

AN SQP ALGORITHM WITH NONMONOTONE LINE SEARCH FOR GENERAL NONLINEAR CONSTRAINED OPTIMIZATION PROBLEM

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摘要

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AN SQP ALGORITHM WITH NONMONOTONE LINE SEARCH FOR GENERAL NONLINEAR CONSTRAINED OPTIMIZATION PROBLEM

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Abstract In this paper, an SQP type algorithm with a new nonmonotone line search technique for general constrained optimization problems is presented. The new algorithm does not have to solve the second order correction subproblems for each iterations, but still can circumvent the so-called Maratos effect. The algorithm's global convergence and superlinear convergent rate have been proved. In addition, we can prove that, after a few iterations, correction subproblems need not be solved, so computation amount of the algorithm will be decreased much more. Numerical experiments show that the new algorithm is effective.

Key words

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