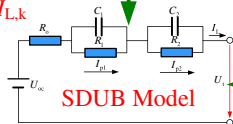




Current $I_{L,k}$



Model updating

$U_{t,k}$

$$\mathbf{e}_k = U_{t,k} - \hat{U}_{t,k}$$

$\hat{U}_{t,k}$

Error e_k

AEKF algorithm

Adaptive law

$$\mathbf{H}_k = \frac{1}{M} \sum_{i=k-M+1}^k \mathbf{e}_k \mathbf{e}_k^T \Rightarrow \mathbf{Q}_k, \mathbf{R}_k \Rightarrow \mathbf{K}_k$$

Gain \mathbf{K}_k

Correction

$$\hat{\mathbf{x}}_k^+ = \hat{\mathbf{x}}_k^- + \mathbf{K}_k \mathbf{e}_k$$

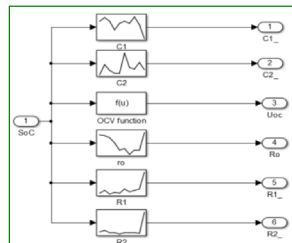
State estimates

$$\mathbf{x} = [U_{1,k} \quad U_{2,k} \quad SoC_k]$$

SoC

Parameters table

$U_{oc}, C_1, R_1, C_2, R_2, R_o$



SoC_k