

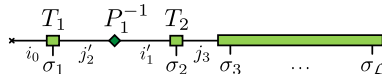
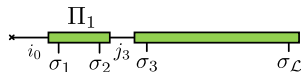
a)  $\text{rand}(\hat{\sigma}), \mathcal{T}_{\hat{\sigma}} \neq 0$

$$\mathcal{I}_\ell = \{(\hat{\sigma}_1, \dots, \hat{\sigma}_\ell)\}$$

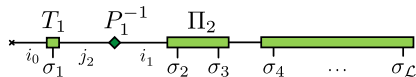
$$\mathcal{J}_\ell = \{(\hat{\sigma}_{\ell+1}, \dots, \hat{\sigma}_\mathcal{L})\}$$

$\forall \ell$

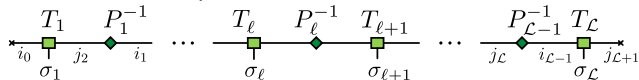
b)



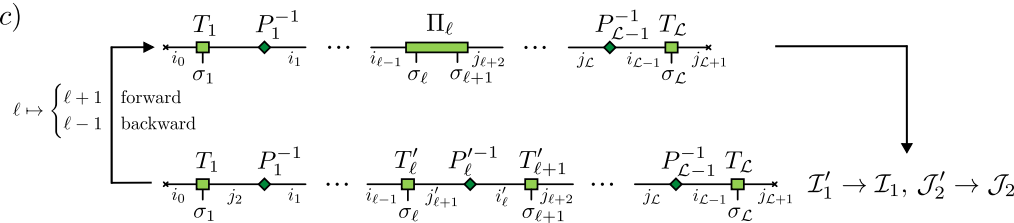
$$\mathcal{I}'_1 \rightarrow \mathcal{I}_1, \mathcal{J}'_2 \rightarrow \mathcal{J}_2$$



$\vdots$



c)



$$\mathcal{I}'_1 \rightarrow \mathcal{I}_1, \mathcal{J}'_2 \rightarrow \mathcal{J}_2$$