Predictor-corrector interior-point algorithms

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In this talk we propose a new predictor-corrector interior-point algorithm for solving sufficient linear complementarity problems. We use the method of algebraic equivalent transformation for the determination of the search directions. We prove that the introduced algorithm has polynomial iteration complexity in the handicap of the problem's matrix, the size of the problem and the bitsize of the data. In order to show the efficiency of the algorithm, we also provide promising numerical results on a family of sufficient matrices with positive handicap.