1. Record Nr. UNINA9910483710803321 Autore Nowicki Robert K Titolo Rough Set-Based Classification Systems / / by Robert K. Nowicki Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2019 3-030-03895-5 **ISBN** Edizione [1st ed. 2019.] 1 online resource (XIII, 188 p. 125 illus.) Descrizione fisica Collana Studies in Computational Intelligence, , 1860-949X;; 802 Disciplina 006.3 511.322 Soggetti Computational intelligence Artificial intelligence Computational Intelligence Artificial Intelligence Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Introduction -- Rough Set Theory Fundamentals -- Rough Fuzzy Nota di contenuto Classication Systems -- Fuzzy Rough Classication Systems -- Rough Neural Network Classier -- Rough Nearest Neighbour Classier --Ensembles of Rough Set-Based Classiers -- Final Remarks. Sommario/riassunto This book demonstrates an original concept for implementing the rough set theory in the construction of decision-making systems. It addresses three types of decisions, including those in which the information or input data is insufficient. Though decision-making and classification in cases with missing or inaccurate data is a common task, classical decision-making systems are not naturally adapted to it. One solution is to apply the rough set theory proposed by Prof. Pawlak. The proposed classifiers are applied and tested in two configurations: The first is an iterative mode in which a single classification system requests completion of the input data until an unequivocal decision (classification) is obtained. It allows us to start classification processes using very limited input data and supplementing it only as needed, which limits the cost of obtaining data. The second configuration is an ensemble mode in which several rough set-based classification

systems achieve the unequivocal decision collectively, even though the

systems cannot separately deliver such results.			