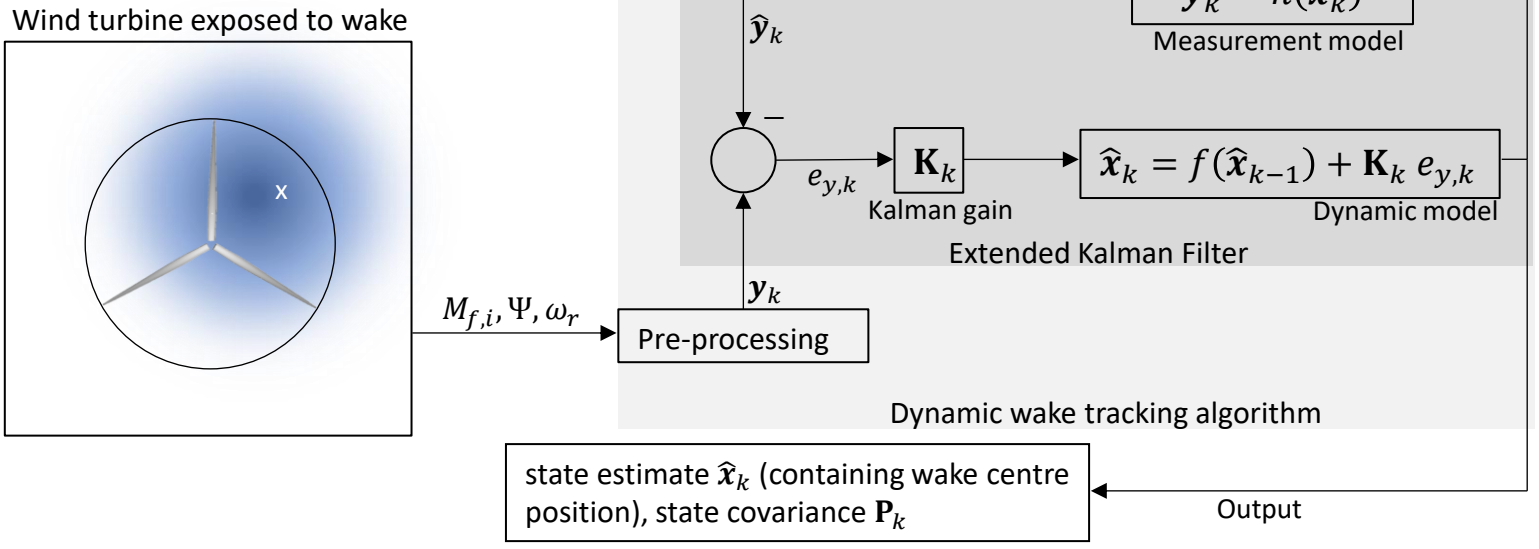
Wind turbine exposed to wake
x
$M_{f,i}, \Psi, \omega_r$
Pre-processing
$\boldsymbol{y}_k$
$\hat{\boldsymbol{y}}_k = h(\hat{\boldsymbol{x}}_k)$
Measurement model
$\hat{\boldsymbol{y}}_k$
−
$e_{y,k}$
$\mathbf{K}_k$
Kalman gain
$\hat{\boldsymbol{x}}_k = f(\hat{\boldsymbol{x}}_{k-1}) + \mathbf{K}_k\, e_{y,k}$
Dynamic model
Extended Kalman Filter
Dynamic wake tracking algorithm
state estimate $\hat{\boldsymbol{x}}_k$ (containing wake centre position), state covariance $\mathbf{P}_k$
Output