

**INFLUENCE FUNCTIONS AND INTEGRAL FORMULAE  
FOR SPHERICAL THERMOELASTIC BODIES**

Victor Seremet<sup>\*</sup>, Guy Bonnet<sup>\*\*</sup> & Tatiana Speianu<sup>\*</sup>

*\*Department of Mathematics and Engineering, Agrarian State University of Moldova, Moldova*

*\*\* Laboratoire de Mécanique, Université de Marne la Vallée, 77454 Marne la Vallée France*

This paper proposes a new method to derive the influence functions for volume dilatation and Green's matrices for canonical domains of spherical system of coordinates. On this basis new thermo elastic influence functions and general integral formulae for determination of displacements in the cases of some classes of locally mixed boundary value problems in static and dynamical uncoupled thermo elasticity are suggested. The advantage of proposed formulae is that they allow us to unite the two-stage process of solving the boundary value problems in the theory of thermal stresses into one single stage. The desired thermo elastic displacements are determined directly via prescribed inner and boundary heat actions. An example of influence functions for displacements and integral solution of a mixed boundary value problem for thermo elastic wedge is considered.