

Point symmetry group of the Lagrangian

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Abstract

The theory of finite point symmetry transformations is revisited within the frame of the general theory of transformations of Lagrangian mechanics. The point symmetry group $G(L)$ of a given Lagrangian function L (i.e., the Noether group) is thus obtained, and its main features are briefly discussed. The explicit calculation of the Noether group is presented for two rather simple c -equivalent Lagrangian systems. The formalism affords an introduction to the Noether theory of infinitesimal point symmetry transformations in Lagrangian mechanics; however, it is also of interest in its own right.