

## HIGHER ORDER INTEGRABLE LAGRANGIANS

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We will show results on the integrability of Euler-Lagrange equations arising from Lagrangians of second order. Integrability will be understood under the symmetry approach of A. Shabat et al. Lagrangian systems usually yield equations of hyperbolic type, and applying the symmetry approach to hyperbolic equations is quite difficult. But in the case of Euler-Lagrange equations, the symmetry approach is applicable if one uses its generalization to certain non evolutionary equations as reported in R. Hernández Heredero, A. Shabat and V. Sokolov, *J. Phys. A: Math. Gen.* 36 (2003) L605–L614.