Turkish Journal of Mathematics

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THE INVERSE NONSTATIONARY SCATTERING PROBLEM FOR A HYPERBOLIC SYSTEM OF EQUATIONS ON SEMI-AXIS

N. Sh. ISKENDEROV, A. YILDIZ

Abstract: In this paper, the direct and inverse nonstationary scattering problem for a hyperbolic system of n equations (n>3) on a semi-axis is studied. The coefficients of the system are uniquely determined according to scattering operator. The solution of the problem is generalized for an arbitrary natural number n applying the properties of separation of factors by means of operator transformations to some elements of the scattering operator and its inverse as well as reducing the scattering problem given on a semi-axis to the scattering problem on the whole-axis.

Full text: pdf
Other articles published in the same issue: Turk. J. Math.,vol.20,iss.4.