Solving delay differential equations using embedded singly diagonally implicit Runge-Kutta methods

ABSTRACT

In this paper we used three embedded diagonally implicit Runge-Kutta methods to solve a standard set of delay differential equations. Some of the methods share the FSAL (first stage as last) property and the same stage order. The Q-stability polynomials of the methods are obtained and their stability regions presented. Numerical results are tabulated and compared,from which we can conclude that the method with the highest order and the higher stage order is the most efficient.