

0,1 Nonconvex Quadratically Constrained Problems

Suppose $F \subseteq \{0,1\}^n$ and \mathcal{P}_F includes $\pm x_i(x_i-1) \leq 0, \forall i \in \{1,2,\dots,n\}$.

Theorem: Let $C_0 := [0,1]^n$ and $\mathcal{P}_k := \mathcal{P}^2(C_k), \forall k \geq 1$ in SSDPR and SSILPR Methods. Then each method terminates in at most $(n+1)$ iterations with $C_{n+1} = \text{conv}(F)$.

Kojima, T. (SIAM J. Opt. [2000])