



## **LAX PAIR AND RIEMANN-HILBERT METHOD FOR SOLVING SCATTERING PROBLEMS IN SEISMOLOGY**

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New Riemann - Hilbert method was suggested recently by A.Fokas for studying boundary problems for linear and integrable nonlinear PDEs. In this paper we extend this approach for solution of the vector elastodynamic equation in inhomogeneous geomaterials. Scattering of Rayleigh wave in an elastic quarter space is considered. The suitable Lax pair formulation of the elastodynamic equation is obtained. The integral representations for the solutions of the Lax pair equations are found. This reduces the problem to the analysis of certain Riemann - Hilbert problems. The results of this analysis, which uses the apparatus of the Jacobian elliptic functions will be reported at the meeting.