

On new solutions of linear system of first -order fuzzy differential equations with fuzzy coefficient

ABSTRACT

In this paper, we firstly introduce system of first order fuzzy differential equations. Then, we convert the problem to two crisp systems of first order differential equations. For numerical aspects, we apply exponentially fitted Runge Kutta method to solve the fuzzy problems. We solve some well-known examples in order to demonstrate the applicability and accuracy of results.

Keyword: System of fuzzy differential equations; Exponentially fitted Runge-Kutta method; Generalized Hukuhara differentiability