In the name of God

Department of Physics
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COMPUTATIONAL PHYSICS

Exercise Set 9

(Date Due: 1393/10/01)

1. Based on Variational theorem in the quantum mechanics, write a variational Monte-Carlo program to estimate the ground state of 1D harmonic oscillator.

2. Fitting formula: Using file which is called *fitinput.txt* and consider $y_{theory} = ax^H$ compute a, H and their errors using MCMC method.

Good luck, Movahed