Parallel block method for solving delay differential equations.

ABSTRACT

This paper considers the implementation of a two-point diagonally implicit block method for solving delay differential equations on parallel machines. The variable stepsize variable order block method produces two points simultaneously within a block. For greater advantage, formulae for the predictor-corrector scheme are represented in divided difference form. Performance of the parallelization is assessed in terms of speedup and efficiency.

Keyword: Delay differential equations; Parallel processing; Block methods; Predictor-corrector.