NMF

$$x_i[t] = \sum_{r=1}^{R} S_{ir} u_r[t] \tag{1}$$

LFM

$$\dot{x}_i[t] = -D_i x_i[t] + \sum_{r=1}^{R} S_{ir} u_r[t] \tag{2}$$

Extended LFM

$$\dot{x}_i[t] = -D_i x_i[t] + \sum_{p=1}^{P} B_{ip} x_i[t-p] + \sum_{q=0}^{P} \sum_{r=1}^{R} S_{irq} u_r[t-q] \tag{3}$$