

$$d\mathbf{x}_t = \mathbf{A}\mathbf{x}_t dt + \mathbf{B}\mathbf{u}_t dt + \mathbf{E}d\mathbf{w}_t$$

$$d\mathbf{y}_t = \mathbf{C}\mathbf{x}_t dt + \mathbf{G}d\mathbf{v}_t,$$