

stat=['f' 'f'] | N=[2 2] | J = 1 | M=6 | V\_aa=0.00 | V\_bb = 0.00 | U\_ab = 1.00e-01 | pbc = 0

$$\hat{H}_\sigma = -J \sum_{i=0}^{M-1} (1 - (-1)^{i+1} \Delta t) (a_{\sigma,i}^\dagger a_{\sigma,i+1} + h.c.) + \frac{V_{\sigma\sigma}}{2} \sum_{i=0}^M \hat{n}_{\sigma,i} (\hat{n}_{\sigma,i} - 1), \quad \hat{H}_{ab} = U_{ab} \sum_{i=0}^M \hat{n}_{a,i} \hat{n}_{b,i}, \quad \sigma \in a, b$$

$$\hat{H}_{tot} = H_1 + H_2 + H_{ab}, \quad \hat{H}_{total}|\lambda\rangle = E_\lambda|\lambda\rangle$$

