论文

预处理2步非线性共轭梯度法的并行算法与数值试验

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摘要：

关键词：

A PARALLEL ALGORITHM OF PRECONDITIONED 2-STEP NONLINEAR CONJUGATE GRADIENT (NCG) METHOD AND NUMERICAL TEST

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Abstract:

A 2-step nonlinear conjugate gradient (NCG) method has been introduced and an-alyzed in [2]. This method can be used to solve large sparse nonlinear equations with nonsymmetric Jacobin. In this paper, we presented a parallel algorithm of precohdi-tioned 2-step nonlinear conjugate gradient method and discuss how to choose the better precondition which is more suitable for shared memory multiprocessor. Also, we ana lyze how to implement efficiently polynomial preconditioning with step NCG method on shared memory parallel computer. Numerical result on solving nonlinear equations arising from the discretization of nonlinear elliptic partial equations have been given.

Keywords:

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