

Invariants of linear parabolic differential equations

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Abstract

The paper is dedicated to construction of invariants for the parabolic equation

$$u_t + a(t, x)u_{xx} + b(t, x)u_x + c(t, x)u = 0.$$

We consider the equivalence group given by point transformations and find all invariants up to seventh-order, i.e. the invariants involving the derivatives up to seventh-order of the coefficients a , b and c with respect to the independent variables t , x .

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