

**G. Khatiashvili**

**N. Muskhelishvili Institute of Computational Mathematics,  
Georgian Academy of Sciences  
Tbilisi, Georgia**

**DIRICHLET'S AND NEUMAN'S PROBLEMS FOR  
LAYERED ELLIPTIC MEDIUMS**

In the first part, there are considered the Dirichlet's and Neuman's plane problems for isotropic and anisotropic mediums, with exterior elliptic boundary and interfaces, occupying following domains: a) two-layered elliptic ring, b) two-layered elliptic ring strengthened by isotropic or anisotropic solid elliptic kernel, c) isotropic or anisotropic infinite medium (environment) strengthened by indicated layered elliptic ring.

In the second part, the obtained results are generalized for the multilayered elliptic ring and infinite medium (environment). It is assumed that each layer is made from materials with different physical characteristics and all ellipses are confocal.

All problems are solved using Faber's polynomials.