

Source Identification Problems for Schrödinger Differential and Difference Equations

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Abstract: In the present study, a source identification problem for a one-dimensional Schrodinger equation is investigated. Stability estimates for the solution of the source identification problem are established. A first order of accuracy difference scheme for the numerical solution of this problem is presented. Stability estimates for the solution of this difference scheme are established. Numerical results are provided.

Keywords: Source identification problem, Schrodinger differential equation, difference scheme.

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