A Global Method for Solving the Convex Quadratic Maximization Problem

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Abstract: We consider the problem of maximizing a convex quadratic function over a polyhedral set. We propose a numerical method for solving the problem globally. Our approach is based on the global optimality conditions and approximation techniques of the level set of the objective function. The proposed method uses linear programming as auxiliary problems and conjugate directions to construct an approximation set. The method has been implemented numerically on in programming language Borland C++ v.5.02 on personal computer withPentium 300Mhz processor and 64MB RAM and the results are presented.