

MPS



$$M_{\sigma(x_i)}^{\alpha_{i-1}\alpha_i}$$

by sym. (?)



$$M_{\sigma_i(x_i), \vec{x}_{<i}}^{\alpha_{i-1}\alpha_i}$$

repeat



$$M_{\sigma_i(x_i)}^{\alpha_{i-1}\alpha_i} \vec{x}_{<i}, \vec{x}$$

Transformer

Decoder Wavefunc.



$$\tilde{f}_{x_{<i}(x_i), \sigma_i(x_i), \vec{x}}, \quad \eta^{\sigma_i(x_i)}$$

reshape



linear layer
conv. layer
by MPS' M

$$f_{\sigma_i(x_i)}^{\alpha_{i-1}\alpha_i} \vec{x}_{<i}, \vec{x}$$



reshape



$$\tilde{\psi}_{\sigma_i(x_i)}^{\alpha_{i-1}\alpha_i} \vec{x}_{<i}, \vec{x} = M_{\sigma_i(x_i)}^{\alpha_{i-1}\alpha_i} \vec{x}_{<i}, \vec{x} + f_{\sigma_i(x_i)}^{\alpha_{i-1}\alpha_i} \vec{x}_{<i}, \vec{x}$$



contraction

$$\tilde{\psi}_{\sigma_i(x_i), \vec{x}_{<i}, \vec{x}} = [\tilde{\psi}_{x_1}^{\alpha_0} \tilde{\psi}_{x_2}^{\alpha_0\alpha_1} \dots \tilde{\psi}_{x_n}^{\alpha_{n-1}\alpha_n}]_{\sigma_i(x_i), \vec{x}_{<i}}$$

