Parameters

Math parameters:

- Dynamical system: Pendulum
- Numerical method: Forward Euler
- Interval where time steps are selected for training: [0.05, 2.5]
- Time for ODE's simulation: 20
- Time step for ODE's simulation: 0.1
- Amplitude of noise for data's perturbation: 0.0

AI parameters:

- Domain where data are selected: $[-R, R]^d$, R= 2 and d= 2
- Number of Data: 1 000 000
- Number of time steps selected for an initial data: 1
- Proportion of data for training: 0.8
- Number of terms in then perturbation (MLP's): 1
- Hidden layers per MLP: 2
- Neurons on each hidden layer: 200
- Learning rate: 2.00E-03
- Weight decay: 1.00E-09
- Batch size (mini-batching for training): 150
- Epochs: 200
- Epochs between two prints of the loss value: 20