Abstract

Nonlinear Conjugate gradient methods (CG) are widely used for solving unconstrained optimization problems. Their wide application in many Fields such as Engineering, Applied Sciences and Economics is due to their low memory requirements and global convergence properties. Numerous studies and modifications directed towards improving the efficiency of these methods have been conducted. In this paper, a new conjugate gradient parameter $\beta_k$ that possess convergence properties is presented. We also present preliminary numerical results to show the efficiency of the proposed method.

References

3. Polak, E., Ribiere, Note sur la convergence de directions conjugees, Rev. Francaise
On the Numerical Performance of a New Conjugate Gradient Parameter for Solving Unconstrained Optimization Problems


Index Terms

Computer Science

Algorithms

Keywords
Unconstrained Optimization, Conjugate Gradient Method, Conjugate Gradient Coefficient, Global Convergence.