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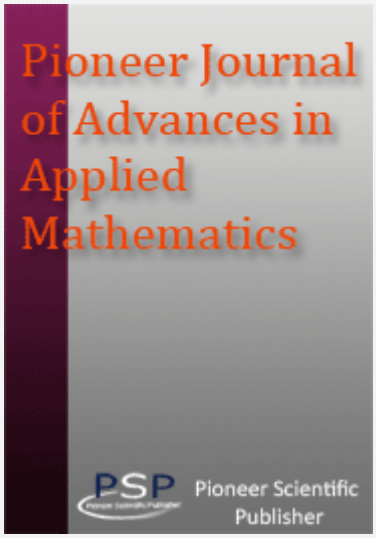

A NEW CONJUGATE GRADIENT METHOD FOR MODIFIED FLETCHER-REEVES FORMULA

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Abstract

In this paper, we propose a modified Fletcher-Reeves (FR) nonlinear conjugate gradient method. The method has the following attractive properties: The iterative direction is always a sufficiently descent direction without utilizing the line search; Conjugacy condition always holds, independently of the line search. A global convergence result is proved when the Wolfe line search conditions are used.

Keywords and phrases: conjugate gradient method, unconstrained optimization, sufficient descent condition.