عنوان مقاله:

EXTENDED PREDICTOR-CORRECTOR METHODS FOR SOLVING FUZZY DIFFERENTIAL EQUATIONS UNDER GENERALIZED DIFFERENTIABILITY

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خلاصه مقاله:

In this paper, the (m+۱)-step Adams–Bashforth, Adams–Moulton, and Predictor-Correctormethods are used to solve rst-order linear fuzzy ordinary dierential equations. The conceptsof fuzzy interpolation and generalised strongly dierentiability are used, to obtaingeneral algorithms. Each of these algorithms has advantages over current methods. Moreover,for each algorithm a convergence formula can be obtained . The convergence of thesemethods is proven in detail. Finally, these methods are illustrated using example initial valueproblems.

کلمات کلیدی:

Fuzzy-number-valued function, Generalized dierentiability, Fuzzy dierential equation, Adams–Bashforth method, Adams–Moulton method, Predictor-Corrector method

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