

On the contact equivalence problem of second order ODEs which are quadratic with respect to the second order derivative

Vadim V. Shurygin Jr

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In the present paper we establish the necessary and sufficient conditions for two ordinary differential equations of the form $y''^2 + A(x, y, y') y'' + B(x, y, y') = 0$ to be equivalent under the action of the pseudogroup of contact transformations. These conditions are formulated in terms of integrals of some one-dimensional distributions.

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