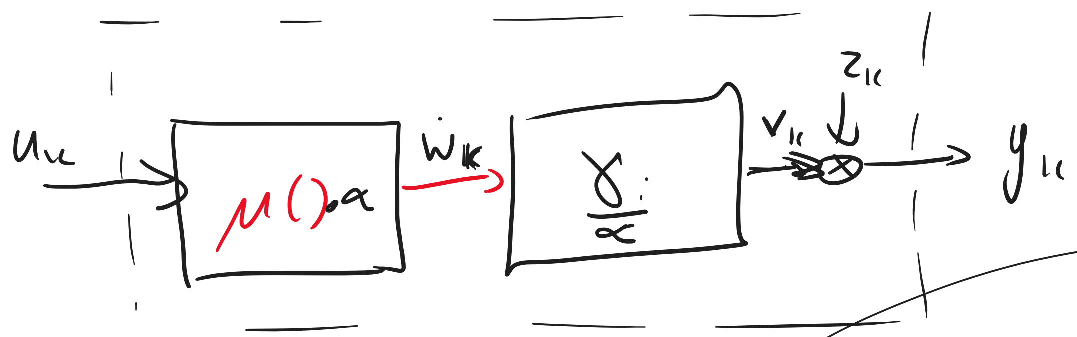

$w_k = \mu(u_k)$ $\qquad v_k = \sum_{i=0}^{\infty} \gamma_i w_{k-i} \qquad y_k = v_k + z_k$

$u_k \sim$ i.i.d.

$$\boxed{y_k = \sum_{i=0}^{\infty} \gamma_i \, \mu(u_{k-i}) + z_k} \qquad H$$

$$R(u) \triangleq E\{y_k \mid u_k = u\} = E\{\gamma_0 \mu(u_k) + \sum_{i=1}^{\infty} \gamma_i \mu(u_{k-i}) + z_k \mid u_k = u\} =$$

$$= \gamma_0 \mu(u) + \underset{\text{const.}}{\underset{\parallel}{c_1}}$$

$$c_1 = \bar{w} \cdot \sum_{i=1}^{\infty} \gamma_i$$

$$R(u^{(1)}, u^{(2)}) = E\{y_k \mid u_k = u^{(1)} \text{ AND } u_{k-1} = u^{(2)}\} =$$

$$= E\{\gamma_0 \mu(u_k) + \gamma_1 \mu(u_{k-1}) + \sum_{i=2}^{\infty} \gamma_i \mu(u_{k-i}) + z_k \mid \dots\} =$$

$$= \gamma_0 \mu(u^{(1)}) + \gamma_1 \mu(u^{(2)}) + c_2 \qquad c_2 = \bar{w} \cdot \sum_{i=2}^{\infty} \gamma_i$$

$$\mu() = \alpha_1 \varphi_1(u) + \dots + \alpha_s \varphi_s(u)$$

$$R(u^{(1)}, u^{(2)}, \dots, u^{(L)}) = [\gamma_0, \dots, \gamma_{L-1}] \begin{bmatrix} \mu(u^{(1)}) \\ \vdots \\ \mu(u^{(L-1)}) \end{bmatrix} + c_L$$

$$c_L = \bar{w} \cdot \sum_{i=L}^{\infty} \gamma_i$$

if the L object: FIR(L) $\Rightarrow c_L = 0$