# Model Documentation of the:

## N integrator chain

## 1 Nomenclature

### 1.1 Nomenclature for Model Equations

$u$   input

## 2 Model Equations

$$\dot{x}_1 = x_2 \tag{1a}$$
$$\dot{x}_2 = x_3 \tag{1b}$$
$$... \tag{1c}$$
$$\dot{x}_{n-1} = x_n \tag{1d}$$
$$\dot{x}_n = u \tag{1e}$$

Inputs: $u$
Parameters:
Outputs:

## 3 Derivation and Explanation

## References

[1] Wang, X.; Saberi1, A.; Stoorvogel, A. A.; Grip, H. F.: *Control of a chain of integrators subject to actuator saturation and disturbances*, international journal of robust and nonlinear control, 2011