

$$\begin{aligned}
x_1 = f_1(t) &= \begin{cases} 4t + \epsilon_1, & t \in [t_0, t_1] \\ 4t_1 + \epsilon_2, & t \in [t_1, t_2] \\ 300 - 3t + \epsilon_3, & t \in [t_2, t_3] \end{cases} \\
x_2 = f_2(t) &= \begin{cases} 5t^2 + \epsilon_1, & t \in [t_0, t_1] \\ 5t^2 + \epsilon_2, & t \in [t_1, t_2] \\ t + 20 + \epsilon_3, & t \in [t_2, t_3] \end{cases} \\
x_3 = f_3(t) &= \begin{cases} e^t/50 + \epsilon_1, & t \in [t_0, t_1] \\ 0.5t^2 + 50 + \epsilon_2, & t \in [t_1, t_2] \\ -0.5t + 50 + \epsilon_3, & t \in [t_2, t_3] \end{cases} \\
x_4 = f_4(t) &= \begin{cases} 5 + \epsilon_1, & t \in [t_0, t_1] \\ 4 + \epsilon_2, & t \in [t_1, t_2] \\ 1 + \epsilon_3, & t \in [t_2, t_3] \end{cases} \\
x_5 = f_5(t) &= \begin{cases} 9t^3 + \epsilon_1, & t \in [t_0, t_1] \\ 4t + 1500 + \epsilon_2, & t \in [t_1, t_2] \\ -7t + 6900 + \epsilon_3, & t \in [t_2, t_3] \end{cases} \\
x_6 = f_6(t) &= \begin{cases} 2 + 5t^3 + \epsilon_1, & t \in [t_0, t_1] \\ t^{1.1} + 3t - 1 + \epsilon_2, & t \in [t_1, t_2] \\ 0 + \epsilon_3, & t \in [t_2, t_3] \end{cases} \\
x_7 = f_7(t) &= \begin{cases} 4t + \epsilon_1, & t \in [t_0, t_1] \\ 4t_1 + \epsilon_2, & t \in [t_1, t_2] \\ -3t + 300 + \epsilon_3, & t \in [t_2, t_3] \end{cases} \\
x_8 = f_8(t) &= \begin{cases} 0.01t + \epsilon_1, & t \in [t_0, t_1] \\ 8\log(t) + \epsilon_2, & t \in [t_1, t_2] \\ 0.005t + \epsilon_3, & t \in [t_2, t_3] \end{cases} \\
x_9 = f_9(t) &= \begin{cases} t^{0.5} + \epsilon_1, & t \in [t_0, t_1] \\ t^{0.5} + \epsilon_2, & t \in [t_1, t_2] \\ t/20 + \epsilon_3, & t \in [t_2, t_3] \end{cases} \\
x_{10} = f_{10}(t) &= \begin{cases} \cos(0.05t) + \epsilon_1, & t \in [t_0, t_1] \\ \cos(0.05t) + \epsilon_2, & t \in [t_1, t_2] \\ \cos(0.05t) + \epsilon_3, & t \in [t_2, t_3] \end{cases} \\
x_{11} = f_{11}(t) &= \begin{cases} \text{abs}(t - 50) + \epsilon_1, & t \in [t_0, t_1] \\ \text{abs}(t - 50) + \epsilon_2, & t \in [t_1, t_2] \\ \text{abs}(t - 50) + \epsilon_3, & t \in [t_2, t_3] \end{cases} \\
x_{12} = f_{12}(t) &= \begin{cases} t^{0.5} + \epsilon_1, & t \in [t_0, t_1] \\ t^{0.5} + \epsilon_2, & t \in [t_1, t_2] \\ t/20 + \epsilon_3, & t \in [t_2, t_3] \end{cases} \\
x_{13} = f_{13}(t) &= \begin{cases} \max(t) - \max(t)/\text{len}(t) * t + \epsilon_1, & t \in [t_0, t_1] \\ \max(t) - \max(t)/\text{len}(t) * t + \epsilon_2, & t \in [t_1, t_2] \\ \max(t) - \max(t)/\text{len}(t) * t + \epsilon_3, & t \in [t_2, t_3] \end{cases} \\
x_{14} = f_{14}(t) &= \begin{cases} 2 + \epsilon_1, & t \in [t_0, t_1] \\ 4 + \epsilon_2, & t \in [t_1, t_2] \\ 1 + \epsilon_3, & t \in [t_2, t_3] \end{cases}
\end{aligned}$$

$$\begin{aligned}
x_{15} = f_{15}(t) &= \begin{cases} 10t + \epsilon_1, & t \in [t_0, t_1] \\ 8t^2 + \epsilon_2, & t \in [t_1, t_2] \\ 0.05t^2 + 30t + \epsilon_3, & t \in [t_2, t_3] \end{cases} \\
x_{16} = f_{16}(t) &= \begin{cases} 2t^2 + 5t + \epsilon_1, & t \in [t_0, t_1] \\ t^{0.5} - 6t + 200 + \epsilon_2, & t \in [t_1, t_2] \\ 0 + \epsilon_3, & t \in [t_2, t_3] \end{cases} \\
x_{17} = f_{17}(t) &= \begin{cases} 4t + \epsilon_1, & t \in [t_0, t_1] \\ 2t + \epsilon_2, & t \in [t_1, t_2] \\ 3t + 300 + \epsilon_3, & t \in [t_2, t_3] \end{cases} \\
x_{18} = f_{18}(t) &= \begin{cases} 1 + \epsilon_1, & t \in [t_0, t_1] \\ 1 + \epsilon_2, & t \in [t_1, t_2] \\ 1 + \epsilon_3, & t \in [t_2, t_3] \end{cases} \\
x_{19} = f_{19}(t) &= \begin{cases} t^2 + 2t + \epsilon_1, & t \in [t_0, t_1] \\ 2t + \epsilon_2, & t \in [t_1, t_2] \\ 2t + \epsilon_3, & t \in [t_2, t_3] \end{cases} \\
x_{20} = f_{20}(t) &= \begin{cases} t + \epsilon_1, & t \in [t_0, t_1] \\ 4t + \epsilon_2, & t \in [t_1, t_2] \\ -3t + 300 + \epsilon_3, & t \in [t_2, t_3] \end{cases}
\end{aligned}$$

$$a = \{1, 6, 1, 10, 1, 50, 1, 1, 5, 10, 1, 6, 1, 10, 1, 50, 1, 1, 5, 10\}$$

$$b = \{1, 6, 1, 1, 1, 1, 1, 1, 5, 3, 1, 6, 1, 1, 1, 1, 1, 1, 5, 3\}$$