

Deformation Due to Thermal Source in Micropolar Generalized Thermoelastic Half-Space by Finite Element Method

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Authors: Abbas, Ibrahim A.; Kumar, Rajneesh

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-  **Abstract**
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The present investigation deals with deformation in micropolar generalized thermoelastic materials due to thermal source. Lord-Shulman (LS) (1967) and Green-Lindsay (GL) (1972) theories are used to study the problem. As an application of the approach, a particular type of thermal source is considered and the problem is solved by finite element method. The components of displacement, microrotation, stress and temperature distribution are obtained. The numerical computation is performed for the resulting quantities and depicted graphically for different theories of thermoelasticity. Appreciated effect of relaxation times is obtained on various quantities.

Keywords: FINITE ELEMENT METHOD; GREEN-LINDSAY THEORY; LORD-SHULMAN THEORY; MICROPOLAR MATERIALS

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