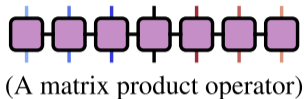


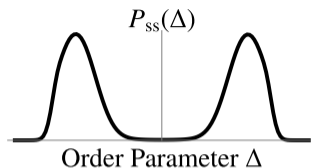
Elementary reactions
of CRN



Tensor network (TN)
decomposition of
rate operator



Marginal Distribution



Doi-Peliti

autoMPO

DMRG

Tensor Contraction
(cf. Fig. 2)

“Second quantized” form
of rate operator

$$\hat{\mathbb{W}} = \sum_{\text{rxns } i} \hat{\mathbb{W}}_i$$

e.g., $\hat{\mathbb{W}}_1 = c_1^+ \left(x_A^2 x_{A_2}^\dagger - x_A^\dagger x_{A_2} \right)$

TN decomposition of
joint distribution over
many-body microstates

