1.	Record Nr.	UNINA9910483053103321
	Titolo	Fuzzy approaches for soft computing and approximate reasoning : theories and applications : dedicated to Bernadette Bouchon-Meunier / / Marie-Jeanne Lesot, Christophe Marsala, editors
	Pubbl/distr/stampa	Cham, Switzerland : , : Springer, , [2021] ©2021
	ISBN	3-030-54341-2
	Edizione	[1st ed. 2021.]
	Descrizione fisica	1 online resource (XX, 297 p. 49 illus., 32 illus. in color.)
	Collana	Studies in fuzziness and soft computing ; ; Volume 394
	Disciplina	511.313
	Soggetti	Fuzzy systems
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Nota di bibliografia	Includes bibliographical references.
	Nota di contenuto	Chapter 1: The Fuzzy Theoretic Turn -- Chapter 2: Membership functions -- Chapter 3: The evolution of the notion of overlap functions -- Chapter 4: Interpolative reasoning: valid, specicity-gradual -- Chapter 5: A similarity-based three-valued modal logic approach to reason with prototypes and counterexamples -- Chapter 6: Analogy -- Chapter 7: The role of the context in decision and optimization problems -- Chapter 8: Decision rules under vague and uncertain information -- Chapter 9: Abstract Models for Systems Identication -- Chapter 10: Fuzzy Systems Interpretability: What, Why and How -- Chapter 11: Fuzzy Clustering Models and Their Related Concepts.
	Sommario/riassunto	This book gathers cutting-edge papers in the area of Computational Intelligence, presented by specialists, and covering all major trends in the research community in order to provide readers with a rich primer. It presents an overview of various soft computing topics and approximate reasoning-based approaches, both from theoretical and applied perspectives. Numerous topics are covered: fundamentals aspects of fuzzy sets theory, reasoning approaches (interpolative, analogical, similarity-based), decision and optimization theory, fuzzy databases, soft machine learning, summarization, interpretability and XAI. Moreover, several application-based papers are included, e.g. on image processing, semantic web and intelligent tutoring systems. This

book is dedicated to Bernadette Bouchon-Meunier in honor of her achievements in Computational Intelligence, which, throughout her career, have included profuse and diverse collaborations, both thematically and geographically.