Summary of symmetry calculations

June 7, 2021

Contents

Chapter 1

hydons_model

Run 01_11PM_04_June-2021

Degree in tangential ansätze: 1
The reaction terms are:

$$\frac{\mathrm{d}y_1}{\mathrm{d}t} = \frac{ty_1 + y_2^2}{-t^2 + y_1 y_2}$$
$$\frac{\mathrm{d}y_2}{\mathrm{d}t} = \frac{ty_2 + y_1^2}{-t^2 + y_1 y_2}$$

The calculated generator is:

$$X = (K_6 t)\, \partial t + (K_6 y_1)\, \partial y_1 + (K_6 y_2)\, \partial y_2 \tag{1.1}$$

Run 11_23PM_07_June-2021

Degree in tangential ansätze: 1
The reaction terms are:

$$\frac{\mathrm{d}y_1}{\mathrm{d}t} = \frac{ty_1 + y_2^2}{-t^2 + y_1 y_2}$$
$$\frac{\mathrm{d}y_2}{\mathrm{d}t} = \frac{ty_2 + y_1^2}{-t^2 + y_1 y_2}$$

The calculated generator is:

$$X = (K_6 t)\, \partial t + (K_6 y_1)\, \partial y_1 + (K_6 y_2)\, \partial y_2 \tag{1.2}$$

Run 11_29PM_07_June-2021

Degree in tangential ansätze: 1
The reaction terms are:

$$\frac{\mathrm{d}y_1}{\mathrm{d}t} = \frac{ty_1 + y_2^2}{-t^2 + y_1 y_2}$$

$$\frac{\mathrm{d}y_2}{\mathrm{d}t} = \frac{ty_2 + y_1^2}{-t^2 + y_1 y_2}$$

The calculated generator is:

$$X = (K_6 t)\,\partial t + (K_6 y_1)\,\partial y_1 + (K_6 y_2)\,\partial y_2 \tag{1.3}$$

Run 11_35PM_07_June-2021

Degree in tangential ansätze: 1
The reaction terms are:

$$\frac{\mathrm{d}y_1}{\mathrm{d}t} = \frac{ty_1 + y_2^2}{-t^2 + y_1 y_2}$$

$$\frac{\mathrm{d}y_2}{\mathrm{d}t} = \frac{ty_2 + y_1^2}{-t^2 + y_1 y_2}$$

The calculated generator is:

$$X = (K_6 t)\,\partial t + (K_6 y_1)\,\partial y_1 + (K_6 y_2)\,\partial y_2 \tag{1.4}$$

Run 11_36PM_07_June-2021

Degree in tangential ansätze: 1
The reaction terms are:

$$\frac{\mathrm{d}y_1}{\mathrm{d}t} = \frac{ty_1 + y_2^2}{-t^2 + y_1 y_2}$$

$$\frac{\mathrm{d}y_2}{\mathrm{d}t} = \frac{ty_2 + y_1^2}{-t^2 + y_1 y_2}$$

The calculated generator is:

$$X = (K_6 t)\,\partial t + (K_6 y_1)\,\partial y_1 + (K_6 y_2)\,\partial y_2 \tag{1.5}$$

Run 11_38PM_07_June-2021

Degree in tangential ansätze: 1
The reaction terms are:

$$\frac{\mathrm{d}y_1}{\mathrm{d}t} = \frac{ty_1 + y_2^2}{-t^2 + y_1 y_2}$$

$$\frac{\mathrm{d}y_2}{\mathrm{d}t} = \frac{ty_2 + y_1^2}{-t^2 + y_1 y_2}$$

The calculated generator is:

$$X = (K_6 t)\, \partial t + (K_6 y_1)\, \partial y_1 + (K_6 y_2)\, \partial y_2 \tag{1.6}$$

Run 11_38PM_07_June-2021

Degree in tangential ansätze: 1

The reaction terms are:

$$\frac{\mathrm{d}y_1}{\mathrm{d}t} = \frac{t y_1 + y_2^2}{-t^2 + y_1 y_2}$$

$$\frac{\mathrm{d}y_2}{\mathrm{d}t} = \frac{t y_2 + y_1^2}{-t^2 + y_1 y_2}$$

The calculated generator is:

$$X = (K_6 t)\, \partial t + (K_6 y_1)\, \partial y_1 + (K_6 y_2)\, \partial y_2 \tag{1.7}$$