

Miettinen, Kaisa M.

Nonlinear multiobjective optimization. (English) Zbl 0949.90082

International Series in Operations Research & Management Science. 12. Dordrecht: Kluwer Academic Publishers. xvii, 298 p. (1999).

This is an important book for those, who really want to solve deterministic multicriterial finite-dimensional nonlinear continuous optimization problems. It provides a consistent and self-contained survey that helps in selecting an appropriate method for the problem to be solved. It is written in a clearly readable kind, with enough but not too much mathematics, with a lot of comments, remarks, interpretations, comparisons with respect of used procedures and with hints at implementations. An extensive bibliography (of papers and books in English language) is given. There are no exercises or illustrative examples but enough references to those available in the literature.

Part I provides the theoretical background, part II handles the methodology, emphasizing the role of the decision maker. Part III concerns on "related issues", i. e., comparing methods, remarks on software and graphical illustrations. Then some comments on future directions, an epilogue, references and an index follow.

Everyone, who applies or teaches multicriteria optimization, being a mathematician, engineer, economist or dealing with operations research or management science, should have this book or at least should have consulted this book.

Reviewer: [Alfred Göpfert \(Halle\)](#)

MSC:

[90C29](#) Multi-objective and goal programming

[90-02](#) Research exposition (monographs, survey articles) pertaining to operations research and mathematical programming

Cited in **426** Documents

Keywords:

[nonlinear multicriterial optimization](#); [scalarizing methods](#); [interactive methods](#); [extensive bibliography](#)