

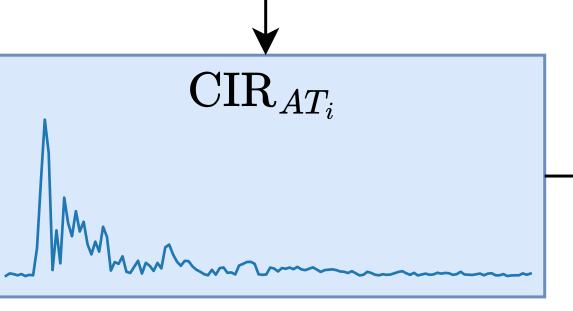
UWB Anchor A_i

$$ig| \, \mathbf{p}_{A_i} = (x_{A_i}, y_{A_i})$$

 $\overline{\mathsf{IUWB}}\,\mathsf{Tag}\,T$

$$\mathbf{p}_T = (x_T, y_T)$$

$$d_{A_iT} = \|\mathbf{p}_T - \mathbf{p}_{A_i}\|$$



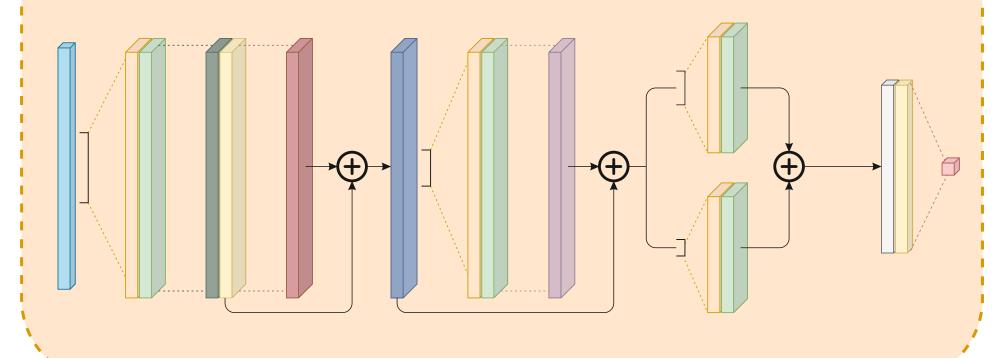
$$\hat{d}_{A_iT} = d_{A_iT} + e_{A_iT} \; ullet$$

$$\hat{e}_{A_iT} = \mathcal{M}(ext{CIR}_{A_iT})$$

$$= \mathcal{M}(\mathrm{CIR}_{A_iT})$$

Error mitigation model ${\mathcal M}$

 $ightarrow d'_{A_iT} = \hat{d}_{A_iT} - \hat{e}_{A_iT} -$



Kalman filter

$$\mathbf{x} = [x_T, y_T, v_x, v_y]^T$$

$$egin{aligned} x_T^{k+1} &= x_T^k + v_x^k \Delta t \ y_T^{k+1} &= y_T^k + v_y^k \Delta t \end{aligned}$$

$$y_T^{k+1} = y_T^k + v_y^k \Delta t$$

$$z_{A_i} = \|\mathbf{p}_T - \mathbf{p}_{A_i}\|$$

$$\hat{\mathbf{p}}_T = (x_T, y_T)$$