

1. Record Nr.	UNINA9910818715003321
Titolo	Nonlinear programming : proceedings of a symposium conducted by the Mathematics Research Center, The University of Wisconsin, Madison, May 4-6, 1970 // edited by J. B. Rosen, O. L. Mangasarian, K. Ritter
Pubbl/distr/stampa	New York, New York ; ; London, England : , : Academic Press, Inc., , 1970 ©1970
ISBN	1-4832-7246-X
Descrizione fisica	1 online resource (503 p.)
Collana	Publication no. 25 of the Mathematics Research Center, The University of Wisconsin Nonlinear programming
Disciplina	519.7/6 519.76
Soggetti	Nonlinear programming
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 at the end of each chapters and index.
Nota di contenuto	Front Cover; Nonlinear Programming; Copyright Page; Table of Contents; Foreword; Preface; Chapter 1. A Method of Centers by Upper-Bounding Functions with Applications; ABSTRACT; Introduction; 1. The Method of Centers: A Summary with Modifications; 2. Method of Centers (General algorithm; 3. Method of Center by Upper-Bounding Functions; 4. Applications of the Method of Centers by Upper-Bounding Functions; REFERENCES; Chapter 2. A New Algorithm for Unconstrained Optimization; ABSTRACT; 1. Introduction; 2. The Formula for Revising the Second Derivative Approximation 3. An Outline of the New Algorithm 4. Theorems on the New Algorithm; Acknowledgements; REFERENCES; Chapter 3. A Class of Methods for Nonlinear Programming II Computational Experience; ABSTRACT; Introduction; 2. A Basic Approach; 3. Algorithms based on Variable Metric methods; 4. Inequality Constraints; REFERENCES; Chapter 4. Some Algorithms Based on the Principle of Feasible Directions; ABSTRACT; 1. Introduction; 2. Direction generators; 3. Unconstrained Optimization; 4. Linearly Constrained Nonlinear Programming; 5. A

partitioning method; REFERENCES

Chapter 5. Numerical Techniques in Mathematical

Programming ABSTRACT; Introduction; A. THE USE OF LU

DECOMPOSITION IN EXCHANGE ALGORITHMS; B. THE QR

DECOMPOSITION AND QUADRATIC PROGRAMMING; C. THE SVD AND

NONLINEAR LEAST SQUARES; REFERENCES; Chapter 6. A Superlinearly

Convergent Method for Unconstrained Minimization; ABSTRACT; 1.

Introduction; 2. Formulation of the problem, definitions and notation;

3. The algorithm; 4. Special convergence properties of the algorithm;

REFERENCES; Chapter 7. A Second Order Method for the Linearly

Constrained Nonlinear Programming Problem; ABSTRACT; 1.

Introduction

2. The algorithm 3. Convergence of the Algorithm; 4. Rate of

Convergence of the Algorithm; 5. Discussion; REFERENCES; Chapter 8.

Convergent Step-Sizes for Gradient-Like Feasible Direction Algorithms

for Constrained Optimization; ABSTRACT; 1. Introduction; 2. Gradient-

like feasible direction algorithms; 3. General stepsize criteria; 4. Step

sizes based on minimization; 5. Step sizes based on a range function;

6. Step sizes based on a search procedure; 7 Example of directions:

variable metric gradient projections; REFERENCES; Chapter 9. On the

Implementation of Conceptual Algorithms; ABSTRACT

1. Introduction 2. Conceptual algorithms; 3. Adaptive Procedures for

Implementation; 4. Open Loop Procedures for Implementation; 5.

Conclusion; REFERENCES; Chapter 10. Some Convex Programs Whose

Duals Are Linearly Constrained; ABSTRACT; 1. Introduction; 2. Dual

problems; 3. The nature of problem (D1); 4. Examples; 5. Relationships

between (P), (D) and (D1); REFERENCES; Chapter 11. Sufficiency

Conditions and a Duality Theory for Mathematical Programming

Problems in Arbitrary Linear Spaces; ABSTRACT; 1. Introduction; 2.

Mathematical preliminaries and problem statement

3. Necessary conditions and sufficient conditions

Sommario/riassunto

Nonlinear Programming
