A new Levenberg-Marquardt approach based on conjugate gradient structure for solving absolute value equations

In this paper, we present a new approach for solving absolute value equation (AVE) which use Levenberg-Marquardt method with conjugate gradient structure. In conjugate gradient methods the new direction obtain by combining steepest descent direction and the previous direction which may not lead to good numerical results. Therefore, we replace the steepest descent direction by the Levenberg–Marquardt direction. The descent property of the direction generated by new algorithm in each iteration is established. The numerical results for an example are reported.

Absolute value equation, Levenberg-Marquardt approach, conjugate gradient method

https://www.civilica.com/Paper-ICIORS11-ICIORS11_179.html