

## On approximate solution of one class of singular integral equations

**A. Papukashvili**

[archil.papukashvili@tsu.ge](mailto:archil.papukashvili@tsu.ge)

Department of Mathematics, Iv. Javakhishvili Tbilisi State University,  
2 University St., 0186 Tbilisi, Georgia

In the present article the problems for composite (piece-wise homogeneous) bodies weakened by cracks when cracks intersect an interface or penetrate it at rectangular angle is studied. Antiplane problems of the elasticity theory for piece-wise homogeneous orthotropic plane is reduced to the system (pair) of singular integral equations containing an immovable singularity with respect to the tangent stress jumps (problem A). First the behaviour of solutions in the neighbourhood of the crack endpoints is studied (see [1]). In a partial case when one half-plane has a rectilinear cut of finite length, which is perpendicular to the boundary, and one end of which is located on the boundary. We have one singular integral equation containing an immovable singularity (problem B). The question of the approached decision of one system (pair) of the singular integral equations is investigated. A general scheme of approximate solutions is composed by the collocation and asymptotic methods are presented (see [2], [3]).

### Referencies:

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- [3] Vashakmadze T. The Theory of Anisotropic Elastic Plates. Kluwer Academic Publishers. Dordrekht/Boston/London. 1999. 256 p.