Vehicle Accident Analysis and Reconstruction Methods

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page	Eq/Line	Correction (should be)	Comment
7	line 22	(33, 0.60) should be (32.0, 0.60)	
11	line 23	x- should be $\overline{x}$	
	line 25	x- should be $\overline{x}$	
12	lines 1,3,5	x- should be $\overline{x}$	
29	line 33	. . .α, when $\alpha = \pi/2$ for any s.	
	line 35	. . .$\beta = \alpha$, $F_x = F\cos\alpha$, $F_y = -F\sin\alpha$	
35	Eq 2.20	$F_x(\alpha,s) = \dfrac{F_x(s)F_y(\alpha)s}{\sqrt{s^2F_y^2(\alpha)+F_x^2(s)\tan^2\alpha}} \dfrac{\sqrt{s^2C_\alpha^2+(1-\lvert s\rvert)^2\cos^2\alpha F_x^2(s)}}{sC_\alpha}$	
35	Eq 2.21	$F_y(\alpha,s) = \dfrac{F_x(s)F_y(\alpha)\tan\alpha}{\sqrt{s^2F_y^2(\alpha)+F_x^2(s)\tan^2\alpha}} \dfrac{\sqrt{(1-\lvert s\rvert)^2\cos^2\alpha F_y^2(\alpha)+\sin^2\alpha C_s^2}}{C_s\sin\alpha}$	
39	line 15	$F_x(\alpha,s) = fF_z \sin\alpha$ should be $F_x(\alpha,s) = fF_z \cos\alpha$	Typographical error
	line 16	$F_x(\alpha,s) = fF_z \cos\alpha$ should be $F_y(\alpha,s) = fF_z \sin\alpha$	Typographical error
40	line 17	. . . the values in Fig. 2.21 should be . . .	"the above table" should be replaced by "Fig. 2.21"
46	Table 2.1	Column 5, *Sources*, should be (top to bottom) . . .	2.25, 2.36, 2.13, 2.13, NHTSA FMVSS, blank, USDOT FMCER 2.37, 2.37, 2.37, 2.37, 2.39, 2.40, 2.41
52	Eq 3.6a	$d = -\dfrac{v_0^2}{2a} = \dfrac{v_0^2}{2fg}$	missing minus sign
53	line 1	$\tau = \dfrac{-11.11}{-7.37} = 1.51\ s$	incorrect denominator
53	last line	The vehicle skids to a stop in 1.51 s . . .	
59	line 3	$f_r = \dfrac{F_{tr}}{F_{zr}} = \dfrac{T/R_w}{F_{zr}} = \dfrac{1935/0.34}{13947} = 0.408$	F_{tr} should be torque, T, divided by the rolling radius R_w

59	line 4	. . . equal to or higher than about 0.41 will allow	
63	line 9	$\sigma_\tau = \sigma_{PDR} = 0.083$	incorrect decimal point
63	line 12	. . . and a standard deviation of 0.083 s.	incorrect decimal point
66	Eq. 3.44	$\dot{y} = \dot{\theta}[b + (h_c - R)\theta]$	current/wrong equation is a repeat of Eq. 3.2
66	Eq. 3.50	$y(\tau) = c_1(e^{\eta_1\tau} - 1) + c_2(e^{-\eta_1\tau} - 1) + c_3(e^{2\eta_1\tau} - 1) + c_4(e^{-2\eta_1\tau} - 1)$	current/wrong equation is a repeat of Eq. 3.3
73	Eq. 4.1	$(x_i - a)^2 + (y_i - b)^2 = R^2, \quad i = 1, 2, 3$	current/wrong equation is a repeat of Eq. 4.4
150	Eq. 6.64	$\Delta V_i = \sqrt{\left(V_{in} - v_{in}\right)^2 + \left(V_{it} - v_{it}\right)^2}$	
189	Eg. 7.9	W_1 = 2400 lb (10.7 kN) and W_2 = 3350 lb (14.9 kN)	The vehicle weights should be switched in the problem statement
227	line 3	Value for d_0 of 31.58 should be 46.31	
228	Eq. 9.4	$K_2 = L[C_1 + 2(C_2 + C_3 + C_4 + C_5) + C_6]/10$	current/wrong equation is from Example 9.1
236	Eq. 9.15	$C_{avg} = [C_1 + 2(C_2 + C_3 + C_4 + C_5) + C_6]/10$	current/wrong equation is a repeat of Eq. 9.12
387 - 389		Reference numbers should begin at top of page 387 as 2.21 and continue consecutively through 2.49 on page 389	