human decision-making, to researchers whose work involves human decisions, and to practitioners who design and employ systems involving human decision-making —so that they can better utilize our ability to make decisions under uncertainty.