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Titolo Nonsmooth Optimization in Honor of the 60th Birthday of Adil M.

**Bagirov** 

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Sommario/riassunto

The aim of this book was to collect the most recent methods developed for NSO and its practical applications. The book contains seven papers: The first is the foreword by the Guest Editors giving a brief review of NSO and its real-life applications and acknowledging the outstanding contributions of Professor Adil Bagirov to both the theoretical and practical aspects of NSO. The second paper introduces a new and very efficient algorithm for solving uncertain unit-commitment (UC) problems. The third paper proposes a new nonsmooth version of the generalized damped Gauss-Newton method for solving nonlinear complementarity problems. In the fourth paper, the abs-linear representation of piecewise linear functions is extended to yield simultaneously their DC decomposition as well as the pair of generalized gradients. The fifth paper presents the use of biasedrandomized algorithms as an effective methodology to cope with NPhard and nonsmooth optimization problems in many practical applications. In the sixth paper, a problem concerning the scheduling of nuclear waste disposal is modeled as a nonsmooth multiobjective mixed-integer nonlinear optimization problem, and a novel method using the two-slope parameterized achievement scalarizing functions is introduced. Finally, the last paper considers binary classification of a multiple instance learning problem and formulates the learning problem as a nonconvex nonsmooth unconstrained optimization

problem with a DC objective function.