

Elmaga A. GASIMOV

# SOLVABILITY OF SOME BOUNDARY VALUE PROBLEMS FOR LAPLACE EQUATION

## Abstract

*One of the important solution methods of boundary value problems for elliptic equations is the method of potentials theory used by many authors [1]-[3].*

*When boundary conditions of the considered problems contain higher derivatives, the use of classic potentials of simple or double layers doesn't lead to the aim.*

*In the given paper, we introduce special potentials [4]-[7] that allow to solve boundary value problems for elliptic equations when a boundary condition may contain higher derivatives. Here, consideration of Laplace equation is caused by simplification of notation. As a matter of fact, these problems are solved for second order elliptic equations.*