

1. Record Nr.	UNINA9910464764103321
Titolo	Concepts and fuzzy logic [[electronic resource] /] / edited by Radim Belohlavek and George J. Klir
Pubbl/distr/stampa	Cambridge, Mass., : MIT Press, c2011
ISBN	0-262-29768-X 1-283-30280-2 9786613302809 0-262-29857-0
Descrizione fisica	1 online resource (287 p.)
Altri autori (Persone)	BelohlavekRadim KlirGeorge J. <1932->
Disciplina	511.3/13
Soggetti	Fuzzy logic Concepts Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Contents; Preface; Acknowledgments; Chapter 1. Introduction; Chapter 2. Concepts: A Tutorial; Chapter 3. Fuzzy Logic: A Tutorial; Chapter 4. "Slow Lettuce": Categories, Concepts, Fuzzy Sets, and Logical Deduction; Chapter 5. Fallacious Perceptions of Fuzzy Logic in the Psychology of Concepts; Chapter 6. Representing Concepts by Fuzzy Sets; Chapter 7. Formal Concept Analysis: Classical and Fuzzy; Chapter 8. Conceptual Combinations and Fuzzy Logic; Chapter 9. Concepts and Natural Language; Chapter 10. Epilogue; Contributors; Glossary of Symbols; Contributors; Index
Sommario/riassunto	Leading researchers examine the usefulness and limitations of fuzzy logic for the psychology of concepts. The classical view of concepts in psychology was challenged in the 1970's when experimental evidence showed that concept categories are graded and thus cannot be represented adequately by classical sets. The possibility of using fuzzy set theory and fuzzy logic for representing and dealing with concepts was recognized initially but then virtually abandoned in the early 1980's. In this volume, leading researchers--both psychologists

working on concepts and mathematicians working on fuzzy logic--reassess the usefulness of fuzzy logic for the psychology of concepts. The book begins with two tutorials--one on concepts and the other on fuzzy logic--aimed at making relevant experimental and theoretical issues accessible to researchers in both fields. The contributors then discuss the experiments that led to the rejection of the classical view of concepts; analyze the various arguments against the use of fuzzy logic in the psychology of concepts and show that they are fallacious; review methods based on sound measurement principles for constructing fuzzy sets; introduce formal concept analysis and its capabilities when generalized by using fuzzy logic; consider conceptual combinations; examine lexical concepts; and propose a research program based on cooperation between researchers in the psychology of concepts and fuzzy logic.

---