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| --- | --- | --- | --- | --- |
| **File** | **System** | **x0** | **t** | **u** |
| data | x’ = -0.1x + u | linspace(-2, 2, 11) | [0, 50] | Fourier(period = 2, n\_basis = 10) |
| data\_2 | x’ = -0.1x + u | linspace(-1.9, 1.9, 20) | [0, 50] | Fourier(period = 2, n\_basis = 10) |
| data\_3 | x’ = -0.1x + u | linspace(-1.9, 1.9, 20) | [0, 50] | Fourier(period = pi, n\_basis = 20) |
| data\_4 | x’ = -0.1x + u | linspace(-1.9, 1.9, 20) | [0, 50] | 3\*Fourier(period = pi, n\_basis = 8) |
| data\_5 | x’ = -0.1x + u | linspace(-1.9, 1.9, 20) | [0, 50] | Nomarlized Chebychev(n\_basis = 5) |
| data\_6 | x' = -x2 + u | linspace(-1, 1, 11) | [0, 1, 51] | Fourier(period = 2, n\_basis = 10) |
| data\_7 | x' = -x2 + u | linspace(-0.9, 0.9, 10) | [0, 1, 51] | Nomarlized Chebychev(n\_basis = 5) |
| data\_8 | θ'' + sin(θ) = u | linspace(-1, 1, 11) | [0, 1, 51] | Fourier(period = 2, n\_basis = 5) |
| data\_9 | θ'' + sin(θ) = u | linspace(-0.9, 0.9, 10) | [0, 1, 51] | Nomarlized Chebychev(n\_basis = 5) |
| data\_10 | Zone model |  | [0, 512] |  |
| data\_11 | Zone model |  | [512, 1024] |  |
| data\_12 | s1' = s2  s2' = -sin(s1) + u | linspace(-1, 1, 5)  linspace(-1, 1, 5) | [0, 1, 11] | Fourier(period = 2, n\_basis = 5) |
| data\_13 | s1' = s2  s2' = -sin(s1) + u | linspace(-0.9, 0.9, 10)  linspace(-0.9, 0.9, 10) | [0, 1, 11] | Nomarlized Chebychev(n\_basis = 5) |