Errata

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Modeling and Simulation for Automatic Control

ISBN 82-92356-01-0, Marine Cybernetics, 2nd Printing, Trondheim June 2003.
Last modified: May 30, 2005.

Page	**Reads**	**Correct to**
22, (1.122)	$J_m\dot{\omega}_m = T_m - T_L$	$J_m\dot{\omega}_m = T - T_L$
22, below (1.128)	...port variables T_1 and ω_m...	...port variables T_1 and ω_1...
23, (1.135)	$J_m\dot{\omega}_1 = T_L$	$J_m\dot{\omega}_1 = T_1$
31, above (1.170)	x_d, v_d	x_0, v_0
31, (1.170)	$u = K(x_d - x) + D(v_d - v)$	$u = K(x_0 - x) + D(v_0 - v)$
45, (2.31)	$H(s) = \frac{\omega_m}{u_a}(s) = \frac{1}{K}\frac{1}{1+T_m s+T_a T_m s}$	$H(s) = \frac{\omega_m}{u_a}(s) = \frac{1}{K}\frac{1}{1+T_m s+T_a T_m s^2}$

Page	**Reads**	**Correct to**
198, (5.23)	$F_f = \begin{cases} \text{sat}(F_a, F_c) & \text{when } v = 0 \\ ... & \text{else} \end{cases}$	$F_f = \begin{cases} \text{sat}(F_a, F_s) & \text{when } v = 0 \\ ... & \text{else} \end{cases}$
201, below (5.36)	... a pole at $\lvert v\rvert/F_c$ ...	... a pole at $\sigma\lvert v\rvert/F_c$ ...
201, below (5.36)	... a time constant $T = F_c/\lvert v\rvert$.	... a time constant $T = F_c/(\sigma\lvert v\rvert)$.
203, (5.43)	$\sigma_0 g(v) = F_c + (F_s - F_c)e^{-(v/v_s)^2}$	$g(v) = F_c + (F_s - F_c)e^{-(v/v_s)^2}$
204, (5.47)	$F_c \leq \sigma_0 g(v) \leq F_s$	$F_c \leq g(v) \leq F_s$
249, (6.334)	$= \frac{1}{2}\begin{pmatrix} \eta & -\boldsymbol{\epsilon}^T \\ \boldsymbol{\epsilon} & \eta\mathbf{I} + \boldsymbol{\epsilon}^\times \end{pmatrix}\begin{pmatrix} 0 \\ \boldsymbol{\omega}^a \end{pmatrix} =$	$= \frac{1}{2}\begin{pmatrix} \eta & -\boldsymbol{\epsilon}^T \\ \boldsymbol{\epsilon} & \eta\mathbf{I} + \boldsymbol{\epsilon}^\times \end{pmatrix}\begin{pmatrix} 0 \\ \boldsymbol{\omega}^b \end{pmatrix} =$
249, (6.335)	$\ldots \begin{pmatrix} 0 \\ \boldsymbol{\omega}^a \end{pmatrix} \ldots$	$\ldots \begin{pmatrix} 0 \\ \boldsymbol{\omega}^b \end{pmatrix} \ldots$
249, (6.336)	$\ldots \begin{pmatrix} 0 \\ \boldsymbol{\omega}^a \end{pmatrix} \ldots$	$\ldots \begin{pmatrix} 0 \\ \boldsymbol{\omega}^b \end{pmatrix} \ldots$
319, (8.51)	$\ldots + \mathbf{J}_{\omega_i}^T(\mathbf{q})\,\mathbf{M}_{ci}^i \mathbf{J}_{\omega 0i}(\mathbf{q})]$	$\ldots + \mathbf{J}_{\omega_{0i}}^T(\mathbf{q})\,\mathbf{M}_{ci}^i \mathbf{J}_{\omega 0i}(\mathbf{q})]\dot{\mathbf{q}}$

Page	**Reads**	**Correct to**
402, above (10.1)	$\ldots \frac{D\mathbf{u}}{Vt} \ldots$	$\ldots \frac{D\mathbf{u}}{Dt} \ldots$
402, below (10.1)	$\ldots \frac{D\mathbf{u}}{Vt} \ldots$	$\ldots \frac{D\mathbf{u}}{Dt} \ldots$
484, line 12	... a large gradients ...	... large gradients ...

Page	**Reads**	**Correct to**
518, (14.22)	$\ldots + \frac{h^{p+1}}{(p+1)!}\frac{d^p \mathbf{f}[\mathbf{y}_L(\tau),\tau]}{dt^p}$	$\ldots + \frac{h^{p+1}}{(p+1)!}\frac{d^p \mathbf{f}[\mathbf{y}_L(t_n;\tau),\tau]}{dt^p}$
533, line 1	...when $\lvert\lambda\rvert$ goes to infinity	...when $\lvert h\lambda\rvert$ goes to infinity.