## Selected Topics of LGT

Gustavo Ramirez Assignment # 1

1 a)

...

## 2 b)

The implementation of this part can be found in main.py and simulation.py.

## 3 c)

A plot of  $S_E$  can be found in sim\_action\*.png. A safe value for the burn-in seems to be 5000 MC steps.

## 4 d)

A histogram of  $x_k$  can be found in sim\_wave\_function\*.png. The continuous plot corresponds to the ground state of the Quantum Harmonic Oscillator.