

*Dedicated to Professor Ion PĂVĂLOIU on his 60<sup>th</sup> anniversary*

## On the $r$ -convergence orders of the inexact perturbed Newton methods

EMIL CĂTINAŞ

### Abstract

The inexact perturbed Newton methods recently introduced by us are variant of Newton method, which assume that at each step the linear systems are perturbed, and then they are only approximately solved.

The  $q$ -convergence orders of the iterates were characterized using the results of Dembo, Eisenstat and Steihaug on inexact Newton methods.

In this note we deduce, in the same manner, the characterization of the  $r$ -convergence orders of these iterates.