

# Hamiltonian to quantum circuit

- The hamiltonian  $H_c$  contains the quantum definition of the ~~prob~~ problem.

- create quantum circuit that will help sample good solutions from quantum computer

① Start in ground state of a known system  $H_0 |0\rangle$

② Steer the system into ground state of the cost operator you are interested in.

a. apply operators  $\{ e^{-i\gamma_p H_c}, e^{-i\beta_p H_M} \}$

b. sample from the resulting state