

On the local convergence of Newton's method to function with values in a cone under majorant condition

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Abstract

A local convergence analysis of Newton's method for solving nonlinear inclusion problems, under a majorant condition, is presented in this paper. Convergence, the biggest range for uniqueness of the solution, the optimal convergence radius and results on the convergence rate are established. Besides, two special cases of the general theory are presented as an application.

Keywords: Inclusion problems, Newton's method, majorant condition, local convergence.

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