

Problem 1. *MPS Implementation*

In this exercise you will implement basic functions to handle MPS and get an idea of how these algorithms work.

1. Implement a function to initialize an MPS for an arbitrary system of size L , local Hilbert space dimension d and bond dimension D .
2. Write a routine to perform a two tensor contraction over one leg.
3. Implement a function that get the left-canonical form of an arbitrary MPS.