1. **Record Nr.**   UNINA9910683348503321

   Titolo   Fuzzy, rough and intuitionistic fuzzy set approaches for data handling : theory and applications / / edited by Tanmoy Som [and three others]

   Pubbl/distr/stampa   Singapore : , : Springer, , [2023]
                        ©2023

   ISBN   9789811985669
                        9789811985652

   Edizione   [1st ed. 2023.]

   Descrizione fisica   1 online resource (279 pages)

   Collana   Forum for Interdisciplinary Mathematics, , 2364-6756

   Disciplina   943.005

   Soggetti   Data mining
                        Conjunts borrosos
                        Mineria de dades
                        Processament de dades
                        Llibres electrònics

   Lingua di pubblicazione   Inglese

   Formato   Materiale a stampa

   Livello bibliografico   Monografia

   Nota di bibliografia   Includes bibliographical references.

   Nota di contenuto   Fuzzy Sets and Rough Sets: A Mathematical Narrative -- Enhancing the Prediction of Anti-cancer Peptides by Suitable Feature Extraction and FRFS with ACO Search Followed by Resampling -- New Methods of Vagueness and Uncertainty Quantification in Lattice Boltzmann Method based Solute Transport Model -- Fuzzy Rough Set-based Feature Selection for Text Categorization -- An Extensive Survey on Detection of Malaria Parasites in Patients based on Fuzzy Approaches -- Application of Feature Extraction and Feature Selection followed by SMOTE to Improve the Prediction of DNA Binding Proteins -- Perspectives of Soft Computing in Multiscale Fluid Flow Systems -- Various Generalizations of Fuzzy Sets in the Context of Soft Computing and Decision Making -- A Linear Diophantine Fuzzy Soft Set based Decision Making Approach using Revised Max-Min Average Composition Method -- Recent Developments in Fuzzy Dynamic Data Envelopment Analysis and Its Applications -- Role of Centrality Measures in Link Prediction on Fuzzy Social Networks -- Interval Solutions of Fractional Integro-Differential Equations by using Modifed

Adomian Decomposition Method -- Generalized Hukuhara Subdifferentiability for Convex Interval-valued Functions and its Applications in Nonsmooth Interval Optimization -- Rules Based Classifier for Identifying Fake Reviews in E-Commerce: Deep Learning System.

Sommario/riassunto	This book facilitates both the theoretical background and applications of fuzzy, intuitionistic fuzzy and rough, fuzzy rough sets in the area of data science. This book provides various individual, soft computing, optimization and hybridization techniques of fuzzy and intuitionistic fuzzy sets with rough sets and their applications including data handling and that of type-2 fuzzy systems. Machine learning techniques are effectively implemented to solve a diversity of problems in pattern recognition, data mining and bioinformatics. To handle different nature of problems, including uncertainty, the book highlights the theory and recent developments on uncertainty, fuzzy systems, feature extraction, text categorization, multiscale modeling, soft computing, machine learning, deep learning, SMOTE, data handling, decision making, Diophantine fuzzy soft set, data envelopment analysis, centrally measures, social networks, Volterra–Fredholm integro-differential equation, Caputo fractional derivative, interval optimization, decision making, classification problems. This book is predominantly envisioned for researchers and students of data science, medical scientists and professional engineers.