Electronic Journal: Southwest Journal of Pure and Applied Mathematics
Internet: http://rattler.cameron.edu/swjpam.html
ISSN 1083-0464
Vol. No. 01, 1997, pp. 18–22.
Submitted: February 7, 1997. Published: July 23, 1997.

GENERAL WAYS OF CONSTRUCTING ACCELERATING NEWTON-LIKE ITERATIONS ON PARTIALLY ORDERED TOPOLOGICAL SPACES

Ioannis K. Argyros

Abstract. In this study, we examine the monotone convergence of Newton-like methods to a solution of an equation on a partially ordered topological space setting. In particular we provide sufficient conditions for the construction of accelerating sequences. This way the solution is obtained faster than in earlier results.

1991 A.M.S. (MOS) Subject Classification Codes. 65J15, 47H17, 49D15.

Key Words and Phrases. Partially ordered topological space, accelerating iteration, nonlinear equation.

Department of Mathematics, Cameron University, Lawton, OK 73505, U.S.A.
E-mail Address: ioannisa@cameron.edu