New technique for determining search directions for interior-point algorithms

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Abstract

We present predictor-corrector interior-point algorithms for solving sufficient linear complementarity problems. We use the technique of algebraic equivalent transformation on the system which defines the central path and we apply Newton's method to this system to obtain the search directions. We analyse the question of solvability of the transformed Newton-systems and the scaled systems. In this way, a unification of the Newton-systems and scaled systems of the predictor-corrector algorithms is given.