

The repeated procedure IRTSS1 for simultaneous inclusion of polynomial zeros

ABSTRACT

The rate of convergence of the interval symmetric single-step procedure IRSS1 is increased by introducing a Newton's method (NM) at the beginning of the procedure. The numerical convergence of this new procedure called IRTSS1 is shown. Based on the numerical results, this new procedure performed better than does IRSS1 in terms of improved CPU times while maintaining the number of iterations.

Keyword: Interval procedure; R-order of convergence; Simple zeros