

1. Record Nr.	UNINA9910438078603321
Titolo	Encyclopedia of Operations Research and Management Science [[electronic resource] /] / edited by Saul I. Gass, Michael C. Fu
Pubbl/distr/stampa	New York, NY : , : Springer US : , : Imprint : Springer, , 2013
ISBN	1-78539-596-3 1-4419-1153-7
Edizione	[3rd ed. 2013.]
Descrizione fisica	1 online resource (225 illus., 38 illus. in color. eReference.)
Disciplina	658.40301
Soggetti	Operations research Decision making Production management Calculus of variations Mathematical models Operations Research/Decision Theory Operations Management Calculus of Variations and Optimal Control; Optimization Mathematical Modeling and Industrial Mathematics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
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Sommario/riassunto

The goal of the Encyclopedia of Operations Research and Management Science is to provide decision makers and problem solvers in business, industry, government, and academia a comprehensive overview of the wide range of ideas, methodologies, and synergistic forces that combine to form the preeminent decision-aiding fields of operations research and management science (OR/MS). The impact of OR/MS on the quality of life and economic well being of everyone is a story that deserves to be told in its full detail and glory. The Encyclopedia of Operations Research and Management Science is the prologue to that story. The editors, working with the Encyclopedia's Editorial Advisory Board, surveyed and divided OR/MS into specific topics that collectively encompass the foundations, applications, and emerging elements of this ever-changing field. We also wanted to establish the close associations that OR/MS has maintained with other scientific endeavors, with special emphasis on its symbiotic relationships with computer science, information systems, and mathematics. Based on our broad view of OR/MS, we enlisted a distinguished international group of academics and practitioners to contribute articles on subjects for which they are renowned. We commissioned over 200 major expository articles and complemented them by numerous descriptions, discussions, definitions, and abbreviations. The connections between topics are highlighted by an entry's final "See" statement, as appropriate. Each article provides a background or history of the topic, describes relevant applications, overviews present and future trends, and lists seminal and current references. To allow for variety in exposition, the authors were instructed to present their material from their research and applied perspectives. In particular, the authors, each of whom is a leading authority on the particular subject, were allowed to use whatever mathematical notation they felt was standard for their topics. The Encyclopedia's intended audience is technically diverse and wide; it includes anyone concerned with the science, techniques, and ideas of how one makes decisions. As this audience encompasses many professions, educational background and skills, we were attentive to the form, format, and scope of the articles. Thus, the articles are designed to serve as initial sources of information for all such readers, with special emphasis on the needs of students.
