

Momoniati, E.; Mahomed, F. M.

The existence of contact transformations for evolution-type equations. (English)

Zbl 0945.35006

J. Phys. A, Math. Gen. 32, No. 49, 8721-8730 (1999).

The authors consider n th order evolution equations $u_t = F(t, x, u, u_x, u_{xx}, \dots, u_{(n)})$ and give an elementary proof that their contact transformations are exhausted by extended Lie transformations if F is expandable as a power series in terms of the derivatives $u_{xx}, \dots, u_{(n)}$.

Reviewer: [Michal Marvan \(Opava\)](#)

MSC:

[35A30](#) Geometric theory, characteristics, transformations in context of PDEs

[35A22](#) Transform methods (e.g., integral transforms) applied to PDEs

[35G25](#) Initial value problems for nonlinear higher-order PDEs

Cited in **1** Review
Cited in **5** Documents

Keywords:

[extended Lie transformations](#)

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