

# **On partial preliminary group classification of some class of (1+3)-dimensional Monge-Ampère equations. I. One-dimensional Lie algebras.**

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A solution of many problems of the geometry, theoretical physics, astrophysics, differential equations, nonlinear elasticity, fluid dynamics, optimal mass transportation, one-dimensional gas dynamics and etc. is reduced to investigation of classes of Monge-Ampère equations in the spaces of different dimensions and different types.

At the present time, we have performed partial preliminary group classification of some class of (1+3)-dimensional Monge-Ampère equations using functional bases of first-order differential invariants of one-dimensional nonconjugate subalgebras of the Lie algebra of the Poincaré group  $P(1,4)$ .

In my report, I plan to present some of the results obtained concerning with partial preliminary group classification of the class under consideration.