Record Nr. UNINA9910253964603321 Autore Sanchez Daniela Titolo Hierarchical Modular Granular Neural Networks with Fuzzy Aggregation [[electronic resource] /] / by Daniela Sanchez, Patricia Melin Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2016 **ISBN** 3-319-28862-8 Edizione [1st ed. 2016.] Descrizione fisica 1 online resource (107 p.) Collana SpringerBriefs in Computational Intelligence, , 2625-3704 Disciplina 620 Computational intelligence Soggetti Artificial intelligence Neural networks (Computer science) Computational Intelligence Artificial Intelligence Mathematical Models of Cognitive Processes and Neural Networks Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Includes index. Nota di contenuto Introduction -- Background and Theory -- Proposed Method --Application to Human Recognition -- Experimental Results --Conclusions. Sommario/riassunto In this book, a new method for hybrid intelligent systems is proposed. The proposed method is based on a granular computing approach applied in two levels. The techniques used and combined in the proposed method are modular neural networks (MNNs) with a Granular Computing (GrC) approach, thus resulting in a new concept of MNNs; modular granular neural networks (MGNNs). In addition fuzzy logic (FL) and hierarchical genetic algorithms (HGAs) are techniques used in this research work to improve results. These techniques are chosen because in other works have demonstrated to be a good option, and in the case of MNNs and HGAs, these techniques allow to improve the results obtained than with their conventional versions; respectively artificial

neural networks and genetic algorithms.