

# On group classification of nonlinear evolution equations: algebraic approach

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We have reconsidered the complete group classification of two classes of (1+1)-dimensional nonlinear evolution equations  $u_t = H(u_{xx})$  and  $u_t + uu_x = H(u_{xx})$  up to the  $G^\sim$ -equivalence. In modified classification procedure (see [1, 2] and references therein), we have used the specific structure of Lie symmetries of the evolution equations for involving the classical Lie theorem on realizations of Lie algebras by vector fields on the line. This approach has substantially simplified the proofs of the classification results and, in particular, simplified the solution of the determining equations.

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## References

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