

Solving fuzzy differential equation using fourth-order four-stage improved Runge–Kutta method

ABSTRACT

In this paper the fuzzy improved Runge–Kutta method of order four for solving first-order fuzzy differential equations is proposed. The scheme is two step in nature and is based on the fourth-order improved Runge–Kutta method for solving first-order ordinary differential equations. The numerical examples are tested to illustrate the efficiency of method.

Keyword: Fuzzy improved Runge–Kutta method; Fuzzy differential equations; Two-step methods; Improved Runge–Kutta method