

An attempt to design a fast and structure preserving scheme for Feng equation

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Abstract:

We have studied how to design structure preserving schemes for partial differential equations and obtained some results about Feng equation. But the obtained scheme is fully implicit and it means that we have to use some nonlinear solver to obtain numerical solutions. To overcome this nonlinearity, linearization technique, which is a kind of relaxation of discrete approximation, may be available and we have tried to use it for Feng equation.