1. Record Nr. UNINA9910483599003321 Autore Nasseri Seyed Hadi Titolo Fuzzy Linear Programming: Solution Techniques and Applications // by Seyed Hadi Nasseri, Ali Ebrahimnejad, Bing-Yuan Cao Pubbl/distr/stampa Cham: .: Springer International Publishing: .: Imprint: Springer, . 2019 **ISBN** 3-030-17421-2 Edizione [1st ed. 2019.] Descrizione fisica 1 online resource (XVIII, 232 p. 13 illus.) Collana ;;379 Disciplina 511.322 006.3 Soggetti Computational intelligence Artificial intelligence Computational Intelligence Artificial Intelligence Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references. Nota di contenuto Preliminaries and Backgrounds -- Fuzzy Linear Programming -- Fuzzy Number Linear Programming -- Linear Programming with Fuzzy Variables -- Semi-Fully Fuzzy Linear Programming -- Application for the Flexible Linear Programming. This book presents the necessary and essential backgrounds of fuzzy Sommario/riassunto set theory and linear programming, particularly a broad range of common Fuzzy Linear Programming (FLP) models and related, convenient solution techniques. These models and methods belong to three common classes of fuzzy linear programming, namely: (i) FLP problems in which all coefficients are fuzzy numbers, (ii) FLP problems in which the right-hand-side vectors and the decision variables are fuzzy numbers, and (iii) FLP problems in which the cost coefficients, the right-hand-side vectors and the decision variables are fuzzy numbers. The book essentially generalizes the well-known solution algorithms used in linear programming to the fuzzy environment. Accordingly, it

> can be used not only as a textbook, teaching material or reference book for undergraduate and graduate students in courses on applied mathematics, computer science, management science, industrial

engineering, artificial intelligence, fuzzy information processes, and operations research, but can also serve as a reference book for researchers in these fields, especially those engaged in optimization and soft computing. For textbook purposes, it also includes simple and illustrative examples to help readers who are new to the field.