LINEAR SYSTEMS THEORY (2ND EDITION)

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Comments and information about typos are very welcome.
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Errata

1) In the Practice Exercise 2.1, equation (2.1) has x_1 and x_2 reversed. It should read

$$x_1 = h, x_1 = 0 \qquad \text{and} \qquad x_1 = -h, x_2 = 0 \qquad \text{and} \qquad x_1 = 0, x_2 = 0.. \qquad (2.1)$$

Moreover, in the solution to question (c) the final expressions for the B and D matrices are correct, but the expressions for the partial derivatives are not. They should read:

$$A := \frac{\partial f}{\partial x}(x^{\text{eq}}, u^{\text{eq}}) = \begin{bmatrix} 0 & 1 \\ \frac{k}{m}\left(\frac{\sqrt{2}h^3}{(x_1^2+h^2)^{\frac{3}{2}}} - 1\right) & 0 \end{bmatrix}_{x=x^{\text{eq}}} \qquad\qquad B := \frac{\partial f}{\partial u}(x^{\text{eq}}, u^{\text{eq}}) = \begin{bmatrix} 0 \\ \frac{1}{m} \end{bmatrix}$$

$$C := \frac{\partial g}{\partial x}(x^{\text{eq}}, u^{\text{eq}}) = \begin{bmatrix} 1 & 0 \end{bmatrix}, \qquad\qquad D := \frac{\partial g}{\partial u}(x^{\text{eq}}, u^{\text{eq}}) = 0.$$

2) In page 133, Figure 11.3 should read ad follows (note the s in the numerator of the left-hand side block):
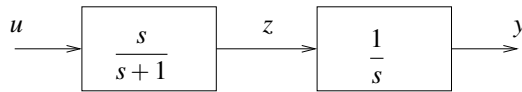

Figure 11.3. Cascade interconnection with zero-pole cancellation.

Acknowledgements

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