

README

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This code implements [F18] and plots the error in gain and cost.

The code is written in Python 3 and there are three files: `constants_f18.py`, `f18.py`, `LQSys.py`. The steps for running the code are as follows:

1. In `constants_f18.py`, set the desired variables as per the simulation parameters, see Table 1 respectively for location of these variables in the code.
2. Run `f18.py`

Table 1: Simulation parameters in `constants_f18.py`

Modelling parameter	Variable name in code	Line number in code
Total simulation time (T)	<code>T</code>	4
Stepsize (Δt)	<code>STEP</code>	5
Gradient descent iterations	<code>GD_ITER</code>	12
Seed for RNG	<code>SEED0</code>	9
Number of repetitions for averaging	<code>N</code>	7
Gradient descent step (α)	<code>NVEC</code>	13
Smoothing parameter (r)	<code>NSIM</code>	11
Number of masses ($d/2$)	<code>MASSES</code>	15