1. Record Nr. UNINA9910454340703321 Autore Kolbin V. V (Viacheslav Viktorovich), <1941-> Titolo Decision making and programming [[electronic resource] /] / V.V. Kolbin; translated from Russian by V.M. Donets River Edge, N.J., : World Scientific, c2003 Pubbl/distr/stampa **ISBN** 1-281-92816-X 9786611928162 981-277-546-3 Descrizione fisica 1 online resource (757 p.) 519.7 Disciplina Soggetti Decision making - Mathematical models Computer programming - Decision making Electronic books. Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references (p. 733-745). Nota di contenuto CONTENTS; INTRODUCTION; Chapter 1 SOCIAL CHOICE PROBLEMS; 1.1. INDIVIDUAL PREFERENCE AGGREGATION; 1.1.1. Individual Preference Aggregation under Certainty; 1.1.2. Individual Preference Aggregation under Uncertainty: 1.1.3. Decision-making under Fuzzy Preference Relation on the Set of Alternatives; 1.2. COLLECTIVE PREFERENCE AGGREGATION: 1.2.1. The Procedures Using the Scale as the Auxiliary Collective Structure; 1.2.2. The Procedures Taking into Account Individual Utility Alternatives; 1.2.3. The Procedures with Exclusion of a Part of Alternatives 1.2.4. The Procedure with the Aggregating Rule Altered 1.2.5. Collective Preference Aggregation: 1.3. MANIPULATION: 1.3.1. Dictation policy: 1.3.2. Methods of group manipulation; 1.3.3. Manipulation theorems and proofs; 1.4. EXAMPLES AND ALGORITHMS FOR PREFERENCE AGGREGATION; 1.4.1. Examples and Algorithm for Preference Aggregation Subject to Criterion Convolution; 1.4.2. Examples and Algorithm for Preference Aggregation in Terms of a Set of Attributes; 1.4.3. The Examples Using the Aggregating Rules during Collective Decision Making (Voting Rules); Chapter 2 VECTOR OPTIMIZATION

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Sommario/riassunto

The problem of selection of alternatives or the problem of decision making in the modern world has become the most important class of problems constantly faced by business people, researchers, doctors and engineers. The fields that are almost entirely focused on conflicts, where applied mathematics is successfully used, are law, military science, many branches of economics, sociology, political science, and psychology. There are good grounds to believe that medicine and some branches of biology and ethics can also be included in this list. Modern applied mathematics can produce solutions to