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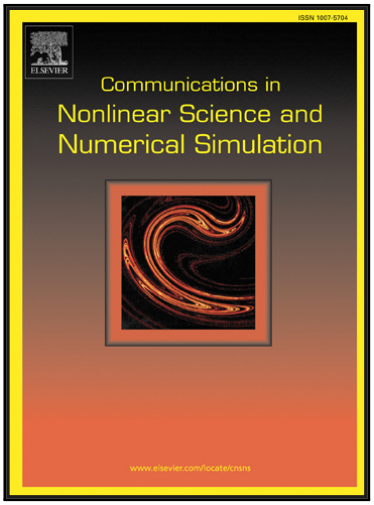

Higher Order Scheme for Two-Dimensional Inhomogeneous sine-Gordon Equation with Impulsive Forcing

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Highlights

- Higher order scheme is presented for two-dimensional inhomogeneous sine-Gordon equation with impulsive forcing representing defect.
- Spectral stability analysis gives implicit expression for critical time step. Moreover, error analysis gives optimal rate of convergence.
- Various two-dimensional test cases of sine-Gordon equation are solved to show the efficacy of the proposed scheme.

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