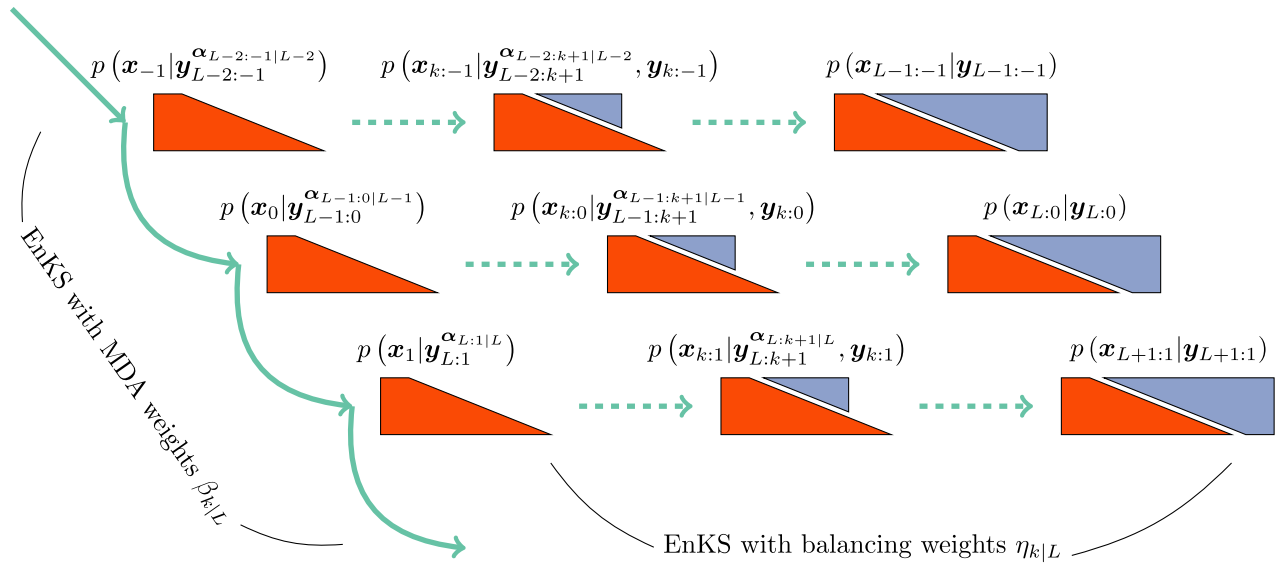
$p\left(\boldsymbol{x}_{-1}|\boldsymbol{y}_{L-2:-1}^{\boldsymbol{\alpha}_{L-2:-1|L-2}}\right)$
$p\left(\boldsymbol{x}_{k:-1}|\boldsymbol{y}_{L-2:k+1}^{\boldsymbol{\alpha}_{L-2:k+1|L-2}}, \boldsymbol{y}_{k:-1}\right)$
$p\left(\boldsymbol{x}_{L-1:-1}|\boldsymbol{y}_{L-1:-1}\right)$
$p\left(\boldsymbol{x}_{0}|\boldsymbol{y}_{L-1:0}^{\boldsymbol{\alpha}_{L-1:0|L-1}}\right)$
$p\left(\boldsymbol{x}_{k:0}|\boldsymbol{y}_{L-1:k+1}^{\boldsymbol{\alpha}_{L-1:k+1|L-1}}, \boldsymbol{y}_{k:0}\right)$
$p\left(\boldsymbol{x}_{L:0}|\boldsymbol{y}_{L:0}\right)$
$p\left(\boldsymbol{x}_{1}|\boldsymbol{y}_{L:1}^{\boldsymbol{\alpha}_{L:1|L}}\right)$
$p\left(\boldsymbol{x}_{k:1}|\boldsymbol{y}_{L:k+1}^{\boldsymbol{\alpha}_{L:k+1|L}}, \boldsymbol{y}_{k:1}\right)$
$p\left(\boldsymbol{x}_{L+1:1}|\boldsymbol{y}_{L+1:1}\right)$
EnKS with MDA weights $\beta_{k|L}$
EnKS with balancing weights $\eta_{k|L}$