## Identified PDEs

|        | None                 | Moving Avg           | Cubic Spline         | Savitzky Golay       | Kernel Filter          |
|--------|----------------------|----------------------|----------------------|----------------------|------------------------|
| 1 term | NA                   | NA                   | NA                   | NA                   | NA                     |
| 2 term | $-7.57265uu_x +$     | NA                   | $-6.35892uu_x +$     | NA                   | NA                     |
|        | $9.20864u^2u_x$      |                      | $7.25214u^2u_x$      |                      |                        |
| 3 term | $-8.13788uu_x +$     | NA                   | $-7.48423uu_x +$     | 6.24250u +           | $406.15548u^2u_{xx} +$ |
|        | $13.32844u^2u_x +$   |                      | $9.51256u^2u_x +$    | $-24.20077u^2 +$     | $301.07389u^2u_{xxx}$  |
|        | $0.29776u^2u_{xx}$   |                      | $-0.01629u^2u_{xxx}$ | $-3.16153uu_x$       | $187.96364u^2u_{xxxx}$ |
| 4 term | $-11.35137uu_x +$    | $-5.10560uu_x +$     | $0.71892u_x +$       | $-2.71153uu_x +$     | NA                     |
|        | $18.23336u^2u_x +$   | $11.22482u^2u_x +$   | $-10.96088uu_x +$    | $0.18731uu_{xx} +$   |                        |
|        | $-0.21804uu_{xx} +$  | $0.63362u^2u_{xx} +$ | $12.49525u^2u_x +$   | $-0.47644u^2u_{xx}+$ |                        |
|        | $0.65337u^2u_{xx}$   | $0.01754u^2u_{xxx}$  | $-0.01657u^2u_{xxx}$ | $-0.01670u^2u_{xxx}$ |                        |
| 5 term | $-11.73880uu_x +$    | $-6.17156uu_x +$     | NA                   | NA                   | NA                     |
|        | $21.16582u^2u_x +$   | $12.90662u^2u_x +$   |                      |                      |                        |
|        | $-0.24670uu_{xx} +$  | $-0.22997uu_{xx} +$  |                      |                      |                        |
|        | $1.06030u^2u_{xx} +$ | $1.14497u^2u_{xx} +$ |                      |                      |                        |
|        | $0.01459u^2u_{xxx}$  | $0.02513u^2u_{xxx}$  |                      |                      |                        |
| 6 term | $-14.26977uu_x +$    | $-7.74109uu_x +$     | NA                   | 5.40982u +           | NA                     |
|        | $29.74040u^2u_x +$   | $17.07645u^2u_x +$   |                      | $-25.99111u^2 +$     |                        |
|        | $-0.63261uu_{xx} +$  | $-0.45185uu_{xx} +$  |                      | $0.12544u_{xx} +$    |                        |
|        | $2.37197u^2u_{xx} +$ | $1.71699u^2u_{xx} +$ |                      | $-6.07009uu_x +$     |                        |
|        | $-0.01559uu_{xxx}+$  | $-0.00978uu_{xxx} +$ |                      | $-0.57899uu_{xx} +$  |                        |
|        | $0.06715u^2u_{xxx}$  | $0.05077u^2u_{xxx}$  |                      | $-0.02084u^2u_{xxx}$ |                        |