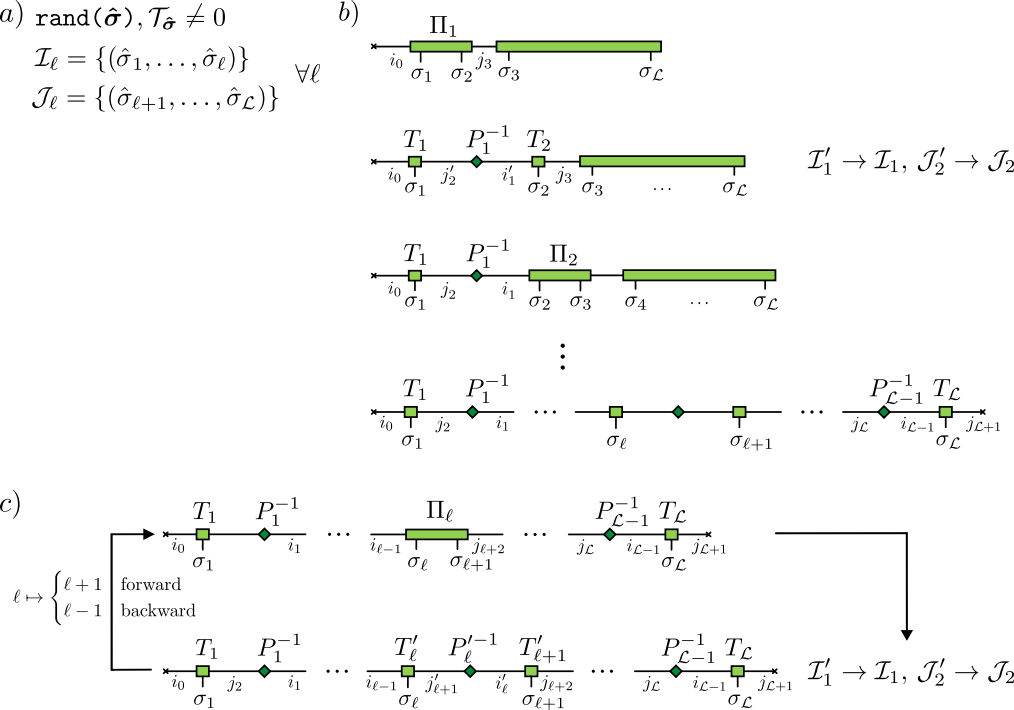
a)
rand($\hat{\boldsymbol{\sigma}}$), $\mathcal{T}_{\hat{\boldsymbol{\sigma}}} \neq 0$
$\mathcal{I}_\ell = \{(\hat{\sigma}_1, \ldots, \hat{\sigma}_\ell)\}$
$\mathcal{J}_\ell = \{(\hat{\sigma}_{\ell+1}, \ldots, \hat{\sigma}_\mathcal{L})\}$
$\forall \ell$
b)
Π_1
T_1 P_1^{-1} T_2
Π_2
$P_{\mathcal{L}-1}^{-1}$ $T_\mathcal{L}$
$\mathcal{I}'_1 \to \mathcal{I}_1$, $\mathcal{J}'_2 \to \mathcal{J}_2$
c)
Π_ℓ
$\ell \mapsto \begin{cases} \ell+1 & \text{forward} \\ \ell-1 & \text{backward} \end{cases}$
T'_ℓ P'^{-1}_ℓ $T'_{\ell+1}$
$\mathcal{I}'_1 \to \mathcal{I}_1$, $\mathcal{J}'_2 \to \mathcal{J}_2$