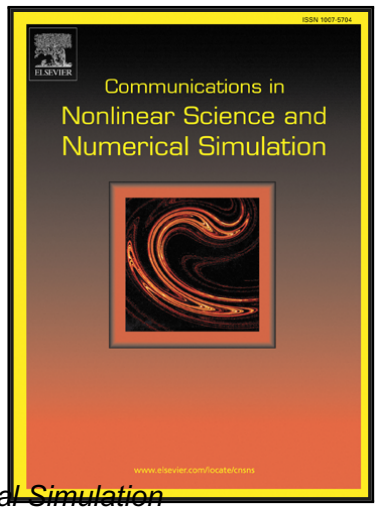
Accepted Manuscript



On the symmetries of a nonlinear non-polynomial oscillator

R. Mohanasubha, M. Senthilvelan

PII: S1007-5704(16)30214-3
DOI: 10.1016/j.cnsns.2016.06.013
Reference: CNSNS 3900

To appear in: *Communications in Nonlinear Science and Numerical Simulation*

Received date: 9 January 2016
Revised date: 8 March 2016
Accepted date: 9 June 2016

Please cite this article as: R. Mohanasubha, M. Senthilvelan, On the symmetries of a nonlinear non-polynomial oscillator, *Communications in Nonlinear Science and Numerical Simulation* (2016), doi: 10.1016/j.cnsns.2016.06.013

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Highlights

- We propose a novel way to obtain different kinds of symmetries from λ-symmetries for a given second-order nonlinear ODE.
- The symmetry vector fields which we generate are adjoint-symmetries, contact symmetries and telescopic vector fields.
- The procedure is demonstrated for a nonlinear non-polynomial oscillator which lacks Lie point symmetries.

ACCEPTED MANUSCRIPT

Download English Version:

https://daneshyari.com/en/article/7155044

Download Persian Version:

https://daneshyari.com/article/7155044

Daneshyari.com