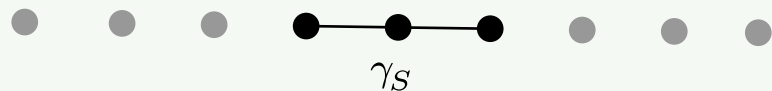


(a)

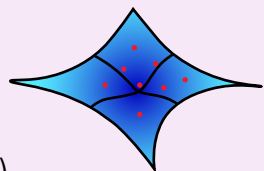
$$H = \sum c_S \gamma_S$$

interaction distance

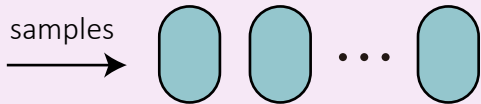


(b)

matchgates group

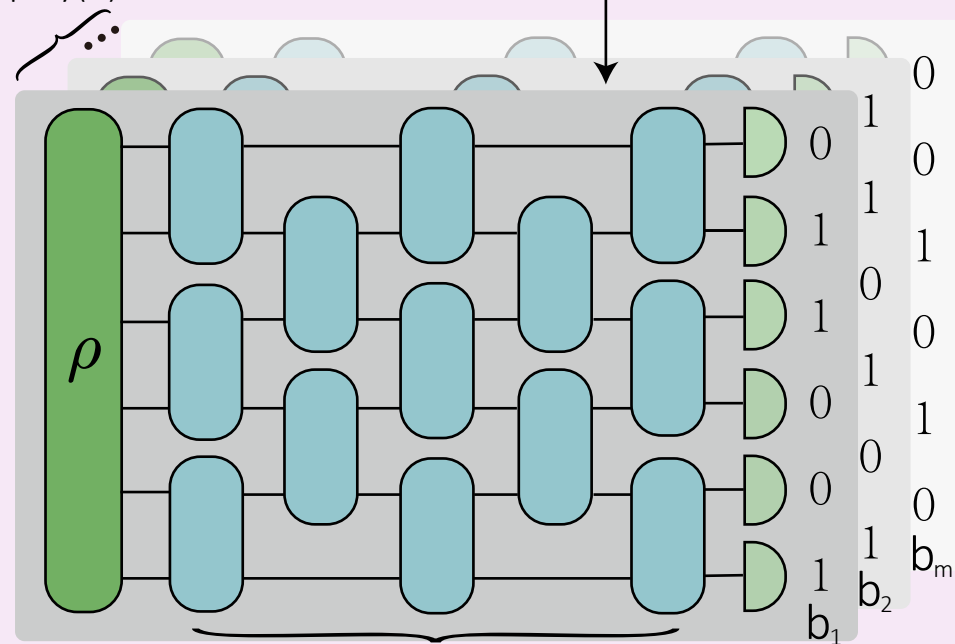


samples



construct

poly(n)

depth \propto square of H interaction distance

$$: \{b\} \rightarrow \{\hat{\rho}\} \rightarrow \mathbb{E}(\text{tr}(H\hat{\rho})) \approx \text{tr}(H\rho)$$

(c)

True $\alpha_{S,d}$ vs fitted $\alpha'_{S,d}$ 