# Numerical solution of the hyperbolic-Schrödinger equation with the multipoint nonlocal boundary condition

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**Abstract:** In this work, we suggest a numerical method to solve hyperbolic-Schrödinger partial differential equations with multipoint nonlocal boundary condition. The stability estimates for the solution of the given problem are established. The first and second order of accuracy difference schemes are obtained for the solution of the given problem. These difference schemes are solved by using the method of modified Gauss elimination for one-dimensional hyperbolic-Schrödinger partial differential equations. The results of numerical experiments are given for supporting the method.

**Keywords:** finite difference equation, partial differential equation, stability

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