**The Linear Complementarity Problem**

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**Abstract**

The linear complementarity problem, introduced by Cottle [1-2], is one of the most widely studied mathematical programming problems. Solving LCP(q,M) for an arbitrary matrix M is NP-complete [3], while there are several classes of matrices M for which the associated LCPs can be solved efficiently. For details of the theory of LCPs, see the books of Cottle et al. [2], Murty [3] and El foutayeni et al. [4-7]. In this communication, we present a new interior-point method to solve this problem. The order of convergence of the proposed method is six. In order to show the efficiency of this method, three examples are demonstrated. We have implemented the MATLAB program for calculating number of iterations required, time taken, and the error norm. We are comparing the results obtained by the proposed method with those obtained by the Yu method [8] and CHKS method [8].

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