

High Dimensional Applications of Implicit Parametrizations in Nonlinear Programming*

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Abstract

Several experiments are reported, related to the implicit parametrization method and its application in optimization, together with comparisons with the existing methodology.

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1 Introduction

In the recent papers [5], [3], [6] a new approach to the solution of general implicit systems has been introduced, based on the application of certain iterated ordinary differential systems. This method can be extended to the critical case via the use of generalized solutions [6]. Some numerical experiments are reported in [3] and [2]. It was noticed that one may apply such techniques to constrained nonlinear programming problems, by solving the equality constraints and reducing the dimension of the minimization problem [6]. In this work, we report on several large scale numerical experiments in constrained optimization and compare them with other approaches

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