

Errata sheet for the PhD thesis
Backstepping and Control Allocation
with Applications to Flight Control
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- page 77, in the last row, a^t should be replaced by a^T .
- page 107, section 7.1, “notion” should be replaced by “notation”.
- page 131, the active inequalities should read

$$p_j = 0, \quad j \in \mathcal{W}$$

not to confuse the index of these variables with the iteration number i .

- page 132, section 8.3.1, “ $u_i^0 = \underline{u}(t)$ or $u_i^0 = \bar{u}(t)$ ” should be replaced by “ $u_i^0 = \underline{u}_i(t)$ or $u_i^0 = \bar{u}_i(t)$ ”.
- page 173, in the expression for u_r , $B^T R_1^{-1} B^T$ should be $BR_1^{-1} B^T$ (no transpose).
- page 174, in Design 2 the control allocation performance index should read

$$\min_u \|Wu\|$$

- page 175, in Theorem 10.3 the expression for R_1 is incorrect since $B^\dagger R_2^{-1} (B^\dagger)^T$ is not invertible. A correct way to select R_1 to achieve $R_2 = (BR_1^{-1} B^T)^{-1}$ is to use (10.13) and select

$$R_1 = W^2 + B^T (R_2 - (BW^{-2} B^T)^{-1}) B$$

where W is any invertible matrix.

- page 178, third item should read “... altering the closed loop ...”.
- page 199, on line 3, (2.14) should be (2.15), and on line 4, “in computed in” should be “is computed in”.
- page 222, “D. Enns. Control allocation approaches... Boston, MA” should be “Reston, VA”.