

1. Record Nr.	UNINA9910552746603321
Autore	Castillo Oscar
Titolo	Interval Type-3 Fuzzy Systems: Theory and Design / / by Oscar Castillo, Juan R. Castro, Patricia Melin
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2022
ISBN	3-030-96515-5
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (109 pages)
Collana	Studies in Fuzziness and Soft Computing, , 1860-0808 ; ; 418
Disciplina	003 511.313
Soggetti	Computational intelligence Artificial intelligence Computational Intelligence Artificial Intelligence
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1: Introduction to Interval Type-3 Fuzzy Systems -- Chapter 2: Type-2 Fuzzy Logic Systems -- Chapter 3: Interval Type-3 Fuzzy Sets -- Chapter 4: Interval Type-3 Fuzzy Logic Systems -- Chapter 5: Conclusions of Type-3 Fuzzy Systems.
Sommario/riassunto	This book briefly reviews the basic concepts of type-2 fuzzy systems and then describes the proposed definitions for interval type-3 fuzzy sets and relations, also interval type-3 inference and systems. The use of type-2 fuzzy systems has become widespread in the leading economy sectors, especially in industrial and application areas, such as services, health, defense, and so on. However, recently the use of interval type-3 fuzzy systems has been receiving increasing attention and some successful applications have been developed in the last year. These issues were taken into consideration for this book, as we did realize that there was a need to offer the main theoretical concepts of type-3 fuzzy logic, as well as methods to design, develop and implement the type-3 fuzzy systems. A review of basic concepts and their use in the design and implementation of interval type-3 fuzzy systems, which are relatively new models of uncertainty and

imprecision, are presented. The main focus of this work is based on the basic reasons of the need for interval type-3 fuzzy systems in different areas of application. In addition, we describe methods for designing interval type-3 fuzzy systems and illustrate this with some examples and simulations.
