



$$H = \sum_x \sum_{i < j, k < l} U_{ijkl, x} c_{ix}^\dagger c_{jx}^\dagger c_{kx} c_{lx} + \sum_{\langle xx' \rangle} \sum_{i, j} t_{ij, xx'} c_{i, x}^\dagger c_{j, x'}$$

$$\overline{|t_{ij, xx'}|^2} = t_0^2 / N.$$