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Nota di contenuto	Preliminaries -- TABLE OF CONTENTS -- THE JUBILEE OF PROF.DR. HABIL.JONAS MOCKUS -- Chapter 1 TOPOGRAPHICAL DIFFERENTIAL EVOLUTION USING PRE-CALCULATED DIFFERENTIALS -- Chapter 2 OPTIMAL TAX DEPRECIATION IN STOCHASTIC INVESTMENT MODEL -- Chapter 3 GLOBAL OPTIMISATION OF CHEMICAL PROCESS FLOWSHEETS -- Chapter 4 ONE-DIMENSIONAL GLOBAL OPTIMIZATION BASED ON STATISTICAL MODELS -- Chapter 5 ANIMATED VISUAL ANALYSIS OF EXTREMAL PROBLEMS -- Chapter 6 TEST PROBLEMS FOR LIPSCHITZ UNIVARIATE GLOBAL OPTIMIZATION WITH MULTIEXTREMAL CONSTRAINTS -- Chapter 7 NUMERICAL TECHNIQUES IN APPLIED MULTISTAGE STOCHASTIC PROGRAMMING -- Chapter 8 ON THE EFFICIENCY AND EFFECTIVENESS OFCONTROLLED RANDOM SEARCH -- Chapter 9 DISCRETE BACKTRACKING ADAPTIVE SEARCH FOR GLOBAL OPTIMIZATION -- Chapter 10 PARALLEL BRANCH-AND-BOUND ATTRACTION METHODS FOR GLOBAL OPTIMIZATION -- Chapter 11 ON SOLUTION OF STOCHASTIC LINEAR PROGRAMS BY DISCRETIZATION METHODS -- Chapter 12 THE STRUCTURE OF MULTIVARIATE MODELS AND THE RANGE OF DEFINITION -- Chapter 13 OPTIMALITY CRITERIA

FOR INVESTMENT PROJECTS UNDER UNCERTAINTY.

Sommario/riassunto

This volume is dedicated to the 70th birthday of Professor J. Mockus, whose scientific interests include theory and applications of global and discrete optimization, and stochastic programming. The papers for the book were selected because they relate to these topics and also satisfy the criterion of theoretical soundness combined with practical applicability. In addition, the methods for statistical analysis of extremal problems are covered. Although statistical approach to global and discrete optimization is emphasized, applications to optimal design and to mathematical finance are also presented. The results of some subjects (for example, statistical models based on one-dimensional global optimization) are summarized and the prospects for developments are justified.