

Complexity of a quadratic penalty accelerated inexact proximal point method for solving linearly constrained nonconvex composite programs

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This talk discusses the complexity of a quadratic penalty accelerated inexact proximal point method for solving a linearly constrained nonconvex composite program. Its objective function is of the form $f+h$ where f is a differentiable function whose gradient is Lipschitz continuous and h is a closed convex function with bounded domain. The method consists of applying an accelerated inexact proximal point method to solve a sequence of quadratic penalized subproblems associated to the linearly constrained problem. Each subproblem is then approximately solved by an accelerated composite gradient method. Numerical results showing the efficiency of the proposed method are given.