Abstract

Conjugate gradient (CG) methods are one of the most widely used methods for solving nonlinear unconstrained optimization problems, especially of large scale. That is, due to their simplicity and low memory requirement. To analyze the convergence properties of a CG method, it implemented into two line searches; exact and inexact. In this paper, given some data, some CG methods will be used to find a polynomial function that fitting the data. To show the efficiency, a comparison between CG methods and least square method will be done.

References


Index Terms

Computer Science

Information Sciences

Keywords

Conjugate gradient methods; unconstrained optimization; least square; data fitting.