Active set methods for convex quadratic problems with simple bounds

F. Rendl[1]

Abstract: A primal-dual active set method for quadratic problems with bound constraints is presented which extends the infeasible active set approach of Kunisch and Rendl (SIOPT 2003). We show that the original method may cycle, but for the new approach strict convexity of the quadratic problem is sufficient for the algorithm to stop after a finite number of steps with an optimal solution. Computational experience indicates that this new approach also performs well in practice.

[1] Institute for Mathematics
Alpen-Adria-University Klagenfurt
Universitätsstraße 65-67, 9020 Klagenfurt am Wörthersee
Franz.Rendl@aau.at