E. Canuto, C. Novara, L. Massotti, C. Perez Montenegro, D. Carlucci, Spacecraft Dynamics and Control. the Embedded Model Control approach, Butterworth-Heinemann (Elsevier), 2018

Chapter 14 Errata Corrigenda

Erratum

$$\hat{\mathbf{x}}_\theta\left(i(k)+N\right)=\hat{\mathbf{x}}_\theta\left(i(k)+N\right)+L^+\left(\breve{\theta}_a(k+1)-C_\theta\hat{\mathbf{x}}_\theta\left(i(k)+N\right)\right)$$
$$\hat{\mathbf{x}}_\theta\left(i(k)+N\right)=A^N\hat{\mathbf{x}}_\theta\left(i(k)\right)+\sum_{h=0}^{N-1}A^{N-1-h}B_\theta u\left(i(k)+h\right) \quad . \qquad (0.1)$$
$$L^+=\begin{bmatrix}-N(g+h) & Nh\\ g+h & -h\\ l & l\end{bmatrix},\ C_\theta=\begin{bmatrix}1 & 0 & 0\end{bmatrix}$$

Corrigendum

$$\hat{\mathbf{x}}_\theta\left(i(k)\right)=\hat{\mathbf{x}}_\theta\left(i(k)\right)+L^+C^+\left(\begin{bmatrix}\breve{\theta}_a(k)\\ 0\\ 0\end{bmatrix}-\hat{\mathbf{x}}_\theta\left(i(k)\right)\right)$$
$$\hat{\mathbf{x}}_\theta\left(i(k)+N\right)=A^N\hat{\mathbf{x}}_\theta\left(i(k)\right)+\sum_{h=0}^{N-1}A^{N-1-h}B_\theta\hat{\omega}_d\left(i(k)+h\right)T\,. \qquad (0.2)$$
$$L^+=\begin{bmatrix}-N(g+h) & Nh\\ g+h & -h\\ l & l\end{bmatrix}$$

Erratum: page 751

The difference in terms of RMS is about 10% in favour of the ‘predictor-corrector’, as expected (solid line in Figure14.4).

Corrigendum

The difference in terms of RMS is about 10% in favour of the ‘predictor-corrector’ with fast propagation (time unit T) of the whole state vector $\hat{\mathbf{x}}_\theta$ in Eq. (14.61) (solid line in Figure14.4).

Erratum: Figure14.4 and caption

Corrigendum

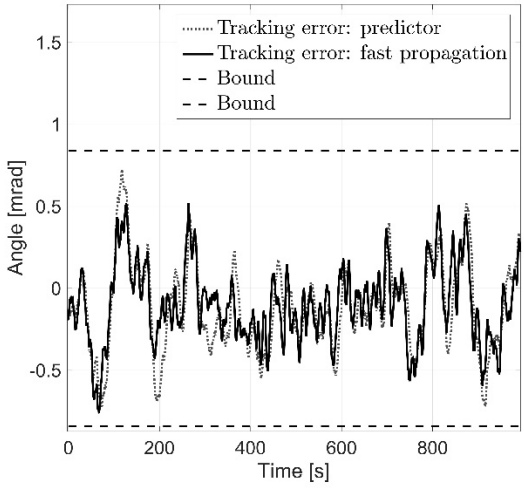

Figure 14.4 True tracking attitude error in response to the same reference: ‘predictor’ (pointwise line) and ‘predictor’ with fast propagation (solid line).