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## Heat Transfer Research

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Forthcoming Article

### Non-Linear Generalized Thermoelasticity of Temperature Dependent Materials Properties

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#### ABSTRACT

In this work, we get the exact solution of a nonlinear model of the thermal shock problem of generalized thermoelastic half-space of temperature dependent materials. We considered two different cases of temperature dependent materials. Finite element analysis technique is used to get the numerical solutions. The results for the temperature increment, the displacement, and the stress distributions are illustrated graphically with some comparisons. The temperature dependent materials parameters have significant effects on all the studied fields.



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