Input: $y_t, \hat{y}_{t|t-1} \in \mathbb{R}^p$ for $t = 1, \ldots, T$

window size n, set Λ (or step x)

$\hat{e}_{t|t-1} = y_t - \hat{y}_t$ for $t = 1, \ldots, T$

for $i = n : T-1$ **do**

$j = i - n + 1$

$\hat{W}_j = \frac{1}{n} \sum_{t=j}^{i} \hat{e}_{t|t-1} \hat{e}'_{t|t-1}$

$\hat{R}_j = \hat{D}_j^{-1/2} \hat{W}_j \hat{D}_j^{-1/2}$

Λ = sequence (from = 0, to = 1, step = x)

for $\delta \in \Lambda$

Compute $\hat{R}_{j,\delta}$ using Eq (1)

Compute $\hat{\lambda}_{j,\delta}$ using Eq (2)

$\hat{R}^N_{j,\delta} = \hat{\lambda}_{j,\delta} \hat{R}_{j,\delta} + (1 - \hat{\lambda}_{j,\delta}) \hat{R}_j$

$\hat{W}^N_{j,\delta} = \hat{D}_j^{1/2} \hat{R}^N_{j,\delta} \hat{D}_j^{1/2}$

$P_{j,\delta} = \left(S' \hat{W}^{N\,-1}_{j,\delta} S \right)^{-1} S' \hat{W}^{N\,-1}_{j,\delta}$

$\tilde{y}_{i+1|i,\delta} = S P_{j,\delta} \hat{y}_{i+1}$

$\tilde{e}_{i+1|i,\delta} = y_{i+1} - \tilde{y}_{i+1|i,\delta}$

end

end

$MSE_\delta = MSE\left(\tilde{e}_{i+1|i,\delta} \text{ for } i = n, n+1, \ldots T-1 \right)$

$\hat{\delta}^* = \underset{\delta \in \Lambda}{\operatorname{argmin}}\, MSE_\delta$

Compute $\hat{\lambda}^*$ on $\hat{e}_{t|t-1}$ for $t = 1, \ldots T$ using $\hat{\delta}^*$ by Eq (1)

Compute $\hat{W}_1^*$ using $\hat{\delta}^*$, λ^* by Eq (3)

Return $\hat{\delta}^*$, $\hat{\lambda}^*$, $\hat{W}_1^*$